GREENHOUSE GAS REPORT
LILAC HILLS RANCH
SAN DIEGO COUNTY, CALIFORNIA

SPECIFIC PLAN
GENERAL PLAN AMENDMENT
REZONE
EIR
TENTATIVE MAP (MASTER)
TENTATIVE MAP (PHASE 1 IMPLEMENTING TM)
MAJOR USE PERMIT

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PREPARED FOR:
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SAN DIEGO, CA 92123
KIVA PROJECT: 09-0112513
SP 3810-12-001
GPA 3800-12-001
REZ 3600-12-003
TM 5571 RPL4~~3~~ and 5572 RPL4~~3~~
MUP 3300-12-005

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~~January 24~~May 16, 2014

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Errata

Greenhouse Gas Report for Lilac Hills Ranch

June 12, 2014

As stated herein, the General Plan also directs preparation of a County Climate Action Plan (CAP) with reduction targets; development of regulations to encourage energy efficient building design and construction; and development of regulations that encourage energy recovery and renewable energy facilities. The County CAP was intended to ensure that actions of the County of San Diego would not impede Assembly Bill 32 and State Bill 375 mandates. The County developed and approved the County CAP in June 2012.

After the County CAP was adopted by the County, a lawsuit was filed by the Sierra Club. In April 2013, the San Diego County Superior Court set aside the approval of the County CAP.

At this time, the County CAP is not considered an applicable plan, nor is it dependable as a source for a significance determination under CEQA. For this reason, the ultimate determination of greenhouse gas impacts (as discussed in the project's EIR) does not rely upon the County CAP. However, because it is an existing source for the analysis of greenhouse gas, the goals, strategies, and measures identified for emission reductions under the County CAP are provided herein for information purposes.

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Glossary of Terms and Acronyms

AB	Assembly Bill
~~ac-ft~~ft.	~~Acre-feet per year~~
ANFO	Ammonium nitrate and fuel oil
APS	Alternative Planning Strategy
BAU	Business as usual
CAFE	Corporate Average Fuel Economy
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CCST	Council on Science and Technology
~~CCAP~~	~~Climate Change Action Plan~~
CCR	Code of Regulations
CCS	Carbon, Capture and Sequestration
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CH_4	Methane
CO_2	Carbon dioxide
CPUC	California Public Utilities Commission
CRV	California Redemption Value
°F	Degrees Fahrenheit
du/ac	Dwelling unit per acre
EIR	Environmental Impact Report
EO	Executive order
EPA	Environmental Protection Agency
EPIC	Energy Policy Initiative Center
FEIR	Final Environmental Impact Report
GHG	Greenhouse Gas
GPA	General Plan Amendment
GWP	Global warming potential
HFC	Hydrofluorocarbons
HVAC	Heating, Ventilation, and Air Conditioning
I-15	Interstate 15
IPCC	Intergovernmental Panel on Climate Change
LCFS	Low Carbon Fuel Standard
LEED-ND	Leadership in Energy and Environmental Design for Neighborhood Development
LEV	Low Emission Vehicle
$MMTCO_2E$	Million metric tons of CO_2 equivalent
mpg	Miles per gallon
MPO	Metropolitan Planning Organization
MSL	Mean sea level
$MTCO_2E$	Metric tons of CO_2 equivalent
MUP	Major Use Permit
MW	Megawatt

N_2O	Nitrous oxide
NF_3	Nitrogen triflouride
NPS	National Park Service
PFC	Perfluorocarbons
Psp	Per service population
REZ	Rezone
RF	Recycling Facility
RPS	Renewables Portfolio Standard
RTP	Regional transportation plan
SANDAG	San Diego Association of Governments
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SDG&E	San Diego Gas and Electric
SF_6	Sulfur hexafluoride
Title 24	California Code of Regulations, Title 24 (i.e., California Building Code)
TM	Tentative Map
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
VCMWD	Valley Center Municipal Water District
VMT	Vehicle miles traveled
WMP	Waste Management Plan
WRCC	Western Regional Climate Center
WRF	Water Reclamation Facility

Executive Summary

The proposed 608-acre Lilac Hills Ranch project site is located within the Valley Center and Bonsall Community Planning areas of the unincorporated County of San Diego with State Route 76 to the north, Valley Center proper to the east, the City of Escondido to the south, and Interstate 15 and Old Highway 395 to the west. Project access would be provided at West Lilac Road, which turns into Main Street within the project site. Additional access would be provided by a connection to West Lilac Road via Covey Lane, and gated access would provide emergency access south of the project site to Circle R Drive via Mountain Ridge Road. An additional emergency vehicle access road would be provided via Street “B” via Rodriguez Road.

The project would consist of a mix of residential, commercial, and institutional uses, along with parks and open space. Specifically, the project would include: 90,000 square feet of commercial, office, and retail uses, including a 50-room country inn; 903 traditional single-family detached houses; 164 single-family attached houses; 211 residential units within the commercial mixed-use areas; 468 age-restricted residential houses within a senior citizen’s neighborhood; necessary facilities and amenities to serve the senior population (including a senior community center, and 200-bed group residential and group care facility); options for civic facilities, including a fire station and a school site (K-8); and public and private neighborhood parks, a private recreational facility, and other recreational amenities. The mixed-use, commercial, and civic uses, with parks, form a Town Center and two Neighborhood Centers, to which residents can walk for various social and commercial needs.

Also planned within the project site are a Recycling Facility (RF), a Water Reclamation Facility (WRF), and other supporting infrastructure. Open space is proposed to retain some of the existing citrus and avocado groves and add additional agricultural open space along with 104.1 acres of sensitive resources including biological/wetland habitat. The project includes numerous design features, discussed further below, that serve to reduce the project’s greenhouse gas (GHG) emissions.

~~The Lilac Hills Ranch Specific Plan (project) would allow for the phased construction of a mix of residential, commercial, and institutional uses, along with parks and open space in a presently rural, largely agricultural area of the unincorporated northeastern portion of the County of San Diego (County). Specifically, the project entails construction of single-family detached, single-family attached, mixed-use residential, and age-restricted single-family units; amenities to serve the senior citizen neighborhood (including a senior community center, a 200-bed group residential and group care facility); commercial uses, a K-8 school; civic facilities that may a include a fire station; public and private parks; a private recreational facility, and other recreational amenities. Also planned within the project site are an on-site Recycling Facility (RF), a Water Reclamation Facility (WRF), and other~~

~~supporting infrastructure. The project includes numerous design features, discussed further below, that serve to reduce the project's greenhouse gas (GHG) emissions.~~

For purposes of the California Environmental Quality Act (CEQA), the County has developed and approved guidance for determining the significance of a project's impact on climate change: *Guidelines for Determining Significance – Climate Change* (County Guidelines). The County Guidelines provide several ~~design features that serve to reduce the project's GHG~~ thresholds, the selection of which depends on the type of project and the information available at the time of analysis. These thresholds include a brightline threshold, a stationary source threshold, efficiency threshold, and performance threshold. ~~emissions to comply with the County's greenhouse gas (GHG) Performance Threshold of 16 percent reduction in metric tons of carbon dioxide (CO_2) equivalent ($MTCO_2E$) compared to "unmitigated" emissions. The performance threshold permits the application of project-specific "mitigation" measures that demonstrate a fair share of emissions reductions necessary statewide to achieve AB 32 targets. While the performance threshold and modeling calculations both refer to "mitigated" emissions, for the purpose of this analysis all "mitigated" emissions are considered project design features under the California Environmental Quality Act; therefore, no mitigation is required.~~ The County Guidelines are discussed in detail in subchapter 3.3.3.

Prior to determining the emissions from proposed sources, this analysis assesses the GHG emissions attributable to existing, on-site uses. The project site is presently occupied primarily by agricultural uses, with 22 single-family homes scattered throughout the 608 acres at very low density. Baseline (2008) GHG emissions associated with these existing residential are approximately equivalent to 564 metric tons of carbon dioxide ($MTCO_2E$).

The project's GHG-reducing design features include:

~~use~~ Use of Tier III construction equipment;

~~exceedance of~~Exceeding the 2008 Title 24 Energy Efficiency Standards by 30 percent for all proposed commercial development and residential dwelling units;

Installation of high-efficiency lighting and appliances, including the installation of Energy Star appliances (including clothes washers, dishwashers, fans, and refrigerators) in 95 percent of the single-family, mixed-use residential, and senior community residential uses;

~~installation~~ Installation of natural gas only fireplaces (i.e., restriction against wood-burning fireplaces);

~~application~~ Implementation of ~~of a~~ water conservation ~~strategy~~strategies that ~~achieves a~~achieve 20 percent reduction in indoor and outdoor water use;

~~u~~Use of Smart Meters to reduce electricity consumption;

~~and p~~Planting of 35,000 trees resulting in a "net" increase in trees on-site after accounting for tree removal associated with project construction and achieving sequestration.

Provision of a mix of residential and resident serving commercial and civic uses within one-half mile of residential uses, including neighborhood-serving retail and restaurant uses, an elementary/middle school, church site, recreation center, neighborhood park, and a recycling collection center.

Provision of a network of pedestrian and bicycle paths, in a complete and interconnected network, where currently there are very limited bicycling and pedestrian facilities.

~~Some~~Most of these features correlate with ~~relevant~~the following County of San Diego Climate Action Plan (CAP) measures: E1, E3, E4, LS1, LU1, and T2 (see the Appendix for detailed calculations).

- ~~*CAP Measure E1: Energy Efficiency for New Development*. In exceedance of CAP Measure E1, 100 percent of the proposed commercial square footageand residential units shall exceed 2008 Title 24 standards by 30 percent.~~

- ~~*CAP Measure E3: Appliance Upgrades for New Residential*. In accordance with CAP Measure E3, Energy Star appliances (including clothes washers, dish washers, fans, and refrigerators) shall be installed in 95 percent of the single-family, mixed-use residential, and senior community residential uses.~~

- ~~*CAP Measure E4: Smart Meter*. In exceedance of CAP Measure E4, 100 percent of new construction shall use Smart Meters to reduce electricity consumption.~~

- ~~*CAP Measure LS1: Plant Trees*. In exceedance of CAP Measure LS1, the project proposes to plant 35,000 trees by buildout. This figure represents the "net" increase in trees on-site after accounting for tree removal associated with project construction. This measure would further reduce GHG emissions by sequestering carbon from the atmosphere; however, the measure is not required to reduce GHG emissions in compliance with the Performance Threshold and is not used to determine significance of GHG impacts.~~

- ~~*CAP Measure LU1: Mixed-Use Development*. In accordance with CAP Measure LU1, the project shall provide a mix of residential and resident-serving commercial and civic uses. The non-residential uses include neighborhood-serving retail and restaurant uses, an elementary/middle school, church site, recreation center, neighborhood park, and a recycling collection center. All of these uses are to be provided within one-half mile of residential uses.~~

- ~~*CAP Measure T2: Increase Walking and Biking*. In accordance with CAP Measure T2, the project shall provide a network of pedestrian and bicycle paths, in a~~

~~complete and interconnected network, where currently there are very limited bicycling and pedestrian facilities.~~

~~Additionally,~~ GHG reductions in vehicle emissions would also occur through reductions in vehicle ~~miles traveled associated with the project's mixed-use and increased walkability design, and through reductions in vehicle~~ GHG emissions ~~as gleaned~~ due to ~~from~~ statewide regulations (Pavley I and II and Low Carbon Fuel Standard, Renewables Portfolio Standard (RPS), and the Tire Pressure Program – refer to subchapter 3.2.3).

~~These~~The proposed project ~~design features, without counting~~emissions were quantified for the ~~contribution of sequestration, would result in the project emitting a gross total of 32,884.34~~years 2020 and 2035 as the County's Climate Action Plan (CAP) includes GHG emission reduction targets for both scenarios. ~~However, d~~Due to the speculative nature of technologies and regulations available in 2050, the analysis of the 2050 emissions and potential emission reductions cannot be accurately quantified and is thus qualitatively assessed, as discussed further in this report.

After considering all project design features, the proposed project would emit 33,073.68 ~~metric tons of carbon dioxide equivalent (~~$MTCO_2E$~~)~~ emissions per year~~.~~ in 2020. Based on the analysis of project emissions, the project's design features~~, the~~ would reduce project ~~would achieve a 19.3~~emissions by 18.9 percent ~~reduction without counting~~~~over~~compared to the ~~contribution of sequestration reductions~~"unmitigated" project. This reduction would ~~,~~ ~~which meets~~exceed~~s~~ the County Guidelines' performance threshold of 16 percent reduction~~from unmitigated emissions. Impacts~~. Therefore, the proposed project ~~associated with the project's contribution to cumulative GHG emissions would thus be considered~~ would have a less than significant~~, and no~~ impact. The project, by demonstrating compliance with the relevant implementing threshold, would also be consistent with the County CAP, Assembly Bill 32 (AB 32) Global Warming Solutions Act and the 2008 Climate Change Scoping Plan, and Senate Bill (SB) 375 through compliance with the 2050 Regional Transportation Plan and Sustainable Community Strategy (RTP/SCS).

As with the year 2020, after consideration of all project design features, the proposed project would emit 29,399.81 $MTCO_2E$ emissions per year in 2035. Therefore, by year 2035, the "mitigated project would achieve a 19.1 percent reduction over the "unmitigated" project. (The reductions in GHG emission between 2020 and 2035 are associated with continued improvements in energy efficiencies and vehicles estimated by CARB after 2020 and through 2035.) While these reductions exceed the County Guidelines performance threshold of 16 percent reduction, and the County CAP's anticipated 13.7 percent reduction from 2005 emissions levels for year 2035, the reductions would not reach the County CAP's 49 percent target for emission reductions by 2035.

While the identified project design features do not achieve the County CAP's 2035 goal of a 49 percent reduction in GHG emissions the project design features assessed for the "mitigated" 2035 project scenario include only existing technology and regulations. As stated in the County CAP, “there are likely to be advances in technology that cannot be accounted for now, as well as additional ~~mitigation is necessary.~~regulations that will enhance the reductions achieved at the state and federal levels by 2035.” To illustrate, under the 2020 scenario, state and federal regulatory actions account for more than 55 percent of the reduction identified in the County CAP. Alternately, the state and federal regulatory actions would only need to account for 34 percent of the reductions in 2035. Some regulatory and technological advances envisioned by the County CAP include, but are not limited to, increasing participation in various energy efficiency programs, increasing the Low Carbon Fuel Standard (LCFS) to 30 percent, requiring increased waste diversion, and expanding recycled water use. As the County is dependent on state and federal actions to assist in achieving the additional reductions in 2035, the project would also rely on these actions. Therefore, as the project would achieve a 19.1 percent reduction in 2035 without consideration of these actions, the project would achieve a greater reduction (53 percent) when these actions take place than the County CAP’s 2035 goal (49 percent), and would thus exceed its fair share of emission reductions.

Also of note, neither the 2020 nor 2035 emission estimates provided above include the emission reductions attributable to the project’s planting of 35,000 trees, which is estimated to provide an additional 2,726.5 $MTCO_2E$ of reduction through sequestration. The GHG reductions from trees could be even greater if planted in proximity to residences to offer shading and reduce cooling needs. If all trees were located in such a manner, the trees could provide an additional reduction of 5,936 $MTCO_2E$. The inclusion of the trees in the 2020 scenario would increase the 2020 emission reduction to 25.6 percent considering only sequestration, and 40.1 percent with related building energy savings. The inclusion of the trees in the 2035 scenario would increase the 2035 reduction to 26.4 percent considering only sequestration and 42.4 percent with related building energy savings.

When ~~subsequent phases~~each phase of ~~under~~ the project ~~Specific Plan come~~comes forward, ~~they~~each will be subject to the policy requirements of the Specific Plan that outline the project design features modeled in this analysis. The actual performance values of ~~subsequent phases~~each phase could be more than 16 percent, given project-level detail of design features~~;~~. ~~and t~~Thus, the proposed project would ~~be ensured to~~ not exceed the County Guideline’s performance threshold for the year 2020 ~~given~~ based on the project Specific Plan’s policies ~~that~~ mandated minimum performance measures for ~~subsequent phases~~each phase.

~~The project, by demonstrating compliance with the relevant implementing threshold, would, as identified in the County’s *Guidelines for Determination of Significance – Climate Change,* also be consistent with the County’s CAP and, by extension, the State’s Assembly Bill 32 Global Warming Solutions Act and implementing Climate Change Scoping Plan. Potential impacts associated with plan or policy conflict would thus be less than significant.~~

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1.0 Introduction and Project Description

1.1 Understanding Global Climate Change

This subchapter summarizes relevant facts related to global climate change and ~~greenhouse gas (~~GHG~~)~~ emissions, including causes of global climate change, sources of GHG emissions, and potential environmental effects of global climate change.

1.1.1 Causes of Global Climate Change

Global climate change is a change in the average weather of the earth, which can be measured by wind patterns, storms, precipitation, and temperature. The earth's climate is in a state of constant flux with periodic warming and cooling cycles. Extreme periods of cooling are termed "ice ages," which may then be followed by extended periods of warmth. For most of the earth's geologic history, these periods of warming and cooling have been the result of many complicated, interacting natural factors that include volcanic eruptions which spew gases and particles into the atmosphere, the amount of water, vegetation, and ice covering the earth's surface;~~,~~ subtle changes in the earth's orbit, and the amount of energy released by the sun (sun cycles). However, since the beginning of the Industrial Revolution around 1750, the average temperature of the earth has been increasing at a rate that is faster than can be explained by natural climate cycles alone.

GHGs influence the amount of heat that is trapped in the earth's atmosphere and thus play a critical role in determining the earth's surface temperature. Outgoing infrared radiation is absorbed by GHGs, resulting in a warming of the atmosphere. This phenomenon, known as the "greenhouse effect," is responsible for maintaining a habitable climate on Earth. With the Industrial Revolution came an increase in the combustion of carbon-based fuels such as wood, coal, oil, and biofuels, as well as the creation of GHG-emitting substances not found in nature. Such human activities have increased atmospheric GHG levels in excess of natural ambient concentrations. This has led to a trend of unnatural warming of the earth's atmosphere and oceans, with corresponding effects on global circulation patterns and climate.

1.1.1.1 Greenhouse Gases of Primary Concern

There are numerous GHGs, both naturally occurring (i.e., biogenic) and manmade (i.e., anthropogenic). Table 1 summarizes some of the most common. Each GHG has variable atmospheric lifetime and global warming potential~~.~~ (GWP).

TABLE 1
GLOBAL WARMING POTENTIALS AND ATMOSPHERIC LIFETIMES (YEARS) OF COMMON GHGs

Gas	Atmospheric Lifetime	100-year GWP	20-year GWP	500-year GWP
Carbon dioxide (CO_2)	50–200	1	1	1
Methane (CH_4)*	12 ± 3	21	56	6.5
Nitrous oxide (N_2O)	120	310	280	170
HFC-23	264	11,700	9,100	9,800
HFC-32	5.6	650	2,100	200
HFC-125	32.6	2,800	4,600	920
HFC-134a	14.6	1,300	3,400	420
HFC-143a	48.3	3,800	5,000	1,400
HFC-152a	1.5	140	460	42
HFC-227ea	36.5	2,900	4,300	950
HFC-236fa	209	6,300	5,100	4,700
HFC-43-10mee	17.1	1,300	3,000	400
CF_4	50,000	6,500	4,400	10,000
C_2F_6	10,000	9,200	6,200	14,000
C_3F_8	2,600	7,000	4,800	10,100
C_4F_{10}	2,600	7,000	4,800	10,100
c-C_4F_8	3,200	8,700	6,000	12,700
C_5F_{12}	4,100	7,500	5,100	11,000
C_6F_{14}	3,200	7,400	5,000	10,700
SF_6	3,200	23,900	16,300	34,900

SOURCE: U.S. Environmental Protection Agency 2010, Annex 6.
GWP = global warming potential.
*The methane GWP includes the direct effects and those indirect effects due to the production of tropospheric ozone and stratospheric water vapor. The indirect effect due to the production of CO_2 is not included.

The atmospheric lifetime of ~~the~~a GHG is the average time the molecule stays stable in the atmosphere. Most GHGs have long atmospheric lifetimes, staying in the atmosphere hundreds or thousands of years. The potential of a gas to trap heat and warm the atmosphere is measured by its ~~global warming potential (GWP).~~GWP. The reference gas for establishing GWP is carbon dioxide, which—as shown in Table 1—consequently has a GWP of 1. As an example, methane, while having a shorter atmospheric lifetime than carbon dioxide, has a 100-year GWP of 21, which means that it has a greater global warming effect than carbon dioxide on a molecule-by-molecule basis. For purposes of reporting GHG emissions, all GHGs are converted to a common factor and reported as CO_2 equivalent (CO_2E).

As stated in the County Guidelines, although there are dozens of GHGs, state law defines GHGs as the following seven compounds: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen triflouride (NF_3). Of these gases, CO_2, CH_4, and N_2O are produced by both biogenic and anthropogenic sources, and are the GHGs of primary concern in this analysis. The remaining gases occur ~~solely~~ as the result of industrial processes, such as refrigeration, aluminum production, semiconductor manufacture, and insulation in electric power transmission and distribution equipment, and are not of primary concern to ~~the project~~this analysis.

1.1.2 Sources of GHG Emissions

The main sources of GHG emissions and the major sectors identified for emissions reductions strategies by the California Air Resources Board (CARB) include transportation, electric power, residential, commercial and~~ residential~~, industrial land uses, recycling and waste, high global warming potential sources, agriculture, and forestry. Two of these GHG emission sectors account for the majority of GHG emissions generated within California: transportation and electric power.

The transportation sector ~~represents~~includes the GHG emissions associated with ~~motor~~on-road vehicles, ~~recreational~~off-road vehicles, aviation, ships, and rail. GHG emissions from on-road and off-road vehicles are generated from the engines' combustion of fossil fuels and thus are typically estimated based on fuel type, fuel quantity consumed and vehicle miles traveled (VMT). CO_2 emissions account for the majority of GHG emissions from mobile sources and are directly related to the quantity of fuel combusted, while CH_4 and N_2O emissions depend more on the emissions-control technologies employed in the vehicle and distance traveled.

Emissions from the electric power sector, as measured statewide, represent the GHG emissions associated with use and production of electrical energy, including electricity generated out of state. Electricity use is associated with fulfilling commercial, residential and industrial energy needs, as well as with collecting, treating, storing, and distributing water, wastewater, and solid waste.

Direct GHG emissions from the commercial and residential sector include area sources such as landscape maintenance equipment, fireplaces, and natural gas consumption for space and water heating. Indirect GHG emissions are also generated off-site at electricity-generating plants to meet commercial and residential electricity demand for heating, cooling, ventilating, lighting and appliance needs. At the state level, these indirect electricity emissions are counted in the electric power sector. At the project level, both the electricity and natural gas needs of a proposed project are counted in the project's operational emissions estimates.

GHG emissions associated with industrial land uses, such as manufacturing plants and refineries, are predominantly comprised of stationary sources (e.g., boilers and engines) associated with industrial processes.

The recycling and waste sector represents the GHG emissions associated with operations at waste management facilities and landfills. GHG emissions are generated from solid waste disposal (including emissions associated with anaerobic and aerobic decomposition that primarily produce CH_4 and CO_2 emissions, respectively) and alternative daily cover (i.e., organic material used to cover waste piles, which also decompose and generate GHG emissions).

Examples of high global warming potential GHG sources include refrigerants (e.g., HFCs), industrial gases (~~i.~~e.g., PFCs and NF_3), and electrical insulation (e.g., SF_6). Although these GHGs are typically generated in much smaller quantities than CO_2, their high GWP results in considerable ~~CO2~~CO_2E statewide.

The agriculture sector represents the GHG emissions associated with agricultural processes as generated through the use of off-road farm equipment, irrigation pumps, residue burning, livestock, and fertilizer volatilization.

GHG emissions associated with the forestry sector include emissions from forest and rangeland fires and other disturbances such as pest damage, timber harvesting, wood waste decomposition, and other sources. ~~The~~ CARB also tracks sinks or sequestration (i.e., the removal of CO_2) associated with forestry.

1.1.3 Potential Environmental Effects of Global Climate Change

According to the California Natural Resources Agency's 2009 *California Climate Adaptation Strategy*, California should anticipate hotter and drier conditions, reduced winter snow, increased winter rain, and accelerating sea level rise. Extreme weather events, such as heat waves, wildfires, droughts, and floods are expected to become more common. By 2050, temperatures are projected to increase by 1.8 to 5.4 degrees Fahrenheit (°F) statewide. These climate changes will affect public health, water supply, food production, and ecosystems health. Such effects are briefly summarized in the County Guidelines and are outlined ~~below.~~in the following section.

1.1.3.1 Public Health

Climate change can trigger a range of public health effects. Extreme heat waves, increases in pollen, more frequent wildfires, and changes in the spread of vector-borne diseases represent threats to the public health~~.~~ (IPCC 2007). Climate change can also impact public health through changes to food supply, water systems, and shelter.

Health effects of increased temperature include heat exhaustion, heat stroke, and exacerbating existing cardiovascular and respiratory diseases, diabetes, nervous system disorders, emphysema, and epilepsy. Climate change can also promote the formation of ground-level pollutants, such as ozone and particulate matter, which have been shown to have adverse health effects, particularly among sensitive populations~~.~~ (IPCC 2007).

1.1.3.2 Water

California can expect a 12 to 35 percent decrease in precipitation levels by mid-century, along with increased evaporation from higher temperatures. Snowpack serves a critical role in California's water supply. With increased temperatures, decreases in winter snow, and increases in winter rain, storage, and conveyance of water supply will become more of a challenge.

The average early spring snowpack runoff has decreased by about 10 percent over the last century. The Sierra Nevada snowpack is projected to decrease by 25 to 40 percent by 2050 compared to its mid-twentieth century average. The loss of snowpack would also hamper hydropower generation and snow-related recreational activities. Over the recent decades of the twenty-first century there has been a tendency for a lower spring snow pack grows. These lower amounts equate to a 60 percent loss in the measured volume available water resources from the Sierra Nevada by 2100 (Scripps Institute of Oceanography 2012).

1.1.3.3 Sea Level Rise

Rising sea levels, more intense coastal storms, and warmer water temperatures will increasingly threaten the state's coastal regions. Recent estimates suggest sea level rise of up to 55 inches by the end of this century~~.~~ (Cal Adapt 2013). Sea level rise of this magnitude would inundate coastal areas with salt water, accelerate coastal erosion, threaten levees and inland water systems, and disrupt natural habitats. An influx of saltwater would degrade California's estuaries, wetlands, and groundwater aquifers.

Saltwater intrusion caused by rising sea levels is a major threat to water quality within the southern edge of the Sacramento/San Joaquin River Delta. Saltwater intrusion will reduce water supply for plants, wildlife, agriculture, and metropolitan use. The Delta accounts for a portion of San Diego County's water supply and is important to the state as a whole~~.~~ (Cal Adapt 2013).

1.1.3.4 Agriculture

Increased GHG emissions are expected to cause widespread changes to agriculture, reducing the quantity and quality of agricultural products statewide. Reductions in available water supply to support agriculture will impact production. Although higher CO_2 levels can stimulate plant production and increase plant water-use efficiency, farmers will face greater water demand for crops and a less reliable water supply as temperatures rise. ~~Crop growth and development will change, as will the intensity and frequency of pest and disease outbreaks.~~

Rising temperatures promote ozone formation, which will, in turn, make plants more susceptible to disease and pests and interfere with plant growth. Plant growth tends to be slow at low temperatures and increase up to a certain point with rising temperatures. Faster growth, however, can result in less-than-optimal development for many crops, thus decreasing the quantity and quality of yield for a number of agricultural products.

1.1.3.5 Ecosystems and Habitats

Climate change is anticipated to adversely affect biological resources in a number of ways. Various temperature-sensitive plant and animal species would have to adapt to warmer temperatures or shift their geographic range, which may not be feasible in certain instances. Species migration and invasions will alter species interactions. Longer fire seasons will affect vegetation and help to spread invasive species. Sea level rise may wipe out critical habitat for coastal species~~.~~ (IPCC 2007, Ackerly 2012).

The timing and amounts of water released from reservoirs and diverted from streams are constrained by their effects on various native fish, including rare species. Several potential hydrological changes associated with global climate change could influence the ecology of aquatic life and have several negative effects on cold-water fish. If climate change raises air temperature by just a few degrees, this could raise the water temperatures above the tolerance of salmon and trout in many streams, favoring non-native fish, such as sunfish and carp. Unsuitable summer temperatures would be particularly problematic for many of the threatened and endangered fish that spend summers in cold-water streams, either as adults, juveniles, or both~~.~~ (IPCC 2007, Ackerly 2012).

1.1.3.6 Wildfires

Climate change is predicted to increase the number of wildfires and the acreage affected. Wildfire occurrence statewide could increase from 57 percent to 169 percent by 2085, depending on the emissions scenario, and events are predicted be more severe. The wildfire season is ~~apparently~~ already increasing in intensity, starting sooner, and lasting longer~~.~~ (Cal EPA 2013).

1.2 Project Description

[Subchapter 1.2 has been updated to clarify the project description.]

The project would consist of a mix of residential, commercial, and institutional uses, along with parks and open space. Specifically, the project would include 90,000 square feet of commercial, office and retail uses, including a 50-room country inn; 903 traditional single-family detached residences; 164 single-family attached residences; 211 residential units within commercial mixed-use areas; 468 age-restricted residences within a senior citizen's neighborhood; necessary facilities and amenities to serve the senior population (including a senior community center, and 200-bed group residential and group care facility); options for civic facilities, including a fire station and a school site (K-8); and public and private neighborhood parks, a private recreational facility, and other recreational amenities. The mixed-use, commercial, and civic uses, with parks, form a Town Center and two Neighborhood Centers, to which residents can walk for various social and commercial needs. As defined in the Lilac Hills Ranch Specific Plan, the residential component of the project consists of 1,746 units with an overall density less than 2.9 dwelling units per acre.

Also planned within the project site are a RF, a WRF, and other supporting infrastructure. Open space is proposed to retain some of the existing citrus and avocado groves, and allows 104.1 acres of sensitive resources including biological/wetland habitat.

The project application includes a Specific Plan (SP12-001), a General Plan Amendment (GPA 12-001), a Rezone (REZ 12-003), a Master Tentative Map (TM 5571 RPL 4), an implementing Tentative Map for Phase 1 (TM 5572 RPL 4), one site plan (S12-018 for Parks), and a MUP for the WRF (MUP 12-005). The project would be implemented in five phases. Additional discretionary permits may be needed to implement latter phases, as identified in the Specific Plan.

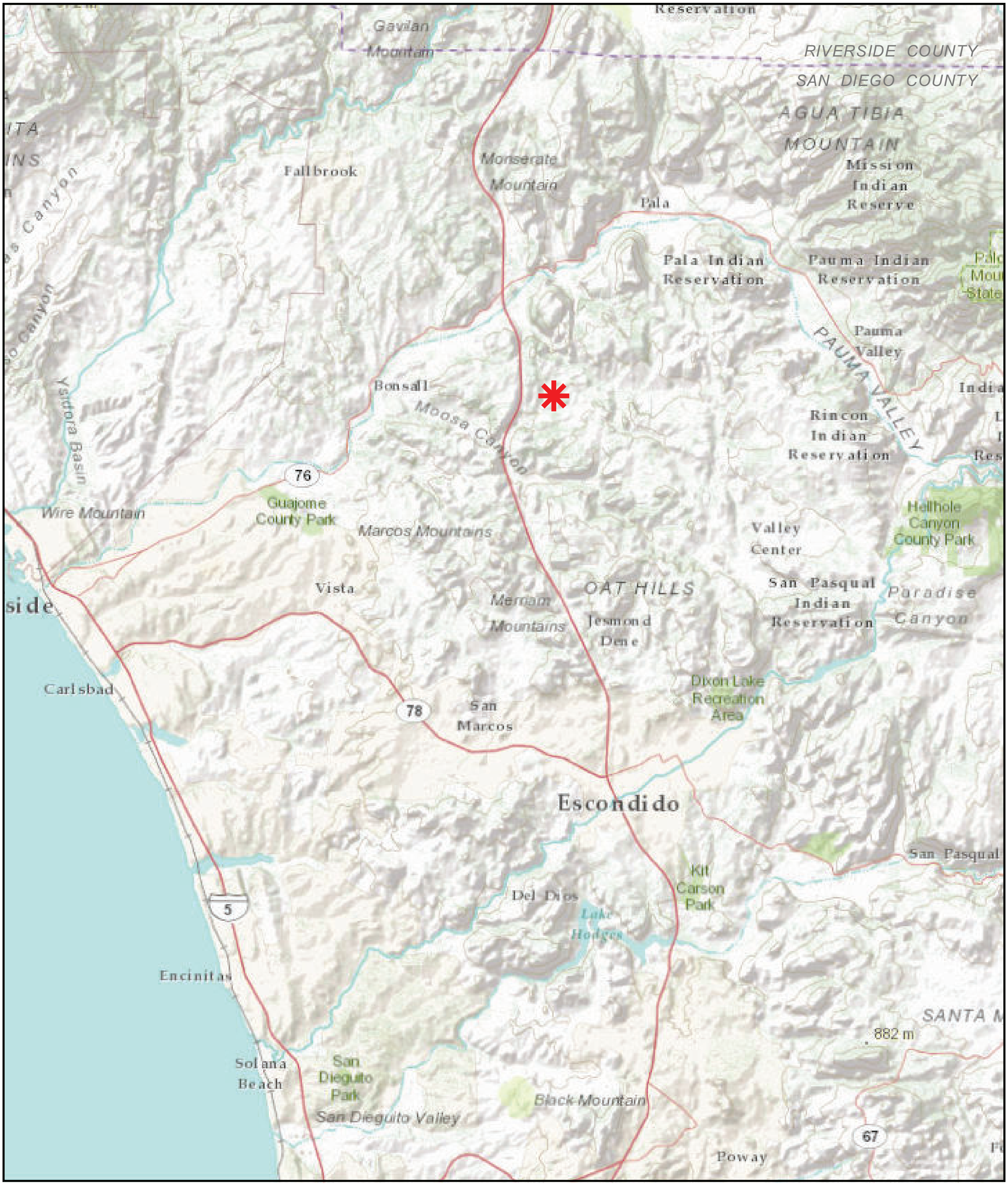
1.2.1 Project Location

The project site is located in the unincorporated portion of San Diego County in the westernmost portion of the Valley Center Community Plan Area and easternmost portion of the Bonsall Community Plan Area, and adjacent to I-15 and Old Highway 395, as illustrated on Figures 1 and 2. From the northwest project corner, West Lilac Road serves as the northern boundary of the project site, while Rodriguez Road serves generally as the project boundary to the south and east. From the southwest project corner, the western boundary of the project runs along Old Highway 395/Shirey Road and extends to Standell Lane. From there, the project site extends back to Shirey Road, which serves as the northwestern project boundary.

1.2.2 Project's Component Parts

1.2.2.1 Plan Amendments

In order to develop the proposed project, a number of land use changes to the General Plan, the Valley Center Community Plan, and Bonsall Community Plan are required. These include an amendment to the Regional Land Use Element Map, an amendment to the Valley Center Community Plan, an amendment to the Bonsall Community Plan, an amendment to the Regional Mobility Element, a rezone, adoption of the Lilac Hills Ranch Specific Plan, two tentative maps, two site plans, and a major use permit.



0 Miles 4

Project Location

FIGURE 1

Regional Location

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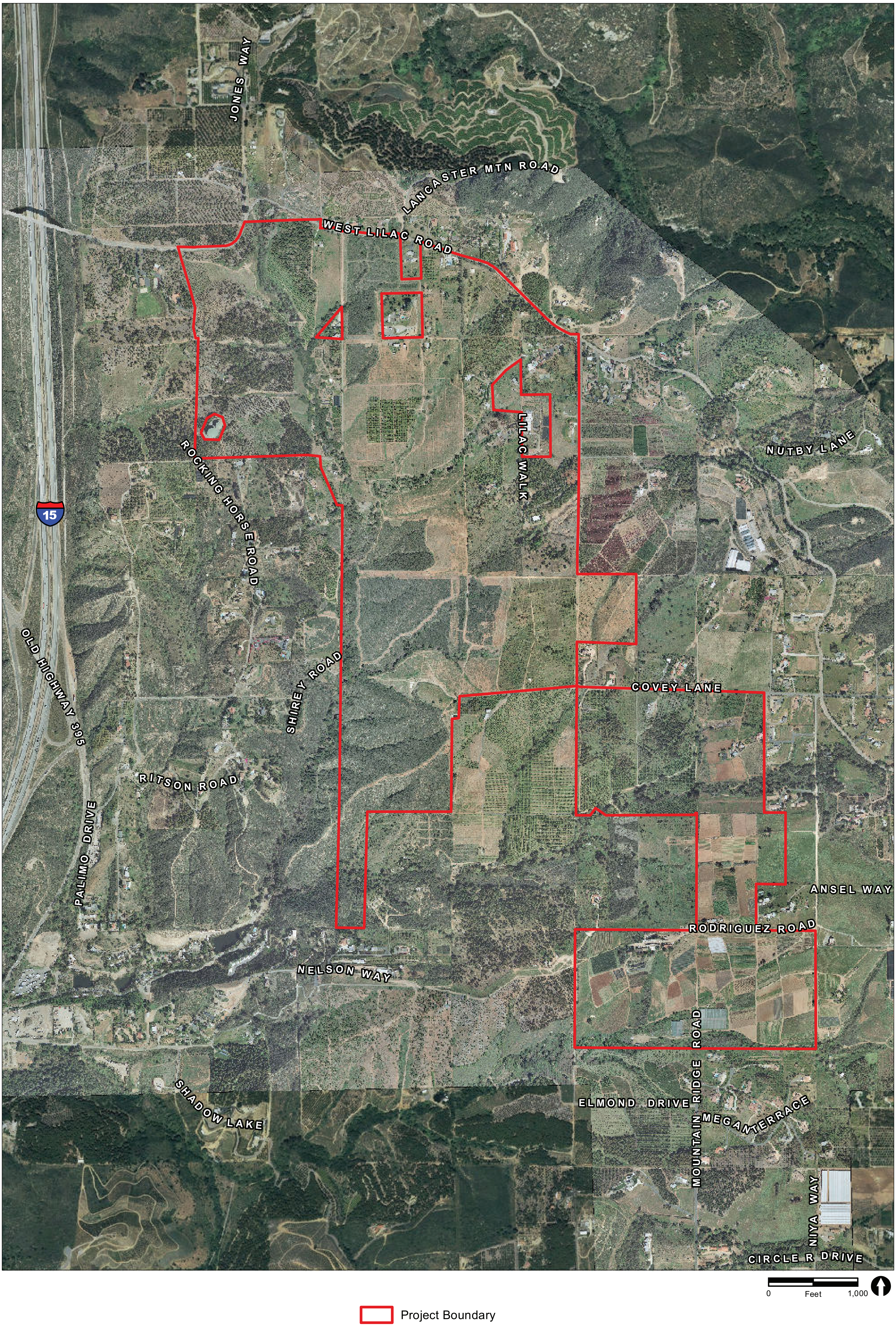

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FIGURE 2

Project Location on an Aerial Photograph

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1.2.2.2 Rezone

The majority of the project site, which lies within the Valley Center Community Plan Area, is zoned "Limited Agriculture"; the portion of the site, which lies within the Bonsall Community Plan Area, is zoned "Rural Residential". The project includes a Rezone (R12-003), as illustrated in Figure 3, which would replace the existing Rural Residential and Limited Agriculture Use Regulations with two new Use Regulations:

1. Outside of the Town Center and two Neighborhood Centers, the project site would be rezoned with the Urban Residential (RU) Use Regulation.

2. The Town Center would be rezoned with the General Commercial–Residential C34 Use Regulation, as would be the two Neighborhood Centers south of the Town Center and the RF.

1.2.2.3 Specific Plan

This Specific Plan (SP12-001) provides the guidelines for implementation of the project, including future approvals and improvement plans, and establishes permitted land uses, densities, maximum number of residential units, required public facilities, and phasing and implementation mechanisms, and demonstrates compliance with applicable County policies. In addition to establishing regulations and zoning for the proposed planning areas, the Specific Plan also sets forth guidelines for the character and design of the project site, including architectural and landscape design guidelines.

a. Specific Plan Planning Areas

The project would be implemented in five phases, as discussed below. Table 2 provides a summary of the planning areas by category and their associated zoning.

Map Source: Vance and Associates, 2014

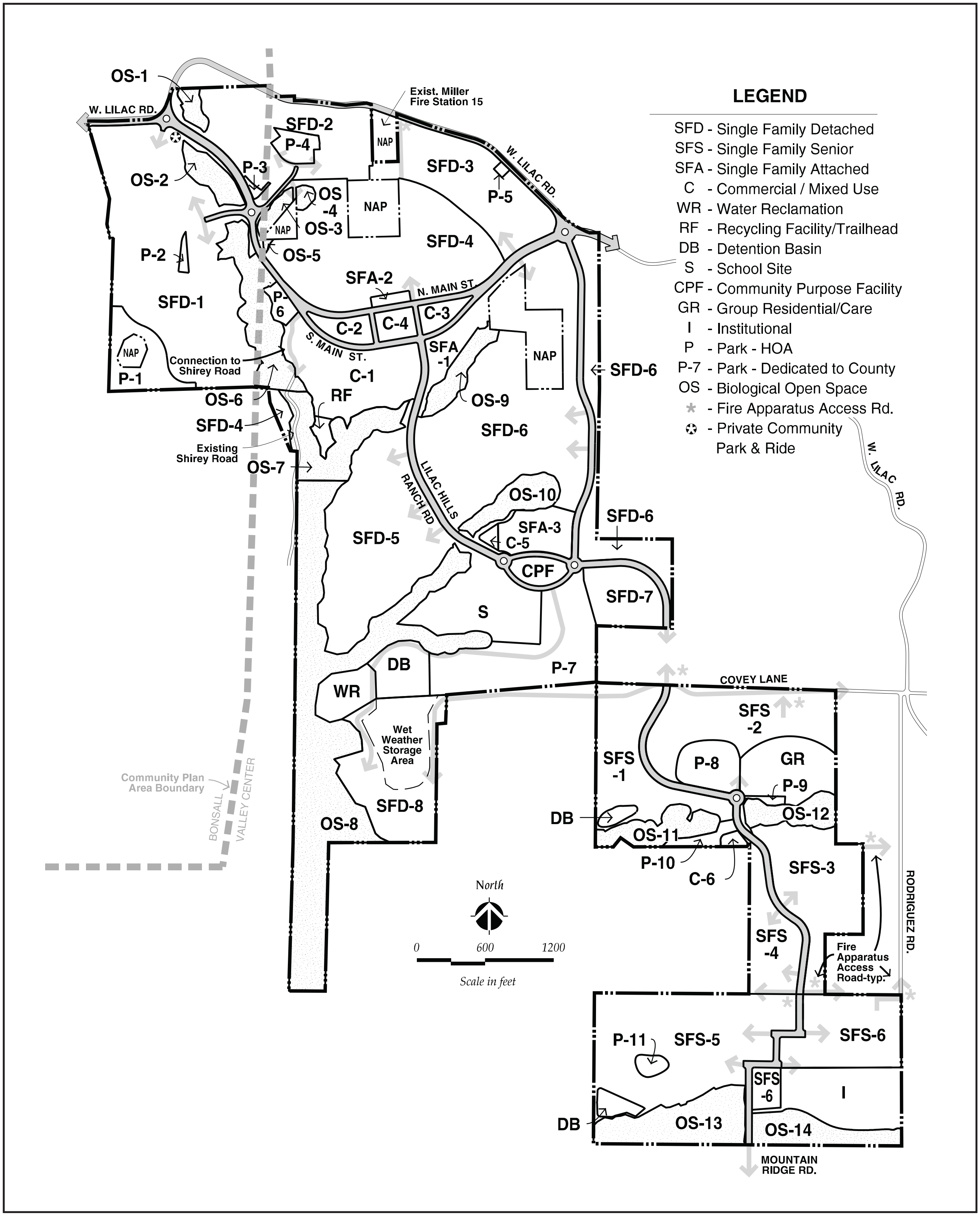

FIGURE 3

Specific Plan Map

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TABLE 2
PLANNING AREA SUMMARY

Land Use	Planning Areas	Gross Acreage	Dwelling Units/ Square Feet (s.f.)
Single-family Detached	SFD	156.9	903
Single-family Senior	SFS	76.9	468
Single-family Attached	SFA	7.9	164
Group Residential/Group Care	GR	6.5	N/A
Commercial and Mixed-Use	C	15.3	211/ (90,000 s.f.)
K-8 School Site	S	12.0	N/A
Institutional Use	I	10.0	N/A
Parks - Dedicated to County	P10	13.5	N/A
Parks - HOA	P	10.1	N/A
Community Purpose Facility	CPF	2.0	N/A
Biological Open Space	OS	104.1	N/A
Common Areas/Agricultural Buffers	--	20.3	N/A
Manufactured Slopes	--	68.2	N/A
Circulating and Non-Circulating Roads	--	83.3	N/A
Water Reclamation Facility	WRF	2.4	N/A
Recycling Facility/Trail Head/Staging Area	RF	0.6	N/A
Detention Basins	DB	7.9	N/A
Wet Weather Storage	WWS	8.1	N/A
TOTAL		**608**	**1,746**

The Specific Plan map (see Figure 3) shows the community divided into multiple planning areas with types of land uses ranging from single-family residential to biological open space. The phasing map (Figure 4) shows how the community has been divided into five phases with Phase 1 at the northeast corner and Phase 5 in the southeast corner of the community.

Phase 1 encompasses 121.5 acres and would be located in the northern portion of the project site, adjacent to West Lilac Road. This area would include 352 single-family detached units, along with 4.5 acres of public pocket park(s).

Phase 2 would be located just south of Phase 1, is the only Phase which is entirely surrounded by the other phases of the project (Phases 1 and 3), and is not adjacent to any existing homes or parcels. The 89.6-acre area would include the location of the Town Center and a maximum of approximately 196 single-family detached units, 59 single-family attached units, and 211 mixed-use residential units; 80,000 square feet of commercial space; and 0.8 acres of park, and a 2.0-acre Village Green. The RF would also be located within this phase, south of the Town Center.

Image source: Custom image provided by client (flown March 2012), and Aerials Express, All Rights Reserved (flown March 2010)

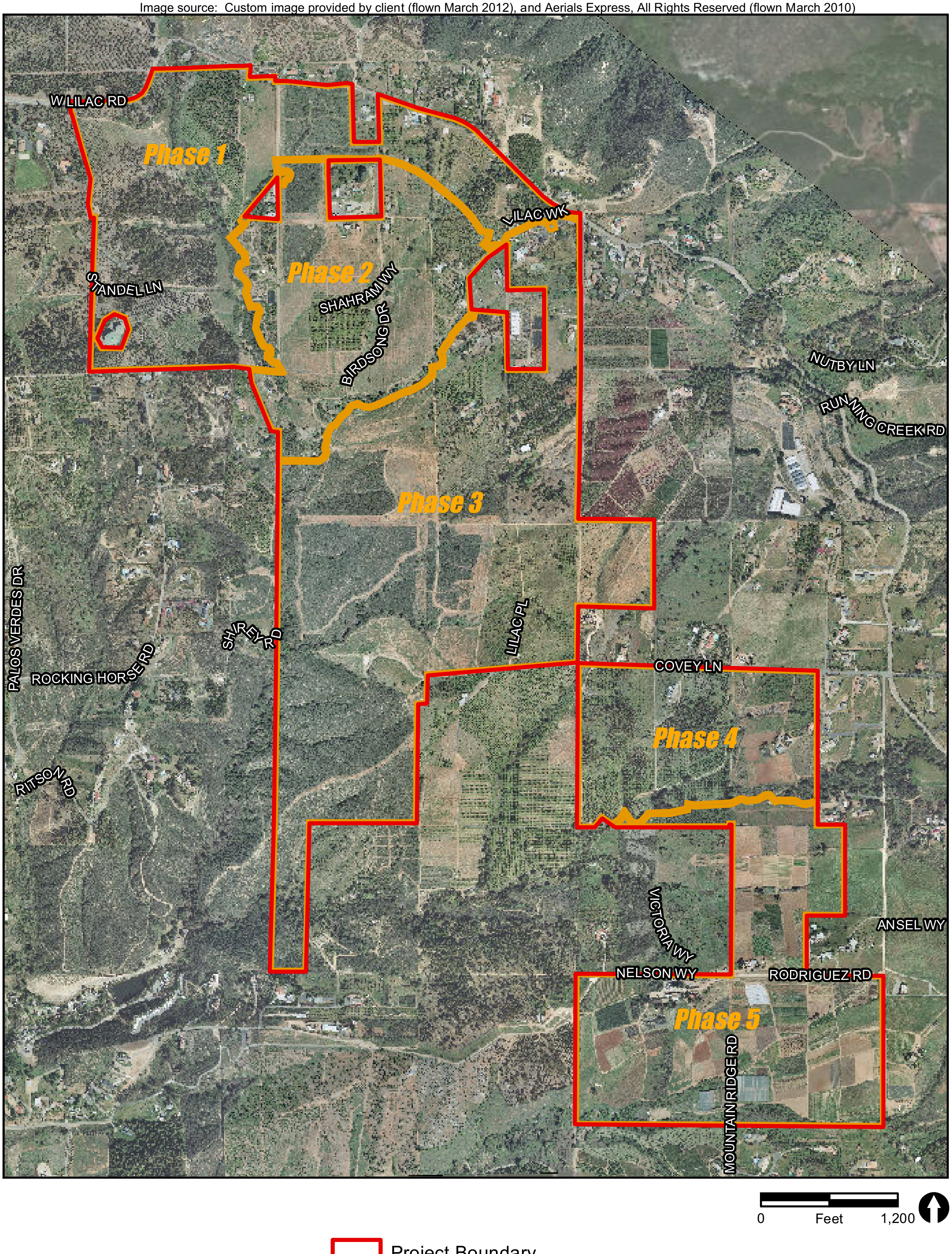

FIGURE 4

Project Phases

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Phase 3 encompasses 223 acres and would be located directly south of Phase 2. This phase would include the construction of a maximum of 355 single-family detached and 105 single-family attached dwelling units and 7,500 square feet of commercial space. Also located within Phase 3 would be a 2.0-acre Community Purpose Facility area composed of a fire station and private recreational center not to exceed 40,000 square feet, combined. The WRF, a detention basin, and a 13.5-acre public park are also included with Phase 3.

Phase 4 would be located southeast of Phase 3. A total of 171 age-restricted/single-family detached homes and 2,500 square feet of commercial uses are proposed on 61.5 acres. Primary access to Phase 4 would be via Lilac Hills Ranch Road from Phase 3. Covey Lane would provide alternative access, and secondary emergency access would be provided via Street "B", connecting to Rodriguez Road on the east. Also proposed within Phase 4 are a 3.3-acre senior center, a private park, a 200-unit Group Residential/Group Care facility (these units are permitted to have small private kitchens in addition to the facility group kitchen), a half-acre pocket park, and a detention basin.

Phase 5 would be located directly south of Phase 4. Phase 5 would include 297 age-restricted/single-family senior detached homes, 2,500 square feet of commercial space, and 10.0 acres for a religious/institutional use. Also included in Phase 5 is a detention basin. Primary access would be from a connection to Lilac Hills Ranch Road constructed in Phase 4 to the north, and a secondary fire apparatus access road would be provided via Rodriguez Road to the east and Mountain Ridge Road to the south for the Institutional parcel. Mountain Ridge Road is planned to be a gated road that will be accessible only by a portion of Phase 5 residence and opened during emergencies to facilitate evacuation of residents in the area during an emergency.

b. Construction

Infrastructure

Required roadway improvements and storm drains would be constructed in phases to ensure that improvements are in place at the time of need. The Specific Plan and Traffic Impact Study prepared for the project detail when roadway improvements occur in relation to residential occupancies of the phases. Water and wastewater facilities, along with dry utilities, would be phased as the residential units are occupied.

On-Site

The project would require on-site grading and improvements, including fuel modification zones, on 505.3 acres of the site, as depicted on the conceptual grading plan. Both cuts and fills are proposed within each grading area. Fill material would be transferred between the areas as required.

All grading would be balanced on-site. The maximum (worst case) grading/construction conditions are based on 10 acres per day per phase would be actively graded[1]. Based on the limited amount of blasting required, blasting would occur by phase and would occur at various times during each phase as the grading reaches an appropriate depth. Rock crushing would be required and would occur on-site, as needed, for continuous periods of less than 30 days.

Grading would be balanced with an estimated 4.07 million cubic yards (cy) of cut and fill (less than 2,300 cy per home), without the need for export or import of soil. The majority of cut and fill slopes would be approximately 10 feet, and approximately 85 percent of all cubic yardage moved would be less than 20 feet deep. The grading plan also includes three hydromodification basins, located throughout the project site.

On-site grading quantities by phase are shown in Table 3, below. A detailed grading plan has been prepared for only Phase 1, in conjunction with the Tentative Map. Grading plans also would be required in conjunction with Tentative Maps for future phases.

TABLE 3
GRADING QUANTITIES BY PHASE (cy)

Phase	Cut	Fill	Net
1	715,000	860,000	(145,000)
2	635,000	830,000	(195,000)
3	1,815,000	1,260,000	555,000
4	295,000	420,000	(125,000)
5	610,000	700,000	(90,000)
TOTAL	4,070,000	4,070,000	-

cy = cubic yards

[1]This is based on a 50,000 cubic yard a day cut, transport, and spread. (50,000 cy/27=X/10 ft=Y/43,560 sq ft =Z acres * 3 activities = ~10 acres, then assume a max of two crews working on site for 20).

c. Off-site Roadway Improvements

The project would improve the following off-site roadways:

- West Lilac Road
- Gopher Canyon Road/I-15 Northbound Ramps
- Gopher Canyon Road/I-15 Southbound Ramps
- Mountain Ridge Road to Circle R Drive
- Covey Lane to West Lilac Road
- Street “B” to Rodriguez Road
- Rodriguez Road from the project site to Covey Lane

d. Blasting

Blasting would be required for several areas within the project site. Deep blasting (greater than 50 feet in depth) would occur in one location within the project site, near the detention basin in Phase 3. Blasting in this location is anticipated to remove 1,500 cy of material. Moderate depth blasting (30–40 feet below existing grade) would occur in several areas across the site and occur within each phase. Blasting in these locations is anticipated to remove 24,000 cy of material. Shallow blasting would occur in two locations (Phases 1 and 4) and would remove approximately 28,000 cy of material. In total, between 1 to 2 percent of the total volume of material (a total of approximately 81,400 cy) to be moved would be the result of blasting.

e. Construction Vehicles and Equipment

A variety of equipment would be used during the construction of the project. All equipment would be Tier III, operational for eight hours per day. The maximum equipment that would be operational at any one particular time includes: 1 concrete/industrial saw, 4 tractors/loaders/backhoes, 6 crawler tractors, 5 rubber-tired loaders, 2 bore/drill rigs, 1 grader, 8 scrapers, 1 crane, 3 forklifts, 2 generator sets, 1 welder, 2 pavers, 2 paving equipment, 2 rollers, and 2 air compressors.

Blasting operations would require three to four drill rigs working per day. To accomplish 81,400 cy of cut, blasting would occur over approximately 9 days during the entire build-out of the project (assuming each blast can generate approximately 10,000 cy per blast). One or two hoe rams would be working on-site for the majority of grading, along with a mobile rock crusher. The mobile rock crusher would be utilized a total of 2 to 3 months maximum, spread out over 6 to 12 months (may move in and out as needed), per phase.

Construction vehicles would access the project site via I-15, Old Highway 395, and West Lilac Road. Construction staging areas would be located within areas proposed for grading within the project site. The grading equipment to be used for the project would be brought to the site at the beginning of the grading period and would remain on-site until the completion of the grading period (e.g., equipment would not be hauled to and from the site daily). A traffic control plan, approved prior to grading, would be prepared to minimize traffic impacts to surrounding communities.

1.2.3 Operation

The project is described in detail in subchapter 1.2.2. It is anticipated that various individual phases will be operational at different points along the project timeline. Construction of each individual phase is planned to be geographically distributed to cause less impact on the operations of the previous phase(s). The proposed operational dates are listed in Table 4 for each development phase:

TABLE 4
PHASES 1 THROUGH 5 OPERATIONAL START DATES

Phase	Start Date
Phase 1	January 2016
Phase 4	October 2016
Phase 2	July 2017
Phase 5	April 2018
Phase 3	January 2022

In the northernmost area of the project, Phase 1 would be developed first. It is anticipated this would be followed by the development of Phase 4 in the southern portion of the project. Phase 2 would follow immediately after and would be located to the southeast of Phase 1. The next phase would be Phase 5, which is located at southernmost end of the project. The last phase to enter operation would be the largest and the longest to construct, Phase 3, which would be located in the central area of the project site. Operational emissions associated with full build-out, in January of 2022, were used to evaluate the long-term air quality impacts in this analysis.

1.2.4 Construction

1.2.4.1 Infrastructure

Required roadway improvements and storm drains would be constructed in phases, to ensure that improvements are in place at the time of need. The Specific Plan and Traffic Impact Study prepared for the p~~P~~roject identify ~~detail~~ when roadway improvements occur in relation to residential occupancies of the phases. Water and wastewater facilities, along with dry utilities, would be ~~phased~~developed as the residential units are occupied.

1.2.4.2 On-Site

The project would require on-site grading and improvements, including fuel modification zones, on 505.3 acres of the site, as depicted on the conceptual grading plan. Both cuts and fills are proposed within each grading area. Fill material would be transferred between the areas as required. Primary, or backbone, roadways would be constructed immediately following the grading stage of each construction phase, and additional on-site roadways, as traffic demand requires.

Grading of the project site is planned to occur in five phases between July of 2014 and December of 2021 (see Table 3). The project would require grading and earthmoving for approximately 4,070,000 cubic yards (yd^3) (less than 2,300 cy per home) of cut and fill, which would be balanced on-site. The balancing of the cut and fill on–site would decrease construction trips~~.~~ by decreasing hauling trips.

~~**TABLE 3**~~
~~**GRADING QUANTITIES BY PHASE**~~

~~Phase~~	~~Cut (yd^3)~~	~~Fill (yd^3)~~	~~Net (yd^3)~~
~~1~~	~~715,000~~	~~860,000~~	~~(145,000)~~
~~2~~	~~635,000~~	~~830,000~~	~~(195,000)~~
~~3~~	~~1,815,000~~	~~1,260,000~~	~~555,000~~
~~4~~	~~295,000~~	~~420,000~~	~~(125,000)~~
~~5~~	~~610,000~~	~~700,000~~	~~(90,000)~~
~~Total~~	~~4,070,000~~	~~4,070,000~~	~~0~~

~~Yd^3 = cubic yards~~

~~Grading would be balanced with an estimated 4.07 million yd^3 of cut and fill balanced on-site (less than 2,300 cy per home).~~ The majority of cut and fill slopes would be approximately 10 feet, and approximately 85 percent of all cubic yardage moved would be less than 20 feet deep. The grading plan also includes three hydromodification basins, located throughout the project site.

A detailed grading plan has been prepared for only Phase 1, in conjunction with the implementing Tentative Map. Grading plans ~~also~~ would be required in conjunction with Tentative Maps for future phases.

Based on information provided by the project applicant, the worst-case daily grading scenario for any development phase would be a maximum of 10–20 acres a day. It is estimated that ~~assumed~~ grading would require 6 months for Phases 1, 2, 4, and 5, and 15 months for Phase 3. To determine a reasonable worst-case condition for assessing impacts, the average daily movement of material was calculated based on the total cut and fill by phase divided over the period of grading. Based on this calculation, the phase with the highest average daily volume necessary to balance all cut and fill would be Phase 1 with an average movement of 12,353 yd^3 per day. It is projected that ~~assumed~~ blasting would be required for approximately 1 to 2 percent of the total volume and would occur at various times during each phase as the grading reaches an appropriate depth. Rock crushing would be required and would occur on-site, as needed, for continuous periods of less than 30 days.

1.2.4.3 Blasting

Blasting would be required for several areas within the project site. Deep blasting (greater than 50 feet in depth) would occur in one location within the project site, near the detention basin in Phase 3. Blasting in this location is anticipated to remove 1,500 yd^3 of material. Moderate depth blasting (30–40 feet below existing grade) would occur in several areas across the site and occur within each phase. Blasting in these locations is anticipated to remove 24,000 yd^3 of material. Shallow blasting would occur in two locations (Phases 1 and 4) and would remove approximately 28,000 yd^3 of material. In total, approximately 80,000 yd^3, of the total volume of material to be moved would be the result of blasting.

The blasting material is anticipated ~~assumed~~ to be ammonium nitrate and fuel oil (ANFO), which is typically requires 1 pound (~~lb~~) of explosive to excavate 1 yd^3 of rock (NPS 1999). It is estimated that each blast would excavate 10,000 yd^3 of rock material. It is estimated this would require 10,000 pounds of ANFO per blast with a total of 8 blasts over the life of the project for a total of 80,000 pounds of explosive.

1.2.4.4 Off-site Private Roadway Improvements

The project would be required to make improvements to the following off-site roadways:

- West Lilac Road
- Gopher Canyon Road/I-15 Northbound Ramps
- Gopher Canyon Road/I-15 Southbound Ramps
- Mountain Ridge Road to Circle R Drive
- Covey Lane to West Lilac Road
- Street “B” to Rodriguez Road
- Rodriguez Road

1.2.5 Operation

The project is described in detail in subchapter 1.2.2. It is anticipated that various individual phases will be operational at different points along the project timeline. Construction of each individual phase is planned to be geographically distributed to cause less impact on the operations of the previous phase(s). ~~The proposed operational start dates are listed in Table 4 for each development phase:~~

~~**TABLE 4**~~
~~**PHASES 1 THROUGH 5 OPERATIONAL START DATES**~~

~~Phase~~	~~Start Date~~
~~Phase 1~~	~~January, 2016~~
~~Phase 4~~	~~October, 2016~~
~~Phase 2~~	~~July, 2017~~
~~Phase 5~~	~~April, 2018~~
~~Phase 3~~	~~January, 2022~~

In the northernmost area of the project, Phase 1 would be developed first. It is anticipated this would be followed by the development of Phase 4 in the southern portion of the project. Phase 2 would follow immediately after and would be located to the southeast of Phase 1. The next phase would be Phase 5, which is located at southernmost end of the project. The last phase to enter operation would be the largest and the longest to construct, Phase 3, which would be located in the central area of the project site.

1.2.6 Project Features That Affect GHG Emissions

This subchapter describes the elements of the project that would or could generate GHG emissions, as well as the design and location features of the project that will have the effect of reducing GHG emissions.

1.2.6.1 Project Elements That Generate GHGs

The project includes a Specific Plan. Its adoption would not, in itself, generate GHG emissions. However, implementation of the land uses proposed in the Specific Plan would generate GHG emissions. Project implementation would be associated with the following sources of GHG emissions:

- Construction-related emissions; and
- Operational emissions associated with: mobile sources; on-site fuel combustion for space and water heating; landscape maintenance equipment; fireplaces; off-site emissions at utility providers associated with the electricity and wastewater demands; and sold waste generation and disposal.

The timeframe for implementation of project elements would occur in five phases over several years, as detailed in Table 4. Meanwhile, operational uses would begin in 2016 and continue through the anticipated 20-plus-year lifespan of the buildings.

1.2.6.2 Project Elements That Reduce GHGs

The project includes several siting, design, and operational features that would have the effect of reducing potential GHG emissions. Some of these features are included in the

CAP as measures relevant to the project, some are in response to existing regulations, and some are voluntarily included in order to reduce project GHG emissions~~ to below threshold levels. Quantification~~. The quantification of these reductions is ~~demonstrated~~provided in Chapter 5.0 of this report. Chapter 8.0 includes a recap of the project's GHG-reducing design features along with enforcement provisions.

a. Relevant County CAP Measures

Six relevant County CAP measures, E1, E3, E4, LS1, LU1, and T2, are incorporated into the project design and/or will be included as ~~policies (~~performance measures for ~~subsequent phases~~each project phase~~)~~.

E1: Energy Efficiency for New Development

~~In accordance with~~As identified in County CAP Measure E1, 100 percent of the proposed commercial square footage and residential units shall exceed 2008 Title 24 standards by [a minimum of] 15 percent. ~~(In fact, a~~As described in the design features below, however, ~~subsequent phases~~each project phase shall be required to exceed 2008 Title 24 standards by 30 percent, which exceeds the requirements of CAP Measure E1.~~)~~

This performance measure for design of ~~subsequent phases~~each project phase has been included as a policy in the project Specific Plan. By reducing energy consumption through building design, GHG emissions ~~are also~~would be reduced.

E3: Appliance Upgrades for New Residential

~~In accordance with~~As identified in County CAP Measure E3, Energy Star appliances (including clothes washers, dish washers, fans, and refrigerators) shall be installed in 95 percent of the single-family, mixed-use residential, and senior community residential uses.

This performance measure for design and operation of ~~subsequent phases~~ each project phase has been included as a policy in the project Specific Plan. By reducing per-appliance energy consumption, GHG emissions ~~are also~~would be reduced.

E4: Smart Meter

~~In exceedance of~~As identified in County CAP Measure E4, ~~100 percent of~~ new construction will utilize Smart Meter technology to reduce electricity consumption.

This measure would be applied to 100 percent of the new development. This performance measure for design and operation of ~~subsequent phases~~ each project phase has been included as a policy in the project Specific Plan. By reducing electricity consumption with Smart Meter technology, GHG emissions ~~are also~~would be reduced.

LS1: Plant Trees

~~The~~ As identified in County CAP Measure LS1, the proposed project will plant ~~35,000~~ new trees. The project will plant 35,000 net new trees by project build-out. Carbon reductions identified in the County CAP associated with tree planting are based on the carbon sequestered in the trees themselves~~. This~~ and potential energy savings if the planting location provides shade for buildings. While this measure would ~~further~~ reduce GHG emissions by sequestering carbon from the atmosphere~~; however, the measure~~ , its effectiveness in increasing energy efficiency is ~~not~~ unknown as a specific planting plans for individual lots would be required and are presently unavailable. Also, due to the length of ~~reduce GHG~~ time required for trees to mature and sequester GHGs, the emission reductions associated with this measure are not included in the analysis of GHG emissions ~~in compliance with the Performance Threshold~~for the County threshold, and ~~is~~ are not used to determine the significance of GHG impacts in 2020. However, the emission reductions associated with trees are considered in the context of 2035 and 2050 emissions.

LU1: Mixed-Use Development

In accordance with County CAP Measure LU1, the project proposes to provide a mix of residential and resident-serving commercial and civic uses. The non-residential uses include neighborhood-serving retail and restaurant uses, an elementary/middle school, church site, recreation center, neighborhood park, and a recycling center. All of these uses ~~are to~~would be provided within one-half mile of proposed residential uses.

As identified in the project Specific Plan~~ and Environmental Impact Report (EIR),~~, a key project objective is to:

- Develop a community within San Diego County over the next few decades consistent with the Community Development Model by using the principles of Leadership in Energy and Environmental Design for Neighborhood Development (LEED-ND) or an equivalent for appropriate development and phasing of pedestrian-oriented mixed-use community where one does not currently exist for both new and existing residents.

By providing a variety of land uses proximate to each other, mixed-use development reduces the quantity and length of vehicle trips, thereby reducing VMT and the emission of GHGs associated with vehicle fuel combustion.

T2: Increase Walking and Biking

In accordance with County CAP Measure T2, the project proposes to provide an on-site network of pedestrian and bicycle paths, in a complete and interconnected network, where currently there are very limited bicycling and pedestrian facilities.

As identified in the project Specific Plan~~ and EIR~~, two key objectives of the project are to:

- Provide a range of housing and lifestyle opportunities in a manner that encourages non-automotive mobility, and that provides public services and facilities.

- Provide a variety of recreational opportunities including parks for active and passive activities, and trails available to the public that connect the residential neighborhoods to the Town and neighborhood centers.

T~~o these ends~~hus, the project would be designed as a rural, bike and pedestrian-friendly community, with a centrally located Town Center and activity nodes located within a half-mile radius (a 20-minute walk) of the residential areas. Primary streetscapes would be designed to be pedestrian-oriented and contain tree-shaded walkways, pedestrian scaled lighting, and shortened or enhanced crosswalks.

The project also includes numerous trails, community pathways, bike lanes, and similar facilities throughout the project site. The project would include two bike lanes on Main Street through the Town Center. These bike lanes would provide a link for bicyclists to safely navigate the public road system in this part of Valley Center and provide a connection on the west to the Bonsall Community. Community pathways would be provided along Street 'Z', Main Street, and portions of Lilac Hills Ranch Road, south of Neighborhood Center North.

By increasing walking and biking opportunities, reliance on automobile use is reduced, thereby reducing GHG emissions ~~from~~associated with vehicles fuel consumption.

b. Project Design and Operation Measures

In addition to the County CAP measures described above, the project has been designed and will be operated to include measures to reduce GHG emissions from construction, energy use, water use, area sources, and waste disposal.

Use Tier III Construction Equipment

The project Specific Plan requires ~~subsequent phases~~each project phase to use a minimum of Tier III U.S. Environmental Protection Agency (EPA)/CARB-certified construction equipment, for the majority of construction equipment used, during construction. Tier III equipment may be replaced with Tier IV equipment in the final phases of construction. Common construction equipment is regulated by the U.S. EPA non-road diesel engine standards. These standards establish gas exhaust emission Tier I through IV standards, with the higher tiers being increasingly more stringent. The Tier III standards are met through advanced engine design and fuel controls, with limited use of exhaust gas after treatment (oxidation catalysts), and are purported to reduce Tier I emissions by one-third. The Tier IV emission standards are to be phased-in over the period of 2008–2015 and will achieve up to a 1/20 emission reduction through the use of control technologies including advanced exhaust gas after treatment (U.S. EPA 2012 and Komatsu 2006). Although primarily intended to reduce criteria pollutant emissions, by using more fuel-efficient and cleaner-burning Tier III and IV construction equipment, the GHG emissions from such equipment may also be reduced.

This performance measure for construction of ~~subsequent phases~~ each project phase has been included as a project design feature.

Exceed 2008 Title 24 Energy Efficiency by 30 Percent

~~In exceedance of~~accordance with County ~~CAP Measure E1, all subsequent~~ project ~~phases subject to Title 24 shall exceed 2008 Title 24 energy efficiency standards by. Additionally,~~ ~~t~~The proposed project would exceed the requirements of the County CAP measure by achieving a minimum of 30 percent exceedance or equivalent~~.~~ over the 2008 Title 24 standards. This performance measure for design of ~~subsequent phases~~ each project phase has been included as a project design feature.

~~By reducing building envelope energy needs, a project's overall energy consumption is reduced, thereby reducing GHG emissions associated with energy production. Per Title 24's triennial update cycle, the~~It should be noted that~~,~~ the recently adopted 2013 Title 24 ~~E~~energy ~~E~~efficiency s~~S~~tandards, which are presently scheduled for implementation by July 1, 2014, are anticipated ~~proposed~~ to use 25 percent less energy for lighting, heating, cooling, ventilation, and water heating than the 2008 Standards (IVEDC 2013). ~~Thus~~Thus, as the project would be subject to the 2013 Title 24 standards, the project's energy efficiency requirement would exceed this proposed update by~~ an additional~~ 5 percent.

Install High-efficiency Lighting

The project Specific Plan would require all ~~subsequent~~project phases to install high-efficiency lighting in all residential and commercial buildings ~~for~~to achieve an overall minimum 15 percent lighting energy reduction.

This ~~performance measure for~~project design ~~of subsequent phases would be~~feature is included as a policy in the project Specific Plan. By installing high-efficiency indoor and outdoor lighting systems on all structures, lighting energy consumption rates ~~are~~would be reduced and the GHG emissions associated with lighting energy use ~~are~~would also be reduced.

Install Only Natural Gas (No Wood) Fireplaces

The project Specific Plan ~~would require~~includes a requirement that ~~all~~ all ~~only~~fireplaces to be installed be natural gas or equivalent non-wood burning fireplaces~~ in all residential units. The~~ . Additionally, the conversion to wood~~–~~-burning fireplaces would be specifically ~~prohibited by homeowner by-laws and~~ prohibited by homeowner association by-laws as well as the Covenants, Conditions and Restrictions associated with each lot. By omitting wood-burning fireplaces and allowing only natural gas fireplaces, project GHG emissions from areas sources would be ~~substantially~~ reduced.

Reduce Waste Disposal/Institute Recycling and Composting Services

The project Specific Plan would provide the opportunity for recycling and composting services for all residences in order to achieve the equivalent of a 20 percent reduction in baseline waste disposal.

This performance measure ~~is considered~~would be feasible due to the project's siting of an on-site RF proximate to the other ~~(i.e.,~~ waste-generating~~)~~ land uses~~.~~

~~As identified in~~, e.g., residences. Additionally, the ~~project~~ Specific Plan ~~and EIR,~~states that one of ~~several key~~the project objectives ~~relates directly~~ is to ~~this issue and is to:~~

~~Provide the~~"provide an opportunity for residents to increase the recycling of waste~~.~~."

The RF would be constructed south of the Town Center. It would be owned and operated by a licensed private operator. The purpose of the facility would be to supplement recycling opportunities for project residents in addition to the weekly collection of waste, recycling material and green waste provided by franchised waste haulers, as required by the County of San Diego Solid Waste Management Ordinance and state law. The facility would include temporary roll-off bins or storage containers where recyclables and/or green waste generated from project residents may be consolidated for efficient off-site processing. If economically viable, a buy-back center may be opened at this location for residents to redeem California Redemption Value containers.

The facility would consist of a building and storage yard for truck and equipment storage. Composting would be done inside the building and the resultant material used by residents and the homeowners association for landscaping. The homeowners association ~~(HOA)~~ would require professional landscaping companies maintaining HOA lots to utilize this facility for all clippings and trimmings. This facility would also be available for use by residents in the area surrounding the project site. By reducing the amount of solid waste disposed of at landfills (~~by~~through increasing diversion of ~~this~~ waste to recycling) the GHGs associated with waste disposal would be reduced.

Reduce Potable Water Consumption

The project Specific Plan would require all ~~subsequent~~project phases to be designed to achieve a minimum 20 percent reduction in indoor and outdoor water use in accordance with California Green Building Standards Code (CALGreen). According to the County CAP GHG reduction measures, the project can achieve an interior water use reduction of approximately 20 percent through provision of low-flow faucets and fixtures and other conservation measures.

Additionally, to meet the ~~waste water~~wastewater treatment requirements of the project, the Valley Center Municipal Water District (VCMWD) is considering four alternatives: (1) sending all wastewater to the existing Lower Moosa Canyon Water Reclamation Facility (Moosa WRF) via a forcemain, (2) construction of a scalping plant on-site that would provide reclaimed water for on-site uses but send solids to Moosa WRF for treatment, (3) construction of a scalping plant on-site to serve the northern portion of the project with the southern portion sent to Moosa WRF, or (4) construction of a full WRF that would treat all wastewater and solids generated by the project.

The ~~Project~~project also ~~proposes~~includes on-site water improvements to distribution lines as well as off-site water improvements that would include connections to existing potable water distribution as well as new on- and off-site connection and distribution lines to recycled water. Recycled water could be generated from the proposed on-site WRF, which would be treated to a tertiary level and could be used to irrigate common and agricultural areas throughout the project site. At least two sources of reclaimed water are potentially available to the site, 400 acre-feet per year ~~(ac-ftft./yryr.)~~ could be made available from the Moosa WRF, and if the WRF is developed, the project could generate an estimated 286 acre-feet per year ~~ac-ftft./yr.~~ (Dexter Wilson 2013). The project's yearly exterior irrigation water demand is estimated to be 626 acre-feet per year~~ac-ftft./yr~~; 160 acre-feet per year ~~ac-ftft./yr~~ for exterior potable uses and 466 acre-feet per year ~~ac-ftft./yr~~ for non-potable uses. Based on the Wastewater Management Alternatives Analysis ~~(Dexter Wilson 2013)~~ for the project, the WRF would generate ~~286 ac-ft/yr for exterior non-potable uses,~~ approximately 46 percent of the total exterior demand and 61 percent of the non-potable demand~~.~~ (Dexter Wilson 2013). If non-potable water was utilized from the Moosa WRF, approximately 86 percent of the exterior non-potable demand could be met or 64 percent of the total exterior demand.

The project proposes to use recycled water to irrigate common area landscaping, slopes, parks, school fields, and as the primary method for irrigation of the retained groves, thereby reducing the need for imported and potable water (which, without access to recycled water, is typically also used for irrigation). Irrigation water may also be available from existing on-site wells. Whether and how much recycled water would be used on-site would ultimately be up to VCMWD (which is required to approve the facility), and would be done in accordance with their Master Plan. The present projection ~~assumption~~ by VCMWD is that all reclaimed water generated by the proposed facility can be put to beneficial use on the project lands or be used to offset existing imported water demand somewhere else within the VCMWD service area. Potable water from the VCMWD would be the last choice of supply to meet irrigation needs.

As identified in the project Specific Plan~~ and EIR~~, the project will comply with the County design policies by incorporating and encouraging low-impact development and sustainable practices throughout the entire Specific Plan area, including future commercial development, residential common areas and individual homes. By reducing water demand through water-conserving building and landscape design, and through supplying irrigation needs with recycled or captured water versus imported potable water, the GHGs associated with the energy use needed to collect, treat, and distribute potable water would be ~~substantially reduced. Based on the County CAP, it is assumed the project would reduce interior water use by approximately 20 percent through various conservation measures, such as the provision of low-flow faucets and fixtures.~~reduced.

Smart Meters

The project design includes the installation and use of Smart Meters. These meters provide utility customers with access to details on energy use and cost information, pricing programs based on peak energy demand, and the ability to program home appliances and devices to respond to energy use preferences based on cost, comfort, and convenience. Smart Meters increase awareness thus reducing energy cost and consumption.

Waste Management Plans

The proposed project would require that individual developers have waste management plans prepared for each project phase~~future individual projects~~. These plans will follow County Guidelines and will also include educational materials as part of the content. The plans will also address operational and construction phases of each proposed development.

Plant Trees

The proposed project includes the planting of 35,000 trees. This measure would ~~further~~ reduce GHG emissions by sequestering carbon from the atmosphere~~; however~~ and when planted in proximity to structures by increase energy efficiency through shading. However, the measure is not ~~not required to reduce~~included in the assessment of GHG ~~emissions~~emission reductions, in compliance with the ~~Performance~~ performance ~~Threshold~~ threshold and is not used to determine significance of GHG impacts~~.~~ under the 2020 scenario. The potential sequestration and energy efficiency associated with tree planting is quantified and included in the assessment of 2035 GHG emissions,

c. Existing Regulatory Measures

The project's vehicle and energy GHG emissions would also be reduced as a result of several key existing federal and statewide regulations: the Light Duty Vehicle GHG Emissions Standards, the ~~Low Carbon Fuel Standard (~~LCFS~~)~~, the Renewables Portfolio Standard (RPS), and the Tire Pressure Program. These regulations are included in the County CAP as measures SF1 through SF4. These regulations are described in detail in subchapter 3.2.3.1. In brief, these regulations mandate improved vehicle engine design and low-carbon vehicle fuels that will reduce GHG emissions associated with fossil-fuel combustion, while the RPS promotes diversification of the state's electricity supply and decrease reliance on fossil fuel energy sources.

2.0 Environmental Setting

2.1 Existing Land Use and Surrounding Area

2.1.1 Surrounding Area

The project vicinity includes primarily agricultural, residential and open space uses. Agricultural uses ~~include~~are primarily citrus and avocado groves, but also include small vineyards, row crops, and nursery operations. Residential uses in the immediate vicinity (three miles from the project site) are primarily single-family homes on lots between 1 to 10 acres. Commercial uses (e.g., offices), industrial uses (e.g., rock ~~manufacturing~~processing and concrete batch plant), recreational vehicle campgrounds, and cattle grazing also occur in the area.

Transit services are not currently provided on or within a ¼ mile of the project site (Chen Ryan ~~2013). The site is not in close proximity to~~ 201~~3a~~4). There are no neighborhood-serving uses such as grocery stores, restaurants, and retail in proximity to the site currently.

2.1.2 On-site Land Use and Physical Characteristics

The project site is generally characterized by relatively flat, marginal agricultural lands and gently rolling knolls, with steeper hillsides and ridges running north and south along the western edge. The project site is designated as semi-rural (Semi-Rural 10 and Semi-Rural SR-4), and zoned for Limited Agriculture (A70) and Rural Residential (RR). The primary land uses found on the project site are agricultural-related, with other uses consisting of open space and residential uses.

Agricultural lands cover the majority of the southeastern, east-central, and northern portions of the project area. The northern and central agricultural areas consist of orchard crops (primarily citrus and avocado) with some small areas of vineyard and nursery, while the southern concentrations of existing agricultural uses are primarily labor intensive row crops (vegetables and strawberries). An area used to produce stock for the commercial nursery business is located near the northwest part of the site. A total of 392.3 acres of agricultural lands exist on-site according to the biological technical report (RECON 2014~~12a~~), including 90.5 acres of row crops (vegetables and strawberries), 9.2 acres of nursery, 0.7 acre of vineyard, and 291.9 acres of orchard (citrus and avocado). Several buildings (approximately 16) exist within the project site associated with agricultural uses, including sheds, greenhouses and barns.

Twenty-two residences also exist on-site. The twenty-two residences and on-site agricultural operations (including the approximately 16 agricultural-associated buildings) would be removed from the project site to implement the proposed project. The existing residences are located on large lots scattered throughout the site. ~~Assuming~~ Based on the 2010 average Valley Center household size of 2.97 people (San Diego Association of Governments [SANDAG] 2010a), this roughly equates to an existing population of 66 people residing within the project site.

Wells occur in scattered locations across the site and are used to provide water to the orchards, vineyards, and other agricultural areas. Several man-made agricultural ponds that store water for irrigation purposes occur within the project area.

The project site includes approximately 145 acres of native open space. Native habitat occurs primarily along the drainage courses and on some of the steeper terrain on the western and southwestern portions of the project area. A total of 17 primary habitat types and vegetation communities were identified in the project survey area and buffer survey area (RECON 2014~~12a~~).

2.2 Existing Meteorological Conditions

The project site is located within the San Diego Air Basin (SDAB) and lies approximately 15 miles east of the Pacific Ocean. The eastern portion of the SDAB is surrounded by mountains to the north, east, and south. These mountains tend to restrict airflow and concentrate pollutants in the valleys and low-lying areas ~~below~~.

The project area, like the rest of San Diego County's inland valley areas, has a Mediterranean climate characterized by warm, dry summers and mild, wet winters. The mean annual temperature for the project area is 74°F. The average annual precipitation is 16 inches, falling primarily from November to April. Winter low temperatures in the project area average about 47°F, and summer high temperatures average about 76°F (Western Regional Climate Center [WRCC] 2012).

The dominant meteorological feature affecting the region is the Pacific High Pressure Zone, which produces the prevailing westerly to northwesterly winds. These winds tend to blow pollutants away from the coast toward the inland areas. Consequently, air quality near the coast is generally better than that which occurs at the base of the coastal mountain range.

Generally, atmospheric temperature decreases as one moves higher and further from the earth's surface; however, fluctuations in the strength and pattern of winds from the Pacific High Pressure Zone throughout the day produce periodic temperature inversions. A temperature inversion is a thin layer of the atmosphere where the decrease in temperature with elevation is less than normal. The inversion acts like a "lid" keeping pollutants "trapped" within the area under the inversion layer. This area is called the mixing depth. Generally, the morning inversion layer is lower than the afternoon inversion layer. The greater the change between the morning and afternoon mixing depths, the greater the ability of the atmosphere to disperse pollutants.

Throughout the year the height of the temperature inversion within the SDAB in the afternoon varies between approximately 1,500 and 2,500 feet above mean sea level (MSL) (San Diego Air Pollution Control District [SDAPCD] 2013). In winter, the morning inversion layer is about 800 feet above MSL. In summer, the morning inversion layer is about 1,100 feet above MSL. Therefore, air quality tends to be better in winter than in summer because there is a greater change in the morning and afternoon mixing depths, allowing the dispersal of "trapped" pollutants. Elevations across the project site range from 930 feet MSL at the highest to 750 feet MSL at the lowest~~.~~ (SDAPCD 2013).

The prevailing westerly wind pattern is sometimes interrupted by regional "Santa Ana" conditions. A Santa Ana occurs when a strong high pressure develops over the ~~Nevada-Utah~~Great Basin area and overcomes the prevailing westerly coastal winds, sending strong, steady, hot, dry northeasterly winds over the mountains and out to sea~~.~~ (California Nevada Applications Program ~~CNAP~~ 2014).

Strong Santa Ana winds tend to blow pollutants out over the ocean, producing clear days. However, at the onset or during breakdown of these conditions, or if the Santa Ana is weak, local air quality may be adversely affected. In these cases, emissions from the South Coast Air Basin to the north are blown out over the ocean, and low pressure over Baja California draws this pollutant-laden air mass southward. As the high pressure weakens, prevailing northwesterly winds reassert themselves and send this cloud of contamination ashore in the SDAB. When this event does occur, the combination of transported and locally produced contaminants produce the worst air quality measurements recorded in the SDAB.

2.3 State and Local GHG Inventories

2.3.1 Statewide GHG Emissions

~~The~~ CARB performs statewide GHG inventories. The inventory is divided into nine broad sectors of economic activity: agriculture, commercial, electricity generation, forestry, high GWP emitters, industrial, recycling and waste, residential, and transportation. Emissions are quantified in million metric tons of ~~CO_2 equivalent~~CO_2E (MMTCO_2E). Table 5 shows the estimated statewide GHG emissions for the years 1990, ~~2000, 2004, and~~ 2008, and 2011.

TABLE 5
CALIFORNIA GHG EMISSIONS BY SECTOR IN 1990, 2008 AND 2011

Sector	1990[1] Emissions in $MMTCO_2E$ (% total)[2]	2008[3] Emissions in $MMTCO_2E$ (% total)[2]	2011 Emissions in $MMTCO_2E$ (% total)[2]
Sources			
Agriculture	23.4 (5%)	33.88 (7%)	32.24 (7%)
Commercial	14.4 (3%)	15.56 (3%)	15.62 (3%)
Electricity Generation	110.6 (26%)	120.14 (25%)	86.57 (19%)
High GWP	--	11.48 (2%)	15.17 (3%)
Industrial	103.0 (24%)	89.27 (18%)	93.24 (21%)
Recycling and Waste	--	6.69 (1%)	7.0 (2%)
Residential	29.7 (7%)	29.03 (6%)	29.85 (7%)
Transportation	150.7 (35%)	177.16 (37%)	168.42 (38%)
Forestry (Net CO_2 flux)	-6.69	--	--
Not Specified	1.27	--	--
TOTAL	**426.6**	**483.22**	**448.11**

SOURCE: CARB 2007, 2013a
[1] 1990 data was retrieved from the CARB 2007 source.
[2] Percentages may not total 100 due to rounding.
[3] 2008 and 2011 data was retrieved from the CARB 2013a source.
[4] Reported emissions for key sectors. The inventory totals for 2008 and 2011 did not include Forestry or Not Specified sources.

~~CALIFORNIA GHG EMISSIONS BY SECTOR IN 1990, 2000, 2004, AND 2008~~

~~Sector~~	~~1990 Emissions in $MMTCO_2E$ (% total)[1]~~	~~2000 Emissions in $MMTCO_2E$ (% total)[1]~~	~~2004 Emissions in $MMTCO_2E$ (% total)[1]~~	~~2008 Emissions in $MMTCO_2E$ (% total)[1]~~
~~Sources~~				
~~Agriculture~~	~~23.4 (5%)~~	~~25.44 (6%)~~	~~28.82 (6%)~~	~~28.06 (6%)~~
~~Commercial~~	~~14.4 (3%)~~	~~12.80 (3%)~~	~~13.20 (3%)~~	~~14.68 (3%)~~
~~Electricity Generation~~	~~110.6 (26%)~~	~~103.92 (23%)~~	~~119.96 (25%)~~	~~116.35 (24%)~~
~~Forestry (excluding sinks)~~	~~0.2 (<1%)~~	~~0.19 (<1%)~~	~~0.19 (<1%)~~	~~0.19 (<1%)~~
~~High Global Warming Potential~~	~~--~~	~~10.95 (2%)~~	~~13.57 (3%)~~	~~15.65 (3%)~~
~~Industrial~~	~~103.0 (24%)~~	~~97.27 (21%)~~	~~90.87 (19%)~~	~~92.66 (19%)~~
~~Recycling and Waste~~	~~--~~	~~6.20 (1%)~~	~~6.23 (1%)~~	~~6.71 (1%)~~
~~Residential~~	~~29.7 (7%)~~	~~30.13 (7%)~~	~~29.34 (6%)~~	~~28.45 (6%)~~
~~Transportation~~	~~150.7 (35%)~~	~~171.13 (37%)~~	~~181.71 (38%)~~	~~174.99 (37%)~~
~~Unspecified Remaining[2]~~	~~1.3 (<1%)~~	~~--~~	~~--~~	~~--~~
~~*Subtotal*~~	~~*433.3*~~	~~*458.03*~~	~~*483.89*~~	~~*477.74*~~
~~Sinks~~				
~~Forestry Sinks~~	~~-6.7 (--)~~	~~-4.72 (--)~~	~~-4.32 (--)~~	~~-3.98 (--)~~
~~**TOTAL**~~	~~**426.6**~~	~~**453.31**~~	~~**479.57**~~	~~**473.76**~~

~~SOURCE: CARB 2010a.~~
[1] ~~Percentages may not total 100 due to rounding.~~

[2] ~~Unspecified fuel combustion and ozone depleting substance (ODS) substitute use, which could not be attributed to an individual sector.~~

As shown in Table 5, statewide GHG source emissions totaled 426.6~~433~~ $MMTCO_2E$ in 1990, ~~458 $MMTCO_2E$ in 2000, 484 $MMTCO_2E$ in 2004, and~~ 483.22~~478~~ $MMTCO_2E$ in 2008, and 448.11 CO_2E in 2011. Many factors affect year-to-year changes in GHG emissions, including economic activity, demographic influences, environmental conditions such as drought, and the impact of regulatory efforts to control GHG emissions. While CARB has adopted multiple GHG emission reduction measures, the effect of those reductions will not be seen until around 2015. According to CARB most of the reductions since 2008 have been driven by economic factors (recession), previous energy efficiency actions, the renewable portfolio standard, and climate hydrology~~According to data from the CARB, it appears that statewide GHG emissions peaked in 2004 and are now beginning to decrease~~ (CARB ~~2010a~~2013a). Transportation-related emissions consistently contribute the most GHG emissions, followed by electricity generation and industrial emissions.

The forestry sector is unique because it not only includes emissions associated with harvest, fire, and land use conversion (sources), but also includes removals of atmospheric CO_2 (sinks) by photosynthesis, which is then bound (sequestered) in plant tissues. However, estimates of CO_2 uptake and GHG emissions by processes occurring on forest, range, and other land types, such as urban forests, are not included in the current inventories as new research and analyses methods are required to better understand forest sector carbon accounting and the fundamental processes associated with sequestration and emissions (CARB 2013a). ~~As seen in Table 5, the forestry sector consistently removes more CO_2 from the atmosphere statewide than it emits. As a result, although decreasing over time, this sector represents a net sink, removing a net 6.7 MMTCO$_2$E from the atmosphere in 1990, a net 4.7 MMTCO$_2$E in 2000, a net 4.3 MMTCO$_2$E in 2004, and a net 3.9 MMTCO$_2$E in 2008.~~

2.3.2 San Diego Countywide GHG Emissions

A San Diego regional emissions inventory was prepared by the University of San Diego School of Law, Energy Policy Initiative Center (EPIC) and ~~that~~ took into account the unique characteristics of the region. Their 2006 emissions inventory for San Diego is duplicated in Table 6. The sectors included in this inventory are somewhat different from those in the statewide inventory.

TABLE 6
SAN DIEGO COUNTY GHG EMISSIONS BY SECTOR IN 2006

Sector	2006 Emissions in MMTCO$_2$E (% total)[1]	
Agriculture/Forestry/Land Use	0.7	(2%)
Waste	0.7	(2%)
Electricity	9.0	(25%)
Natural Gas Consumption	3.0	(8%)
Industrial Processes & Products	1.6	(5%)
On-road Transportation	16.0	(45%)
Off-road Equipment & Vehicles	1.3	(4%)
Civil Aviation	1.7	(5%)
Rail	0.3	(<1%)
Water-borne Navigation	0.127	(<0.5%)
Other Fuels/Other	1.1	(3%)
TOTAL	**35.5**	

SOURCE: University of San Diego 2008.

[1]Percentages may not total 100 due to rounding.

Similar to the statewide emissions, transportation-related GHG emissions contributed the most countywide, followed by emissions associated with energy use. Transportation accounts for a higher proportion of GHG emissions in San Diego compared to the state, while electricity-related emissions represent the same proportion relative to the state as a whole. Industrial and agricultural emissions are substantially less represented in San Diego County compared to the state.

The November~~June~~ 2013~~2~~ County CAP also identifies baseline and forecast community-wide GHG emissions (County of San Diego 2013~~2a~~). This is duplicated in Table 7 below. Table 7 includes ~~forecast~~ GHG emissions estimates for a 2005 baseline, and forecast 2020, 2035, and 2050 emissions under a business-as-usual (BAU) scenario. Baseline inventories for 1990 were not possible to estimate, hence, a 2005 baseline. A BAU scenario is the expected emissions that would occur in the County CAP and other GHG-reducing measures (such as statewide legislation) were not implemented.

TABLE 7
SAN DIEGO COUNTY COMMUNITY BASELINE AND PROJECTED GHG EMISSIONS

Sector	2005 Baseline Emissions in $MTCO_2E$	2020 BAU Emissions in $MTCO_2E$	2035 BAU Emissions in $MTCO_2E$	2050 BAU Emissions in $MTCO_2E$
Transportation	2,636,702	3,098,307	4,004,966	4,785,555
Residential Energy	505,963	566,033	666,952	707,334
Commercial/Industrial energy	615,687	737,916	818,698	934,503
Agriculture	190,025	159,246	118,134	83,520
Solid Waste	144,865	162,064	190,959	202,521
Wastewater	50,412	56,397	66,452	70,475
Potable Water	236,435	264,506	311,665	330,535
Other	132,490	148,220	174,646	185,221
TOTAL	**4,512,580**	**5,192,689**	**6,352,472**	**7,299,664**

SOURCE: County of San Diego Climate Action Plan, Appendix C, Table C.1, November~~June~~ 2013~~2~~.

~~As indicated in Table 7, T~~Ttransportation GHG emissions accounted for 58 percent of total baseline community-wide emissions, and energy consumption associated with residential and commercial/industrial uses accounted for 11 and 14 percent of total baseline GHG emissions, respectively. BAU 2020 transportation GHG emissions are forecasted to account for 60 percent of total community-wide emissions, and energy consumption associated with residential and commercial/industrial uses to account for 11 and 14 percent of total 2020 BAU GHG emissions (the same percentages as baseline). While all other sectors are forecast to increase relative to the baseline, GHG emissions from the agriculture sector are projected to decline by 2020 and beyond.

2.3.3 Project Site GHG Emissions

Current sources of on-site GHG emissions are associated with the vehicle use, energy use, water use, area sources (landscaping and other equipment use, stoves and fireplaces) and waste disposal practices of existing land uses. As identified above in subchapter 2.1.1, the project site is presently occupied primarily by agricultural uses, with 22 single-family homes scattered throughout the 608 acres at very low density. ~~Emissions due to these existing residential uses in year 2020 were modeled and subtracted from the scenarios with and without mitigations as required when using the County's Performance Threshold. The existing emissions are presented for informational purposes only and do not change the results of the impact analysis.~~

~~Typically, GHG emissions from agriculture are due to energy/fuel use and off-gassing associated with agricultural vehicles, agricultural pumps (irrigation pumps), residue burning, soil management practices, enteric fermentation from livestock, and histosol and rice cultivation.~~

~~The CAP estimated that for the County as a whole, the agricultural sector emitted 190,025 MTCO~~$\sout{_2}$~~E (4 percent of total countywide emissions) in 2005; and is projected to emit 159,246 MTCO~~$\sout{_2}$~~E (3 percent of total emissions) by 2020 under BAU. As stated in Appendix C of the CAP, within the agriculture sector, energy emissions (from diesel-operated pumps and off-road vehicles) accounted for the majority (57 percent) of total agricultural emissions. Other agricultural emissions calculated include enteric fermentation (22 percent), soil management (12 percent), manure management (9 percent), and residue burn (less than 1 percent).~~

Given the types of agricultural operations on-site (i.e., mostly orchard crops, some row crops, no livestock, no histosol or rice cultivation), current emissions of GHGs ~~would~~are ~~mostly~~are mostly ~~be~~ associated with off-road agricultural vehicles such as mowers, sprayers, tractors, balers, and tillers. Smaller amounts of GHGs ~~would be~~are associated with fertilizer application and soil management. Conservatively, ~~T~~the agricultural emissions were not reported for on-site existing sources and uses due to the difficulty in securing reliable data.

Emissions due to the existing residential uses were quantified for year 2008 and 2020, as shown in Table 8. A comparison of the existing emissions to the proposed project emissions at build-out is provided in subchapter 6.1.

TABLE 8
ANNUAL ESTIMATED GHG EMISSIONS
FOR EXISTING USES

Project Emission Sources	2008 Existing Emissions ($MTCO_2E$)	2020 Projected Emissions ($MTCO_2E$)
Construction	--	--
Vehicles	392.54	292.83
Energy Use	95.26	86.59
Area Sources	52.70	58.54
Water Use	11.49	11.49
Solid Waste	11.75	11.75
TOTAL	**563.74**	**461.20**

The GHG emissions from 2008 include the GHG reductions from the Initial RPS. The GHG emissions from 2020 reflect reductions from LCFS, Pavley I, the RPS reduction calculated for 2020, the tire pressure program and LEV III. The projected emissions from existing sources and uses in 2020 are calculated to be lower than the existing emissions in 2008 and represent an 18.1 percent reduction from existing land uses by 2020, which is in line with the reduction anticipated by the state for existing land uses through regulatory action at the state and local level.

3.0 Regulatory Setting

This chapter identifies the most relevant federal, state, and local laws, rules, regulations, plans and policies that define the regulatory framework for climate change and reducing GHG emissions.

3.1 International/Federal

3.1.1 Intergovernmental Panel on Climate Change

In response to growing concern about pollutants in the upper atmosphere and the potential problem of climate change, the World Meteorological Organization and the United Nations Environment Programme (UNEP) established the Intergovernmental Panel on Climate Change (IPCC) in 1988. The IPCC was tasked with assessing the scientific, technical, and socioeconomic information relevant to understanding the scientific basis for human-induced climate change, its potential impacts, and options for adaptation and mitigation. IPCC reports provide scientific consensus on measurable changes to the climate; establish that these changes are caused by human activity; and identify that significant adverse impacts on the environment, the economy, and human health and welfare are unavoidable. As a member of the UNEP, the U.S. is a participant in the IPCC.

3.1.2 United Nations Framework Convention on Climate Change

In 1994, the United States joined a number of other nations in signing an international treaty known as the United Nations Framework Convention on Climate Change (UNFCCC). The UNFCCC recognized that global climate is a shared resource that can be affected by industrial and other emissions of GHGs and set an overall framework for intergovernmental efforts to tackle the challenges posed by global climate change. Under this treaty, governments agree to gather and share information on GHG emissions, national policies, and best practices; launch national strategies for addressing GHG emissions and adapting to expected impacts; and cooperate with other nations in preparing for adaptation to the impacts of climate change (UNFCCC 2007).

3.1.3 Executive Office Climate ~~Change~~ Action Plan

~~Adopted in late 1993, the U.S. Climate Change Action Plan (CCAP) consists of voluntary actions to reduce all significant GHGs from all economic sectors. Backed by federal funding, the CCAP supports cooperative partnerships between the government and the private sector in establishing flexible and cost-effective ways to reduce GHG emissions. The CCAP encourages investments in new technologies, but also relies on previous actions and programs focused on saving energy, reducing transportation emissions, improving forestry management, and reducing waste.~~The Executive Office has produced the President's Climate Action Plan, which includes goals of cutting carbon pollution and preparing for the impacts of climate change (Executive Office of the President 2013). Cutting carbon pollution is part of the President's goal to double renewable electricity generation by 2020, through accelerating clean energy permitting and expanding and modernizing the electric grid. The plan also states that the federal government will consume 20 percent of its electricity from renewable sources by 2020. This document was produced by the executive branch and has not passed through congressional channels.

3.1.3.1 GHG Emissions Intensity Reduction Programs

Towards the effort to reduce GHG emissions, in February 2002, the U.S. set a goal to reduce its GHG emissions intensity, which is the ratio of GHG emissions to economic output. In 2002, the U.S. GHG Emissions Intensity was 183 metric tons per million dollars of gross domestic product (U.S. EPA 2007). The goal established in February 2002 was to reduce this GHG emissions intensity by 18 percent by 2012 through the various ~~CCAP-related~~GHG reduction programs. One of these programs includes the Energy Star program that was first established in 1992 by the U.S. EPA and became a joint program with the U.S.

Department of Energy in 1996. Energy Star is a program that labels energy efficient products with the Energy Star label. Energy Star enables consumers to choose energy-efficient and cost-saving products, with up to 30 percent energy savings over conventional appliances such as refrigerators, dishwashers, clothes washers, and fans. Another key federal GHG reduction program is the Green Power Partnership program that establishes partnerships between the U.S. EPA, and companies and organizations that have bought or are considering buying green power (i.e., power generated from renewable energy sources). The U.S. EPA offers recognition and promotion to organizations that replace electricity consumption with green power.

3.1.4 U.S. EPA Authority to Regulate GHGs

On April 2, 2007, the U.S Supreme Court ruled that CO_2 is an air pollutant as defined under the Clean Air Act, and that the U.S. EPA has the authority to regulate GHG emissions.

3.1.5 Corporate Average Fuel Economy Standards

The federal Corporate Average Fuel Economy (CAFE) standards determine the fuel efficiency of certain vehicle classes in the U.S. While the standards had not changed since 1990, as part of the Energy and Security Act of 2007, the CAFE standards were increased ~~in 2007~~ for new light-duty vehicles to ~~35~~achieve the equivalent of 35 miles per gallon (mpg) by 2020. In ~~May 2009, President Obama announced further plans to increase CAFE standards to require~~October 2012, the EPA and National Highway Traffic Safety Administration (NHTSA) issued a final rule for new light~~-~~-duty vehicles ~~to meet~~for model years 2017 to 2025 to achieve an ~~average fuel economy~~ equivalent of ~~35~~54.5 mpg ~~by 2016.~~(Federal Register 2011). With improved gas mileage, fewer gallons of transportation fuel would be combusted to travel the same distance, thereby reducing nationwide GHG emissions associated with vehicle travel.

3.2 State

3.2.1 Executive Order S-3-05—Statewide GHG Emission Targets

This executive order (EO) of 2005 proclaims that California is vulnerable to the impacts of climate change, including increased temperatures that could reduce the Sierra Nevada's snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, it established the following GHG emission reduction targets for the state of California:

- by 2010, reduce GHG emissions to 2000 levels;

- by 2020, reduce GHG emissions to 1990 levels;
- by 2050, reduce GHG emissions to 80 percent below 1990 levels.

This EO also directed the secretary of the California EPA (CalEPA) to oversee the efforts made to reach these targets, and to prepare biannual reports on the progress made toward meeting the targets and on the impacts to California related to global warming. The first such Climate Action Team Assessment Report was produced in March 2006 and has been updated every two years thereafter.

3.2.2 Assembly Bill 32—California Global Warming Solutions Act of 2006

In response to EO S-3-05, the California legislature passed ~~Assembly Bill 32 (~~AB 32~~)~~, the California Global Warming Solutions Act of 2006, and thereby enacted Sections 38500–38599 of the California Health and Safety Code. AB 32 required CARB to establish an emissions cap and adopt rules and regulations that would reduce GHG emissions to 1990 levels by 2020. AB 32 also required CARB to adopt a plan by January 1, 2009 indicating how emission reductions would be achieved from significant GHG sources via regulations, market mechanisms, and other actions.

3.2.3 Climate Change Scoping Plan

3.2.3.1 Baseline Emissions

As directed by AB 32, in 2008 CARB adopted the Climate Change Scoping Plan, which identifies the main strategies California will implement to achieve the GHG reductions necessary to reduce forecasted BAU emissions by 2020. In 2008, as part of its adoption of the Scoping Plan, CARB estimated that annual statewide GHG emissions were 427 $MMTCO_2E$ in 1990 and would reach 596 $MMTCO_2E$ by 2020 under a BAU scenario (CARB 2008a). To achieve the mandate~~1990 emissions levels~~goals of ~~427 $MMTCO_2E$~~AB 32, a 169 $MMTCO_2E$ (or approximate 28.3 percent) reduction in BAU ~~emission~~emissions was ~~thus determined to be~~ needed by 2020. (The 2020 emissions baseline used in the 2008 Scoping Plan is the estimate of statewide 2020 emissions developed using pre-recession data and reflects GHG emissions expected to occur in the absence of any reduction measures in 2010 (CARB 2011a~~b~~).

In 2010, CARB revised its 2020 BAU projections to account for the economic downturn and to account for laws that had taken affect but were not included in the 2008 calculations. ~~Based on the refined input, CARB estimated that 2020 emissions under a BAU scenario would reach approximately 507 $MMTCO_2E$ (CARB 2011a).~~

~~CARB is mandated to update the Scoping Plan at least once every five years to allow evaluation of progress made and to correct the Scoping Plan's course where necessary. In~~

~~2010, CARB revised its 2020 BAU projections to account for the economic downturn and other factors. CARB's revised forecast estimated that 2020 emissions would reach approximately 545 MMTCO$_2$E under BAU (CARB 2010b). Because this projection assumed the absence of any Scoping Plan reduction measures despite two~~Based on that effort CARB ~~of its key~~ updated the projected 2020 emissions to 545 MMTCO$_2$E (CARB 2011a). Two reduction measures ~~already being enforced, CARB also estimated a new 2020 baseline emissions (accounting for these two reduction measures) of approximately 507 MMTCO$_2$E per year. The two Scoping Plan measures that have already begun to be enforced include the~~ (Pavley I ~~(Light-duty Vehicle GHG Emissions Standards)~~ and the ~~initial~~Initial RPS~~-~~) not previously included in the 2008 Scoping Plan baseline were incorporated into the updated baseline, further reducing the 2020 statewide emissions projection to 507 MMTCO2e. Effectively, the economic downturn reduced the 2020 BAU by 55 MMTCO2E, while Pavley I and the Initial RPS accounted for reductions of 26 MMCO$_2$E and 12 MMTCO$_2$E, respectively (CARB 2011b).

Given the refined 2020 ~~baseline~~ forecast of 507 MMTCO$_2$E per year ~~(accounting for Pavley I and the initial RPS, an~~, CARB determined statewide GHG emissions would need to be reduced by 80 MMTCO$_2$E (or ~~16~~15.8 percent~~) reduction was determined to be needed~~ of 507 MMTCO$_2$E) by 2020 in order to reach the 1990 emissions ~~level of 427 MMTCO$_2$E~~emission levels per AB 32 (CARB 2010~~b~~a). ~~These updates have been~~The updated emissions projects and targets were incorporated into ~~a revised~~the AB 32 Scoping Plan that was approved in 2011 (CARB 2011b~~a~~).

The Scoping Plan states that land use planning and urban growth decisions will play an important role in the reaching the state's GHG reduction targets because local governments have primary authority to plan, zone, approve, and permit how land is developed to accommodate population growth and the changing needs of their jurisdictions.

In February 2014, CARB released the Draft First Update to the Scoping Plan. According to the Scoping Plan Update, California is on track to meet the near-term 2020 greenhouse gas limit and is well positioned to maintain and continue reductions beyond 2020 as required by AB 32 (CARB 2014). However, unlike the 2010 revision to the 2008 Scoping Plan, the Scoping Plan Update does not revise 2020 GHG emissions forecasts.

3.2.3.2 GHG Reduction Strategies

The majority of the Scoping Plan's GHG reduction strategies are directed at the two sectors with the largest GHG emissions contributions: transportation and electricity generation. The GHG ~~reductions~~reduction strategies for these sectors involve statutory mandates affecting vehicle or fuel manufacture, public transit, and public utilities. The reduction strategies employed by CARB are designed to reduce emissions from existing sources as well as future sources. The most relevant are outlined ~~below~~in the following sections.

~~The Scoping Plan also states that land use planning and urban growth decisions will play an important role in the state's GHG reductions because local governments have primary authority to plan, zone, approve, and permit how land is developed to accommodate population growth and the changing needs of their jurisdictions.~~

a. AB 1493—Light-duty Vehicle GHG Emissions Standards

AB 1493 enacted July 2002, directed CARB to adopt vehicle standards that lowered GHG emissions from passenger vehicles and light-duty trucks to the maximum extent technologically feasible, beginning with the 2009 model year. CARB adopted regulations in 2004 but was not granted the authority to enforce them until mid-2009 due to a lawsuit by the Alliance of Automobile Manufacturers (Marten Law Group 2008).

CARB adopted these regulations (termed "Pavley I") as a discrete early action measure pursuant to AB 32 and includes it as a reduction measure in ~~its~~the 2011 Scoping Plan. CARB estimates that full implementation of Pavley I will reduce GHG emissions from California passenger vehicles by about ~~29.9~~26 $MMTCO_2E$~~ or 37 percent of the total 80 $MMTCO_2E$ reduction target for 2020~~, as established in the 2011 Scoping Plan ~~based on the refined 2020 baseline forecast~~ (CARB 2011a~~0b~~ and 2011b~~a~~). CARB has also adopted a second phase of the Pavley regulations, termed "Pavley II" ~~or~~ now called the Low Emission Vehicle III" (LEV III) Standards, that covers model years 2017 to 2025. CARB estimates that ~~Pavley II~~ LEV III will reduce vehicle GHGs by an additional 4.0 $MMTCO_2E$ for a 2.4 percent reduction over Pavley I (CARB 2011a~~0~~c~~b~~). These reductions ~~are to~~ come from improved vehicle technologies such as ~~small~~smaller engines with superchargers, continuously variable transmissions, and hybrid electric drives. On August 7, 2012 the final regulation for the adoption of LEV III became effective. It is expected that Pavley I and LEV III regulations will reduce GHG emissions from California passenger vehicles by about 22 percent in 2012 and about 30 percent in 2016, while improving fuel efficiency and reducing motorists' costs (CARB 2013b).

CARB has adopted a new approach to passenger vehicles – cars and light trucks – by combining the control of smog-causing pollutants and greenhouse gas emissions into a single coordinated package of standards, which includes efforts to support and accelerate the numbers of plug-on hybrids and zero-emission vehicles in California (CARB 2013b).

b. Low Carbon Fuel Standard

~~This~~ An executive order (EO S-01-07) signed in 2007 directed that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020 through a LCFS. ~~The LCFS is a performance standard with flexible compliance mechanisms intended to incentivize the development of a diverse set of clean low-carbon transportation fuel options. Its aim is to accelerate the availability and diversity of low-carbon fuels such as biofuels, electricity, and hydrogen by taking into consideration the full life cycle of GHG emissions.~~

CARB adopted the LCFS as a discrete early action measure pursuant to AB 32 in April 2009 and includes it as a reduction measure in its Scoping Plan that accounts for approximately 10 percent of the total statewide GHG reductions. The LCFS is a performance standard with flexible compliance mechanisms intended to incentivize the development of a diverse set of clean low-carbon transportation fuel options. Its aim is to accelerate the availability and diversity of low-carbon fuels such as biofuels, electricity, and hydrogen by taking into consideration the full life cycle of GHG emissions.

~~The LCFS is currently being challenged in court. Plaintiffs argue that the LCFS is unconstitutional because it violates the interstate commerce clause, which was intended to stop states from introducing laws that would discriminate against businesses located in other states. Litigation is ongoing, and no final decision has been made whether the program is unconstitutional.~~

~~c. SB 375 – Regional Emissions Targets~~

~~SB 375 was signed in September 2008 and requires CARB to set regional targets for reducing passenger vehicle GHG emissions in accordance with the Scoping Plan measure described above (CARB 2010c). Its purpose is to align regional transportation planning efforts, regional GHG reduction targets, and fair-share housing allocations under state housing law. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a Sustainable Communities Strategy (SCS) or Alternative Planning Strategy (APS) to address GHG reduction targets from cars and light-duty trucks in the context of that MPO's Regional Transportation Plan (RTP).~~

~~SANDAG is the San Diego region's MPO.In December 2011, the U.S. District Court issued several rulings in the federal lawsuits challenging the LCFS. In April 2012, the Ninth Circuit granted the CARB's motion for a stay of the injunction and currently the LCFS enforcement injunction is lifted (CARB 2012).~~

c. ~~SANDAG completed and adopted its 2050 RTP in October 2011, the first such plan in the state that included a SCS. The CARB targets for SANDAG call for a 7 percent reduction in GHG emissions per capita from automobiles and light duty trucks compared to 2005 levels by 2020, and a 13 percent reduction by 2035 (SANDAG 2010b). The reduction targets are to be updated every eight years, but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. SANDAG's 2050 RTP and SCS aim to reduce per capita vehicle GHG emissions by promoting high-density, mixed-use developments around mass transit hubs.~~

~~d.~~ Renewables Portfolio Standard

The RPS promotes diversification of the state's electricity supply and decrease reliance on fossil fuel energy sources. Originally adopted in 2002 with a goal to achieve a 20 percent renewable energy mix by 2020 (referred to as the "initial RPS"), the goal has been accelerated and increased by EOs S-14-08 and S-21-09 to a goal of 33 percent by 2020. ~~Its purpose~~In April 2011, the Governor signed SB 2 (1X) codifying California's ~~longstanding~~ 33 percent RPS goal; Section 399.19 requires the California Public Utilities Commission (CPUC), in consultation with the CEC, to report to the L~~l~~egislature on the progress and status of RPS procurement and other benchmarks (CPUC 2014). The purpose of the RPS, upon full implementation is thus to provide 33 percent of the state's electricity needs through renewable energy sources (CARB 2008b). Renewable energy includes (but is not limited to) wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestion, and landfill gas.

The RPS is included in CARB's Scoping Plan list of GHG reduction measures to reduce energy sector emissions. It is designed to accelerate the transformation of the electricity sector through such means as investment in the energy transmission infrastructure and systems to allow integration of large quantities of intermittent wind and solar generation. Increased use of renewables would decrease California's reliance on fossil fuels, thus reducing emissions of GHGs from the electricity sector. In 2008, as part of the Scoping Plan original estimates, CARB estimated that full achievement of the RPS would decrease statewide GHG emissions by 21.3 $MMTCO_2E$ (CARB 2008b). In 2010, CARB revised this number upwards to 24.0 $MMTCO_2E$ (CARB 2011a).

~~e~~d. Tire Pressure Program

CARB's Tire Pressure Regulation took effect in September 2010. The purpose of this regulation is to reduce greenhouse gas emissions from vehicles operating with under inflated tires by inflating them to the recommended tire pressure rating. Automotive service providers must meet the regulation's following requirements:

- Check and inflate each vehicle's tires to the recommended tire pressure rating, with air or nitrogen, as appropriate, at the time of performing any automotive maintenance or repair service.
- Indicate on the vehicle service invoice that a tire inflation service was completed and the tire pressure measurements after the service were performed.
- Perform the tire pressure service using a tire pressure gauge with a total permissible error no greater than +2 pounds per square inch.
- Have access to a tire inflation reference that is current within three years of publication.
- Keep a copy of the service invoice for a minimum of three years, and make the vehicle service invoice available to ~~the~~ CARB or its authorized representative upon request.

~~f~~e. Million Solar Roofs Program

The Million Solar Roofs Program is one of CARB's GHG-reduction measures identified in the Scoping Plan to reduce energy sector emissions. The Million Solar Roofs Program was created by SB 1 in 2006 and includes the ~~California Public Utilities Commission's (~~CPUC's~~)~~ California Solar Initiative and ~~California Energy Commission's (~~CEC's~~)~~ New Solar Homes Partnership. It requires publicly owned utilities to adopt, implement, and finance solar-incentive programs to lower the cost of solar systems and help achieve the goal of installing 3,000 megawatts (MW) of new solar capacity by 2020. Achievement of the program's goal is expected to equate to a reduction of 1.1 $MMTCO_2E$ ~~of the 2010 estimated statewide reduction of 80 MMTCO2E~~ (CARB 2011a).

~~3.2.4~~3.2.4 SB 375—Regional Emissions Targets

SB 375 was signed into law in September 2008 and requires CARB to set regional targets for reducing passenger vehicle GHG emissions in accordance with the Scoping Plan (CARB 2010b). The purpose of SB 375 is to align regional transportation planning efforts, regional GHG reduction targets, and fair-share housing allocations under state housing law. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a Sustainable Communities Strategy (SCS) or Alternative Planning Strategy to address GHG reduction targets from cars and light-duty trucks in the context of that MPO's Regional Transportation Plan (RTP).

The San Diego Association of Governments (SANDAG) is the San Diego region's MPO. SANDAG completed and adopted its 2050 RTP in October 2011, the first such plan in the state that included a SCS. The CARB targets for SANDAG call for a 7 percent reduction in GHG emissions per capita from automobiles and light duty trucks compared to 2005 levels by 2020, and a 13 percent reduction by 2035 (SANDAG 2010b). The reduction targets are to be updated every eight years, but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. As stated by SANDAG, the strategy set forth in the 2050 RTP/SCS is to "focus housing and job growth in the urbanized areas where there is existing and planned infrastructure, protect sensitive habitat and open space, invest in a network that gives residents and workers transportation options that reduce GHG emissions, promote equity for all, and implement the plan through incentives and collaboration" (SANDAG 2011a).

After the plan was adopted, a lawsuit was filed by the Cleveland National Forest Foundation and the Center for Biological Diversity (later joined the state's Attorney General's office). In December 2012, the San Diego Superior Court set aside the environmental impact report (EIR) for the RTP/SCS. The decision has been appealed by SANDAG and a decision from the court of appeal has yet to be rendered ~~has yet to be settled~~.

~~Therefore, t~~The measures set forth within the 2050 RTP/SCS are currently being adhered to despite current litigation (State of California 2013a). The project's consistency with the 2050 RTP/SCS, as currently drafted, is detailed in subchapter 7.2.

3.2.5 Title 24—California Building Code

The California Code of Regulations (CCR), Title 24, is referred to as the California Building Code, or CBC. It consists of a compilation of several distinct standards and codes related to building construction including, plumbing, electrical, interior acoustics, energy efficiency, handicap accessibility, and so on. Of particular relevance to GHG reductions are the CBC's energy efficiency and green building standards as outlined ~~below~~in subchapter 3.2.~~4~~5.1.

3.2.~~4~~5.1 Title 24, Part 6—Energy Efficiency Standards

The CCR, Title 24, Part 6 is the Energy Efficiency Standards or California Energy Code. This code, originally enacted in 1978, establishes energy-efficiency standards for residential and non-residential buildings in order to reduce California's energy consumption. The Energy Code is updated periodically to incorporate and consider new energy-efficiency technologies and methodologies as they become available, ~~.~~ and incentives in the form of rebates and tax breaks are provided on a sliding scale for buildings achieving energy efficiency above the minimum standards.

The Title 24 Energy Code governs energy consumed by major building envelope systems such as space heating and cooling, ventilation, water heating, and some aspects of the fixed lighting system. Non-building energy use, "plug-in" energy use (such as appliances, equipment, electronics, and plugin lighting), are independent of building design and not subject to Title 24.

The ~~most recent amendments to~~current version of the Energy Code, known as 2008 Title 24, or the 2008 Energy Code, became effective January 1, 2010. The 2008 Title 24 requires energy savings of 15–35 percent above the former 2005 Title 24 Energy Code. ~~At a minimum,~~In effect, compliance with the code means residential buildings ~~must~~would achieve a 15 percent reduction in their combined space heating, cooling, and water heating energy consumption compared to the 2005 Title 24 Energy Code standards. ~~Incentives in the form of rebates and tax breaks are provided on a sliding scale for buildings achieving energy efficiency above the minimum 15 percent reduction over 2005 Title 24.~~~~standards.~~ The reference to 2005 Title 24 Energy Code is relevant in that many of the state's long-term energy and GHG reduction goals identify energy-saving targets relative to 2005 Title 24. ~~By reducing California's energy consumption, emissions of statewide GHGs may also be reduced.~~

The most recent version of Title 24 is the 2013 Energy Code (2013 Title 24), which will be effective on July 1, 2014 (CEC 2013). According to the CEC, the minimum 2013 Title 24 standards will reduce energy consumption by 25 percent for lighting, heating, cooling, ventilation, and water heating over the 2008 Title 24 standards (CEC 2013).

New construction and major renovations must demonstrate their compliance with the current Energy Code through submission and approval of a Title 24 Compliance Report to the local building permit review authority and the CEC. The compliance reports must demonstrate a building's energy performance through use of CEC-approved energy performance software that shows iterative increases in energy efficiency given the selection of various heating, ventilation, and air conditioning (HVAC); sealing; glazing; insulation; and other components related to the building envelope. ~~The Title 24 Energy Code governs energy consumed by the major building envelope systems such as space heating, space cooling, water heating, some aspects of the fixed lighting system, and ventilation. Non-building energy use, or "plug-in" energy use (such as appliances, equipment, electronics, plug-in lighting), are independent of building design and are not currently subject to Title 24.~~

The ~~CARB~~ Scoping Plan includes an Energy Efficiency GHG reduction measure that, among other things, calls for increased building and appliance energy efficiency through new standards and programs. In the Scoping Plan, CARB projects that approximately 26.3 $MMTCO_2E$ of GHGs could be reduced statewide through expanded energy efficiency programs, including updates to Title 24's energy efficiency standards.

3.2.5.2 Title 24, Part 11—California Green Building Standards

The California Green Building Standards Code, referred to as CALGreen, was added to Title 24 as Part 11 first in 2009 as a voluntary code, which then became mandatory effective January 1, 2011 (as part of the 2010 CBC). CALGreen institutes mandatory minimum environmental performance standards for all ground-up new construction of commercial and low-rise residential buildings, state-owned buildings, schools, and hospitals. It also includes voluntary tiers (I and II) with stricter environmental performance standards for these same categories of residential and non-residential buildings. Local jurisdictions must enforce the minimum mandatory requirements and may also adopt the Green Building Standards with amendments for stricter requirements.

The mandatory standards require:

- 20 percent mandatory reduction in indoor water use relative to specified baseline levels;
- 50 percent construction/demolition waste diverted from landfills;
- mandatory inspections of energy systems to ensure optimal working efficiency; and
- requirements for low-pollutant emitting exterior and interior finish materials such as paints, carpets, vinyl flooring, and particleboards.

The voluntary standards require:

- Tier I—15 percent improvement in energy requirements, stricter water conservation requirements for specific fixtures, 65 percent reduction in construction waste, 10 percent recycled content, 20 percent permeable paving, 20 percent cement reduction, cool/solar reflective roof; and
- Tier II—30 percent improvement in energy requirements, stricter water conservation requirements for specific fixtures, 75 percent reduction in construction waste, 15 percent recycled content, 30 percent permeable paving, 30 percent cement reduction, cool/solar reflective roof.

Similar to the compliance reporting procedure described above for demonstrating energy code compliance in new buildings and major renovations, compliance with the CALGreen water reduction requirements must be demonstrated through completion of water use reporting forms for new low-rise residential and non-residential buildings. The water use compliance form must demonstrate a 20 percent reduction in indoor water use by either showing a 20 percent reduction in the overall baseline water use as identified in CALGreen or a reduced per-plumbing-fixture water use rate.

The ~~CARB~~ Scoping Plan also includes a Green Building Strategy with the goal of expanding the use of green building practices to reduce the carbon footprint of new and existing buildings. Consistent with CALGreen, the Scoping Plan recognized that GHG reductions would be achieved through buildings that exceed minimum energy-efficiency standards, decrease consumption of potable water, reduce solid waste during construction and operation, and incorporate sustainable materials. Green building is thus a vehicle to achieve the Scoping Plan's statewide electricity and natural gas efficiency targets, and lower GHG emissions from waste and water transport sectors.

In the Scoping Plan, CARB projects that an additional 26 $MMTCO_2E$ could be reduced through expanded green building (CARB 2008b~~:17~~). However, this reduction is not counted toward the BAU 2020 reduction goal to avoid any double counting, as most of these reductions are accounted for in the electricity, waste, and water sectors. Because of this, CARB has assigned all emissions reductions that occur because of green building strategies to other sectors for meeting AB 32 requirements, but will continue to evaluate and refine the emissions from this sector.

The 2013 CALGreen went into effect on January 1, 2014; however, affected energy provisions of the 2013 CALGreen, Part 11, Title 24 will not be implemented until July 1, 2014.

3.2.6 Senate Bill 97—CEQA GHG Amendments

SB 97 (Chapter 185, Statutes of 2007; Public Resources Code, Sections 21083.05 and 21097) acknowledges that climate change is a prominent environmental issue that requires analysis under the California Environmental Quality Act (CEQA). The California Natural

Resources Agency adopted amendments to the CEQA Guidelines (California Code of Regulations, Title 14, Sections 15000-15387) to address GHG emissions, consistent with Legislature's directive in Public Resources Code Section 21083.05 (enacted as part of SB 97 [~~(~~Chapter 185, Statutes 2007]~~)~~). These changes took effect in March 2010.

3.3 Local—County of San Diego

3.3.1 General Plan

The County's General Plan incorporates smart growth and land planning principles intended to reduce VMT, and thus a reduction of GHGs. The General Plan aims to accomplish this by locating future development within and near existing infrastructure. The General Plan also directs preparation of a County CAP with reduction targets; development of regulations to encourage energy efficient building design and construction; and development of regulations that encourage energy recovery and renewable energy facilities, among other actions. These planning and regulatory efforts, in combination with application of the County~~'s~~ Guidelines, ~~is~~ are intended to ensure that actions of the County of San Diego do not impede AB 32 and SB 375 mandates.

3.3.2 Climate Action Plan

~~To comply with the 2011 adopted County General Plan EIR Mitigation Measure CC1.2, Preparation of a CAP, the~~The County developed and approved ~~a~~ the County CAP in June 2012 to address issues of growth and climate change. Specifically, the County CAP was designed to mitigate the impacts of climate change ~~by achieving~~and achieve meaningful GHG reductions by implementing goals and strategies within the County, consistent with AB 32, EO S-3-05, ~~and SB 97, the 2050 RTP/SCS,~~ and to provide a mechanism that subsequent ~~phases~~projects within the County may use as a means to address GHG impacts under CEQA. The County CAP contains two emissions reduction targets: (1) a 15 percent reduction below 2005 levels by 2020; and (2) a 49 percent reduction below 2005 levels by 2035.

The County CAP provides a baseline GHG inventory and BAU projections, leading to GHG emissions reduction targets for 2020 and 2035; and GHG reduction measures and actions for both the community and local government. For community-wide GHG reductions, measures are included in the County CAP pertaining to water use, buildings and energy, increasing renewable energy generation, integrating land use and transportation, agricultural practices, and landscaping and open space. Such GHG reduction measures are provided for both 2020 and 2035. The County CAP also includes a compliance checklist for GHG analysis of projects in the County in its Appendix G. As stated in the County CAP's Appendix G, projects that meet specified GHG screening criteria must also comply with at least one of the applicable County CAP GHG reduction measures. Projects that exceed the

GHG screening criteria must comply with all (or equivalent) County CAP GHG reduction measures that are relevant to their project type and must also complete a technical analysis to demonstrate that the project's design features, along with County CAP measures, are incorporated to reduce emissions below the applicable GHG threshold.

According to analysis in the County CAP, a proposed project that would reduce GHG emissions by at least 16 percent would achieve a reduction representing its fair share of what is necessary statewide to achieve AB 32 targets (County of San Diego 2013). The percentage reduction was based in part on the 2011 Scoping Plan, which estimated that year 2020 BAU emissions, with only the effects of Pavley I and the Initial RPS implemented, would be 507 $MMTCO_2e$ (CARB 2011a). A reduction of this BAU by 15.75 percent by 2020 would equate to the 427 $MMTCO_2E$ level cited in the Scoping Plan (CARB 2008b).

After the County CAP was adopted by the County, a lawsuit was filed by the Sierra Club. In April 2013, the San Diego County Superior Court set aside the approval of the County CAP. While the County's approval was set aside, the decision did not find fault with the goals, strategies, and measures identified for GHG emission reductions. The measures identified in the County CAP and the associated reductions are well documented in the County CAP and supported by other sources including CAPCOA and CARB guidance on GHG reduction measures. As such, the County is continuing to implement the recommended goals, strategies, and measures.

3.3.3 County Guidelines for Determining Significance - Climate Change ~~Significance~~

The overall framework for assessing consistency with AB 32 is provided by the County CAP~~.~~ ~~The~~ (County of San Diego 2013). The County CAP includes GHG reduction measures that, if fully implemented, would achieve an emissions reduction target that is consistent with, and supports the state-mandated reduction target embodied in AB 32. To further ensure that the County's overall reduction target is achieved, considering the wide range of project types the County may approve during build-out of the General Plan, the County has prepared a companion set of quantified GHG emissions thresholds, as a supplement to the measures outlined in the County CAP. These implementing thresholds are contained in the *County's Guidelines for Determining Significance – Climate Change* (County Guidelines~~).~~) (see Chapter 4.0). The County Guidelines outline the County's approach in addressing GHG emissions impacts and provide guidance in determining the appropriate threshold for projects, assessing significance, and mitigating impacts. In addition, the County's *Report Format and Content Requirements* document, under separate cover, ~~provide~~provides instructions for analyzing and reporting GHG emissions for projects and plans.

~~The County Guidelines establish a multi-step process to analyze GHG emissions, starting with exemptions and screening criteria. Projects not subject to CEQA analysis also do not require the use of the County Guidelines to determine significance.~~The County Guidelines were developed in consultation with consultants approved to conduct air quality analyses by the County and other experts in the field. The County issued Interim Guidelines and Report Format and Content Requirement for Climate Change in late 2008 and circulated them for public review from October to November. Afterward, the Draft Guidelines were prepared in conjunction with the preparation of the County CAP and circulated for public review with the County CAP. The current version of the County Guidelines and Report Format and Content Requirements was finalized on November 7, 2013.

~~CEQA and GHG analysis exemptions also exist for transit priority projects that are consistent with the applicable SCS. If a project is determined to be subject to CEQA review, the next step is to compare the project to a list of screening criteria. The screening criteria list projects of select types and sizes that would produce GHG emissions of less than 2,500 MTCO2E per year. For projects that do not merit exemption nor meet the screening criteria, the next step is to select an appropriate implementing threshold, out of the four available, given the proposed project type. Once the appropriate implementing threshold is selected, an analysis must demonstrate that the proposed project complies with the threshold, through incorporating CAP measures and/or other feasible mitigation.~~

4.0 Guidelines for Determining Significance

State CEQA Guidelines Section 15064.4 discusses the significance evaluation for GHG emissions. Section 15064.4(a) recognizes that the determination of the significance “calls for a careful judgment” by the lead agency that is coupled with lead agency discretion to determine whether to (1) use a model or methodology, and/or (2) rely on a qualitative analysis or performance based standards. Section 15064.4(b) further states a lead agency should consider the following non-exclusive list of factors when assessing the significance of GHG emissions.

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

2. The extent to which project emissions exceed a threshold of significance that the lead agency determines applies to the project; and

3. The extent to which the project complies with regulations or requirements adopted to implement statewide, regional, or local plans for the reduction or mitigation of GHG emissions.

Similarly, Appendix G of the state CEQA Guidelines contains two significance criteria for evaluating GHG emissions of a project:

1. Would the project generate GHG emission, either directly or indirectly, that may have a significant impact on the environment?

2. Would the project conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing the emissions of GHGs?

Neither CARB nor the SDAPCD, however, has adopted significance criteria applicable to land use development projects for the evaluation of GHG emissions under CEQA.

Here, ~~T~~the ~~County Guidelines~~County Guidelines are the basis for the determination of GHG emissions significance for the project under state CEQA Guidelines Section 15064.4(b)(2)-(3). As stated in the County~~-~~ Guidelines, the County's CAP provides the overall framework for assessing significance and demonstrates a range of feasible reduction measures that can be implemented to achieve an overall reduction target that is supportive of the state-mandated reduction target embodied in AB 32. Project type-specific implementing thresholds are included in the County Guidelines in order to allow projects to ~~clearly demonstrate~~ evaluate compliance with the County's CAP (including its emission reduction targets) and identify the significance of cumulative contributions to GHG emissions effects ~~and compliance with the County's GHG emission reduction target~~ (County of San Diego 2012a~~b~~, page 23).

The County Guidelines establish a multi-step process to analyze GHG emissions, starting with CEQA exemptions and screening criteria. CEQA and GHG analysis exemptions also exist for transit priority projects that are consistent with the applicable SCS. ~~implementing~~

If a project is not exempt, the next step is to compare the project to a list of screening criteria. The County developed screening criteria to identify those projects that would have less-than-cumulatively considerable GHG emissions impacts. The screening criteria include a specific set of land use developments and development sizes, such as a 61,000-square-foot commercial office building, 120 condominiums, 86 single-family dwelling units, etc. The screening criteria were developed using conservative assumptions so that the County could ensure projects in this category would produce GHG emissions less than the County's bright line threshold.

For projects that do not merit exemption nor meet the screening criteria, the next step is to select an appropriate threshold given the proposed project type. The thresholds include the bright line threshold, the efficiency threshold, the performance threshold, and the stationary source threshold. The bright line and efficiency thresholds rely on determining the proportional or fair-share of emission reductions required to meet the legislative mandate established in AB 32 that would be required within San Diego County. The performance threshold permits the application of project-specific measures that demonstrate a fair share of emissions reductions necessary statewide to achieve AB 32 targets (County of San Diego 2013). The stationary source threshold is often associated with industrial processes. Each of these thresholds is summarized in following discussion.

Bright Line Threshold

The County has estimated the emissions reductions needed to get to 1990 levels for land use related emissions at the statewide level. According to the County, this "gap" for statewide emissions is approximately three percent. The County then calculated the mass emissions target of 2,500 $MTCO_2E$ and set this as numeric quantity as the bright line threshold.

The bright line threshold is similar to the County's screening threshold in that it is set at a level that would capture enough projects so that, through compliance with regulations and the County's CAP, the project would contribute its fair share to meet the goals of AB 32 and GHG emissions would result in less-than-cumulatively considerable impacts (County of San Diego 2013).

Efficiency Threshold

The efficiency threshold focuses on a project's per-unit emissions rather than the mass emissions level. The guidance for the efficiency threshold states that the relative emissions efficiency needed to achieve a fair share of the state's emissions mandate embodied in AB 32 for San Diego County would be approximately 4.32 $MTCO_2E$ per service population. The "service population" in the context of GHG emissions analysis, is a term used to ~~assess GHG emissions from the project is the~~ express the total population plus employment of a proposed project. The use of "fair share" in this instance indicates the GHG efficiency level that, if applied statewide, would meet the AB 32 emissions target and support efforts to reduce emissions beyond 2020 (County of San Diego 2013). With a reduced rate of emissions per resident and employee, California can accommodate expected population growth, while also abiding by AB 32's emissions target and supporting efforts to reduce emissions beyond 2020 and GHG emissions would result in less-than-cumulatively considerable impacts (County of San Diego 2013).

Performance Threshold ~~which states that:~~

> ~~A proposed project would have a cumulatively considerable contribution to climate change impacts if it would result in a net increase of construction and operational greenhouse gas emissions, either directly or indirectly, and if the project would incorporate mitigation that achieves less than a 16-percent total reduction compared to unmitigated emissions.~~

~~As identified in the County Guidelines, "Early coordination with the County is necessary for projects that contemplate the use of this percentage mitigation approach to assessing significance. Impact analysis shall occur relative to the existing environmental baseline and consider whether project-related emissions are cumulatively considerable" and that, "Projects that have cumulatively considerable (i.e., significant) impacts, according to the County's Guidelines, shall include project design features and/or adopt mitigation to reduce~~

~~or avoid impacts to below the cumulatively considerable level." (County of San Diego 2012b, page 25). As previously referenced, this project incorporates project design measures in order to meet the 16 percent Performance Threshold.~~

Under the performance threshold "unmitigated" GHG emissions attributable to a project at full build-out in 2020 are compared to GHG emissions after application of design features and mitigation. "Unmitigated" GHG emissions represent the proposed project, in compliance with any applicable standards and regulations. If, compared to the "unmitigated" project, proposed mitigation would reduce GHG emissions by at least 16 percent, this level of mitigation would represent a fair share of what is necessary statewide to achieve AB 32 targets. In other words, a project that provides mitigation amounting to a reduction in GHG emissions of 16 percent would be considered consistent with AB 32 reduction targets and therefore adequate to avoid a cumulatively considerable contribution to the significant cumulative impact of climate change.

Stationary Source Threshold

A stationary source is one with an identified emission point or points, often associated with industrial processes. Stationary sources typically include cogeneration facilities, boilers, flares, heaters, refineries, and other types of facilities. Single facilities can have many individual emission points. Many of these types of facilities would require a permit from SDAPCD.

The County, like many air districts in California, has identified 10,000 $MTCO_2E$ per year for permitted, stationary source emissions (e.g., industrial projects) as a level below which the project would not be expected to substantially conflict with existing legislation adopted to reduce statewide GHG emissions and would therefore represent a less-than-cumulatively considerable contribution to the significant cumulative impact of global climate change (County of San Diego 2013).

5.0 Impact Analysis

This analysis estimates GHG emissions associated with construction and operation of the project and determines whether the project would have a cumulatively considerable incremental contribution to the significant impact of global climate change. GHG emissions estimates include both direct and reasonably foreseeable indirect GHG emissions from operations. The GHG emissions estimates do not include life-cycle emissions embodied in manufactured materials. The GHG analysis and reporting were conducted in accordance with the County's Report Format and Content Requirements, Greenhouse Gas Analysis and Reporting (County of San Diego 2012b~~c~~). ~~Also, in accordance with the report requirements, the GHG emissions analysis focuses on a 2020 timeline, consistent with the legislative mandate embodied in AB 32; and focuses on net new emissions~~.

~~As the County CAP includes a 2035 scenario this analysis goes beyond the requirements of the County Guidelines and includes an assessment of 2035 emissions. Additionally, in consideration of EO-S-5-03, this report includes a qualitative analysis of 2050 emissions. Net increases in GHG emissions relative to the existing baseline include only those emissions attributable to the project and take into account existing emissions displaced by the project. As discussed in Chapter 4, the significance determination is based on the 2020 emission reductions and the 2035 and 2050 analyses are provided for informational purposes.~~

~~Due to their linear nature, off-site construction emissions were estimated using the Road Construction Emissions Model, Version 7.1.1.~~

5.1 Threshold Selection

According to the County Guidelines, for projects that do not merit exemption nor meet the screening criteria, the next step is to select an appropriate implementing threshold, out of the four available, given the proposed project type. Once the appropriate implementing threshold is selected, an analysis must demonstrate that the proposed project complies with the threshold, through incorporating County CAP measures and/or other feasible mitigation.

Analysis showed that the proposed project would exceed the County's bright line threshold of 2,500 $MTCO_2E$. Therefore, the rational for selecting the appropriate threshold is discussed below.

5.1.1 Stationary Threshold

The stationary threshold is only relevant to the proposed stationary sources, such as the project's WRF. As this stationary source is included in the larger project, the stationary source alone would not be appropriate for this analysis. Additionally, if it were to be included separately, the emissions would be double counted as the calculation of emission for all uses proposed as part of the project include the calculation of the emissions associated with the treatment of wastewater.

5.1.2 Efficiency Threshold

The efficiency threshold requires the calculation of a service population to assess the significance of GHG emissions. For this project, the calculation of residences for typical multiple- and single-family units can be based on the average person per household from the last census. However, there is known data to determine the population within the proposed age restricted or group facilities. The employment requirement for the group facility is not known and no specific employer/operator of the facility has been identified.

Similar issues arise from the commercial uses, the school, church, and other on-site employers.

Due to the level of speculation required to calculate the service population, the analysis under the efficiency threshold would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual impacts attributable the proposed project. Therefore, the efficiency threshold was determined to be inappropriate for assessing the project.

5.1.3 Performance Threshold

The performance threshold requires the calculation of "unmitigated" emissions and "mitigated" emissions based on the available information. Therefore, the performance threshold is most appropriate for this project to assess project impacts. The following analysis uses the performance threshold comparing the "unmitigated" emissions and "mitigated" emissions for the year 2020.

5.2 Construction Emissions

On-site construction and operational emissions were estimated using California Emissions Estimator Model (CalEEMod) Version 2011.1.1 (SCAQMD 2011). Emissions were modeled using climate zone 13 within the ~~San Diego Air Pollution Control District (~~SDAPCD~~)~~ for operational year 2020. SDG&E was selected as the utility provider. The default residential population rate was adjusted to reflect the Valley Center residential population rate obtained from SANDAG (2010a).

~~5.1 Construction Emissions~~

CalEEMod calculates construction emissions for land use development projects based on various project-specific inputs, including building type, acreage, soil hauling, construction phasing, equipment lists, and worker commutes and materials delivery. Thus, project-generated GHG emissions ~~of criteria air pollutants and ozone precursors~~ were modeled based on information provided in the project description, the Lilac Hills Ranch Specific Plan, and ~~default assumptions~~statewide datasets included in CalEEMod. CalEEMod does not calculate emissions from material movement and handling for balanced site conditions with no off-site hauling, thus, material movement and handling was calculated separately and added to the CalEEMod results to determine total construction emissions. ~~Off~~

As all off-site construction would be associated with roadway improvements, off-site construction emission estimates were developed with the Road Construction Emissions Model, a model specifically designed for roadway improvement projects. Per the County

Guidelines, construction emissions are calculated and amortized over a 20 year period and included as part of the analysis.

5.2.1 On-site Construction Emissions

The project applicant has provided approximate timeframes for the five phases of construction activities. As previously ~~stated~~shown in Table 4, the phases would occur in the following order: Phase 1, Phase 4, Phase 2, Phase 5, and Phase 3. Each phase is estimated to be approximately 1.5 years in duration with the exception of Phase 3, which is estimated to last three to four years. The highest average cut-and-fill volume for any phase would be 12,353 yd^3. However, to be conservative, construction emissions were modeled based on ~~assuming~~ a more intense 10-acre area with a daily movement volume of 50,000 yd^3 **2**.

Inputs ~~Assumptions~~ used to model construction emissions for each of the phases were based on equipment lists and cut-and-fill calculation provided by the project applicant. The construction equipment summarized in Table ~~8~~9 is anticipated to be used in each phase of the project. Based on the project applicant's information, the majority of construction equipment would be composed of Tier III equipment, as outlined in the Mitigation Measures and Design Considerations in subchapter 8.2, and may be replaced with Tier IV equipment in the final phases~~ of construction.~~. The emissions calculated in this analysis are based on the tier levels presented in Table ~~8. Default~~9. Statewide data sets for horsepower, emission factors, and load factors provided ~~by~~as part of CalEEMod were used.

2Based on grading a 10-acre site with an average blade depth of 3 feet (10 acres = 435,600 $feet^2$ x 3 feet = 1,306,800 $feet^3$ = 48,400 $yard^3$).

TABLE ~~8~~9
CONSTRUCTION EQUIPMENT LIST

Construction Stage	Equipment Type	Quantity	Tier
Demolition	Concrete/industrial saws	1	II
Demolition	Crawler tractors	1	III
Demolition	Tractors/loaders/backhoes	1	III
Site Preparation	Crawler tractors	2	III
Site Preparation	Rubber-tired loaders	3	III
Grading	Bore/drill rigs	2	III
Grading	Crawler tractors	3	III
Grading	Graders	1	III
Grading	Rubber-tired loaders	2	III
Grading	Scrapers	8	III
Building Construction	Cranes	1	III
Building Construction	Forklifts	3	III
Building Construction	Generator sets	2	II
Building Construction	Tractors/loaders/backhoes	3	III
Building Construction	Welders	1	II
Paving	Pavers	2	III
Paving	Paving equipment	2	III
Paving	Rollers	2	III
Architectural Coating	Air compressors	2	I

Blasting operations would also be required for site preparation. For modeling purposes it was projected ~~assumed~~ that blasting operations would occur during the grading stage of ~~each phase of construction~~all phases; however, actual blasting operations would occur independently from grading activities. ~~Assuming that~~ As blasting would occur during grading operations, this results in a worst-case analysis~~: blasting operations~~ as this would ~~occur in all five phases of~~also be at the same time as the ~~project, and the~~highest emissions during construction occur. -The explosive material would consist of ammonium nitrate and fuel oil, known as ANFO. ~~It~~For modeling GHG impacts, it is estimated that each blast would require 10,000 pounds of explosive per blast and there would be a total of eight blasts for the project. This totals to 80,000 pounds of ANFO for the project.

Based on these inputs, ~~CalEEMod estimates~~it is estimated that on-site project construction would emit a total of 15,250.67 $MTCO_2E$. The CO_2E sources of emissions include off-road equipment as well as hauling, and vendor and worker on-road trips. However, CARB staff has advised CalEEMod users that the model over-estimates off-road construction emissions by 33 percent due to outdated exhaust emission load factors (CARB 2010c). Due to this acknowledged over estimation by ~~CARB~~CalEEMod, the construction emissions from off-road construction equipment calculated in CalEEMod were then reduced by 33 percent (i.e., multiplied by 0.67) to arrive at a more accurate estimate of 11,313.39 $MTCO_2E$ total construction emissions. Amortized over 20 years, in accordance with the County ~~Guidelines~~

Guidelines, annual GHG emissions from on-site construction would total 565.67 $MTCO_2E$ each year. CalEEMod on-site construction emissions output is contained in the Appendix.

5.2.2 Off-site Construction Emissions

Off-site emissions would occur during construction of Phase 1. The off-site impacts consist of road widening activities over a total area of approximately 2.7 acres and were calculated using the Road Construction Emissions Model. The inputs to this model included a 2015 start date for construction, duration of two months, encompassing a total of three acres, with a maximum of three acres disturbed per day. Total volume of soil imported is projected ~~assumed~~ to be 260 cubic yards per day. Worker commute distance is estimated ~~assumed~~ to be 20 miles per day each way. ~~The complete inputs and outputs to this model are included in the Appendix.~~

Based on these inputs, off-site construction would emit approximately 29.0 $MTCO_2E$ total. ~~Amortized over 20 years, in~~ In accordance with the County ~~Guidelines~~guidelines, annual GHG emissions from off-site construction would total 1.45 $MTCO_2E$ amortized over 20 years. The complete inputs and outputs to this model are included in the Appendix.

5.2.3 Total Annual Construction Emissions

Total annual construction emissions, combining on-site and off-site quantities, would be approximately 567.1 $MTCO_2E$ per year, as summarized in Table ~~9~~10 below. The Appendix contains the complete construction emission calculations.

TABLE ~~9~~10
ANNUAL ON-SITE AND OFF-SITE CONSTRUCTION EMISSIONS

Construction Emissions	$MTCO_2E$ per Year
On-Site	565.67
Off-Site	1.45
TOTAL	**567.12**

The construction emissions for 2035 were projected to be the same as the 2020 emissions, because the 2020 emissions include all construction emissions. Therefore no new emissions would be added.

5.3 Operational Emissions

CalEEMod was used to estimate the project's operational GHG emissions that would occur in 2020 and 2035 based on build-out of the proposed land uses as shown below in Table ~~10~~11.

TABLE ~~10~~11
MODELED LAND USES

CalEEMod Land Use Subtype	Project Land Use (Lookup)[1]	Quantity[1]
Elementary School[2]	Elementary School (K-5)	568 students
Junior High School[2]	Middle School (6–8)	132 students
Church[5]	Institutional	10.7 acres
Industrial[3]	Water Reclamation[3]	2.4 acres
Industrial[3]	Recycling Center[3]	0.6 acres
City Park	Neighborhood/County Parks	23.8 acres
Hotel[3]	County Inn/Bed & Breakfast	50 rooms
Recreational[3]	Recreation Center	40,000 square feet
Apartments Low Rise[4]	Senior Community	468 du
Condo/Townhouse[4]	Single–family attached/ residential mixed-use units	375 du
Congregate Care (Assisted Living)[3]	Assisted Living	200 du
Single-family Housing[4]	Single Family	903 du
Strip Mall[3]	Specialty/Strip Commercial	61,500 square feet
Office[3]	Commercial and Mixed Use	28,500 square feet

[1] Land use type and quantities as identified in traffic study (Chen Ryan ~~2013~~2013~~a~~4), assuming a worst-case scenario with a greater number of single-family units than the Specific Plan land uses.

[2] School employee population is based on Valley Center and Bonsall school district school report card data to determine the number of classified teachers per student, which was supplemented with 1 principal, 1 administrative assistant per 250 students, 1 nurse/vice principal, and 1 custodian (CDE 2013).

[3] Water reclamation (industrial), recycling facility (industrial), bed & breakfast (hotel), congregate care facility (Senior Care Facility), and commercial retail employee population is based on Space Use Information from the U.S. EPA Energy Star Program (U.S. EPA 2013).

[4] Residential population is based on CalEEMod default population settings (SCAQMD 2011).

[5] Church employment population assumes 1 senior parishioner, 1 assistant parishioner, 1 administrative ~~assistant,~~assistant and 1 custodian.

The modeling location selected was the SDAPCD area with a rural setting, in climate zone 13, served by San Diego Gas & Electric. GHG emissions were estimated for vehicle use, energy use, water use, area sources (landscaping equipment and fireplaces) and waste disposal. Adjustments were made to the model's default density and population rates for several of the land uses, including the addition of population (employee) for the non-residential uses, based on data from the traffic study and other sources. The Appendix includes the operational GHG emissions calculations for the project with design features, including the inputs and assumptions entered into the model. The calculation methodology and results are summarized below.

5.3.1 Vehicle Emissions

Emissions from ~~mobile~~vehicle fuel combustion are estimated in CalEEMod based on fuel use and VMT data. CO_2 emissions, which account for the majority of emissions from mobile sources, are directly related to the quantity of fuel combusted; while CH_4 and N_2O emissions depend more on the emissions-control technologies employed in the vehicle and the distance traveled. Project VMT was calculated in CalEEMod using default trip lengths and trip generation rates contained in the traffic report (Chen Ryan ~~2013).~~2014). The vehicular trip lengths used in CalEEMod are calculated independent of the traffic analysis and are based on the type of land uses and the purpose of the trips, e.g., home to work, home to shopping, etc. Thus, the trips lengths in the GHG modeling range from 6.6 to 16.8 miles with trips associated with work and business traveling greater distances than shopping and other non-business related trips. Based on the total annual trips generated and the total VMT, CalEEMod estimated an average annual trip distance of 8.95 miles for the proposed project. This trip distance is considered conservative as SANDAG project's the average trip length's range depending on the traffic alternative to be 7.6 to 8.25 miles (Chen Ryan 2014). The SANDAG model is the more accurate prediction of trip length as SANDAG's expertise is transportation planning and all SANDAG data are based on regional surveys and data collection, while CalEEMod was developed as a statewide model and has only limited data specific to each jurisdiction within the state.

Aside from this adjustment to the model's trip rates, all other ~~aspects of~~inputs to the mobile emissions ~~input module were retained. However, to~~are based on the regional and statewide datasets included in CalEEMod. To account for the project's walkability and design, ~~the mobile mitigation module was used to select~~ an improved on-site pedestrian network within the project site~~.~~ was modeled in CalEEMod. With the addition of these attributes, the proposed project would result in 1,537,111 fewer VMT and associated GHG emissions equating to a reduction of 584.66 $MTCO_2E$ per year. This equates to ~~approximately a~~an approximate 2.4 percent reduction in VMT and emissions when using the CalEEMod defaults associated with the number of intersections per square mile. This estimate is consistent with ~~the alternative~~published literature (CAPCOA 2010). Total annual VMT was estimated in CalEEMod to be 60,440,939.

As with the 2011 Scoping Plan and County CAP GHG~~Total annual VMT was estimated in CalEEMod to be 60,440,939. The unmitigated~~ emissions ~~account for~~ estimates, the "unmitigated" project emissions include reductions provided by Pavley I regulations. ~~The~~ This was held constant for the 2035 calculations to maintain the same conditions in the baseline calculations. Thus, for the year 2020 calculations, the "unmitigated" project emissions were estimated to be 26,863.73 $MTCO_2E$ per year. ~~The~~ Unlike the "unmitigated" emissions, the "mitigated" emissions account for additional ~~reduction provided by~~reductions from statewide regulations that took effect after 2008, i.e., LEV III, LCFS, and the Tire Pressure Program (County of San Diego 2013~~2a~~). With these additional reductions, the 2020 "mitigated" project vehicle emissions were estimated to be 22,884.92 $MTCO_2E$ per year.

For the year 2035, the "unmitigated" project GHG emissions were estimated to be 23,918.03 $MTCO_2E$ per year. As with the 2020 calculations, the "mitigated" 2035 GHG emissions accounted for reductions from LEV III, LCFS, and the Tire Pressure Program. Thus, the

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2035 "mitigated" project vehicle GHG emissions were estimated to be 20,417.44 $MTCO_2E$ per year.

5.3.2 Energy Use Emissions

GHGs ~~are generated during~~result from the generation of electricity from fossil fuels off-site in power plants. These emissions are considered indirect but are calculated in CalEEMod as associated with a building's operation. ~~CalEEMod estimates GHG emissions from energy use by multiplying average rates of residential and non-residential energy consumption by the quantities of residential units and non-residential square footage entered in the land use module to obtain total projected energy use.~~. ~~This value is then multiplied by electricity and natural gas GHG emission factors applicable to the project location and utility provider.~~ The project would be served by SDG&E. ~~By identifying the utility provider~~Therefore, ~~its~~ SDG&E's specific energy intensity factors ~~are loaded into~~were used in the ~~model's~~ calculations. SDG&E's energy intensity factors are shown in Table ~~11~~12.

TABLE ~~11~~12
SDG&E INTENSITY FACTORS

GHG	Intensity Factor[1] (pounds/MWh)
Carbon Dioxide (CO_2)	780.790
Methane (CH_4)	0.029
Nitrous Oxide (N_2O)	0.011

[1]SOURCE: CalEEMod Version 2011.1.1.
MWh = megawatt hour

These energy intensity values are used in CalEEMod to determine the GHG emissions associated with electricity use ~~in various modules~~ and are based on CARB's Local Government Operations Protocol (for CO_2) and E-Grid (for CH_4 and N_2O) values~~.~~ (CARB 2011b). The "unmitigated" emissions due to the project's energy use were calculated ~~assuming that buildings would be constructed in accordance with the energy requirements contained in~~based on the 2008 Title 24 energy code. Additionally, the original RPS goal of achieving a 14.2 percent renewable energy mix by 2020 (from the first version of the Scoping Plan) was used ~~assumed~~ for electricity-related emissions. The 14.2 percent reduction is the difference between the 20.3 percent goal and the 6.1 percent total RPS eligible procurement in 2008. The 6.1 percent is derived from the March 2010 RPS compliance report prepared by SDG&E for the California Public Utilities Commission (CPUC 2010). ~~Unmitigated~~Based on these inputs, "unmitigated" energy emissions were estimated to be 6,976.23 $MTCO_2E$ per year.

~~Mitigated~~"Mitigated" energy emissions accounted for the updated RPS goal of achieving a 33 percent renewable energy mix and project design features including increasing energy efficiency by 30 percent over 2008 Title 24 (this is equivalent to a 5 percent improvement over the new 2013 Title 24 requirements (IVEDC 2013). Additional measures include installing high-efficiency lighting to achieve a 15 percent lighting energy reduction, using Smart Meters to reduce energy-related GHG emissions by 0.6 percent (County of San Diego 2013~~2a~~), and installing energy efficient appliances in all residential units including clothes washers (a 30 percent improvement); dish washers (a 15 percent improvement); fans (a 50 percent improvement); and refrigerators (a 15 percent improvement). Because ~~the~~ CalEEMod ~~energy mitigation module~~ does not ~~include~~calculate energy-efficient appliances for non-residential land use subtypes, ~~to reflect energy efficient appliance use in the assisted living facility~~ a conservative 10 percent reduction was made directly to ~~the energy module's~~ non-Title 24 electricity intensity rates to reflect energy-efficient appliance use in the assisted living facility. Additionally, to account for reductions due to RPS (see Section 3.2.3.2(d)), GHG emissions due to electricity use were reduced by a total of 27.2 percent. This consists of the 14.2 percent reduction, previously referenced, and an additional 13 percent reduction to account for the RPS gains achieved in meeting the 33 percent RPS goal by 2020. With these additional reductions, the associated project energy emissions for the year 2020, were estimated to be 5,~~077.75~~244.09 $MTCO_2E$ per year.

Considering only the same regulation and conditions as in the 2020 condition, the year 2035 “mitigated” emissions were calculated to be 5,222.52 $MTCO_2E$ per year. The reduction in GHG emission from electricity consumption is due to the continuing effects of the RPS.

5.3.3 Area Source Emissions

GHGs are emitted from area sources such as landscape maintenance equipment and fireplaces. The use of fireplaces and woodstoves directly emits CO_2 from the combustion of natural gas, wood, or biomass, some of which are thus classified as biogenic. Wood burning stoves and fireplaces emit substantially more GHGs than natural gas burning ones. CalEEMod estimates emissions from hearths and woodstoves only for residential uses based on the type and size features of the residential land use inputs. By default, commercial land uses do not have any hearths or woodstoves in CalEEMod but can be added for those cases where they may occur such as in restaurants or hotels if such information is known. ~~In this GHG analysis no~~No hearths or woodstoves were attributed to any commercial uses.

The “unmitigated” area source emissions were calculated using ~~assuming~~ the default mix of wood~~and natural gas fireplaces. In order to account for the emissions associated with the unmitigated scenario with the default proportion of 35 percent wood-~~-burning fireplaces~~, a separate run was modeled.~~. This value is included in the Appendix. The ~~unmitigated~~area emissions for fireplaces are projected to remain constant for the years 2020 and 2035, and the “unmitigated” area source emissions were estimated to be 4,229.82 $MTCO_2E$ per year.

The “mitigated” source emissions do not include wood-burning fireplaces and include natural gas fireplaces in 90 percent of the residential units~~ rather than the 35 percent~~

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~~wood/55 percent natural gas/10 percent none.~~. No fireplaces were factored in 10 percent of the units, which is a typical assumption in air quality and GHG modeling. The default 246 days per year of use was also changed to 180 days per year based on local climate and a shorter winter season for both the "unmitigated" and "mitigated" scenarios. The 2020 and 2035 "mitigated" area source emissions were estimated to be 2,758.35 $MTCO_2E$ per year.

5.3.4 Water Use Emissions

The amount of water used and wastewater generated by a project has indirect GHG emissions associated with it, and if a WRF is constructed, could include some direct emissions. This analysis estimates emissions from the WRF by including 286 ac-~~ft~~ft./year within the model to capture the associated energy for this land use.

Emissions associated with water/wastewater consumption/generation are a result of the energy used to supply, distribute, and treat the water and wastewater. In addition to the indirect GHG emissions associated with energy use, wastewater treatment can directly emit both methane and nitrous oxide.

~~The~~ Based on the land uses, CalEEMod water/wastewater ~~module~~ estimates ~~the land uses contribution to~~ GHG emissions associated with supplying and treating the water and wastewater. CalEEMod's default rates of indoor and outdoor water use for each residential land use subtype comes from Table ES-1 of the Pacific Institute's *Waste Not, Want Not: The Potential for Urban Water Conservation in California* 2003 report that gives water demand in gallons per dwelling unit type (as cited in ~~CARB~~ SCAQMD 2011~~b~~). Water use data for most commercial and industrial land uses were obtained from Appendices E and F of that same report. Figures in the report show the percent of water use dedicated to landscape irrigation. This percent was multiplied by the total water use to obtain outdoor water use; with the remainder assigned to indoor water use. Wastewater generation was similarly based on a reported percentage of total indoor water use. For a few land uses (place of worship, movie theater, civic center) where the Pacific Institute report did not provide sufficient data, ~~CalEEMod uses~~ the American Water Works Association Research Foundation's Commercial and Institutional End Uses of Water report was used (SCAQMD~~CARB~~ 2011~~b~~).

In the "unmitigated" calculations, CalEEMod uses default electricity intensity values for various phases of supplying and treating water from CEC's 2006 *Refining Estimates of Water-related Energy Use in California*. The model estimates water/wastewater emissions by multiplying the total projected water/wastewater demand by the applicable water electricity intensities and by the utility intensity GHG factors~~.~~, which are estimated to change over time. The 2020 "unmitigated" water emissions were estimated to be 1,746.36 $MTCO_2E$ per year and the 2035 "unmitigated" water emissions were estimated to be 1,239.08 $MTCO_2E$.

The "mitigated" emissions calculated in the water module include an overall 20 percent reduction in indoor and outdoor water use as required by CALGreen. Based on these inputs ~~CalEEMod estimates~~it is estimated that the total annual emissions associated with the 2020 project build-out water use would be 1,397.09 $MTCO_2E$ of GHGs per year~~.~~ and the 2035 project build-out water use would be 991.26 $MTCO_2E$

5.3.5 Solid Waste Disposal Emissions

The disposal of solid waste produces GHG emissions from anaerobic decomposition in landfills, incineration, and transportation of waste. ~~CalEEMod determines the GHG emissions associated with disposal of solid waste into landfills.~~ Portions of these emissions are biogenic. To estimate the GHG emissions that would be generated by disposing of the solid waste associated with the proposed project, the total volume of solid waste was first estimated in the model using waste disposal rates identified by CalRecycle. This estimate is considered conservative as it does not account for the state's policy goal – as set forth in Public Resources Code Section 41780.01 – that not less than 75 percent of solid waste generated be source reduced, recycled, or composted by year 2020, and annually thereafter.

CalEEMod ~~methods~~calculations for quantifying GHG emissions from solid waste are based on the IPCC method using the degradable organic content of waste. The "unmitigated" and "mitigated" GHG emissions associated with waste disposal were both calculated using CalEEMod's default parameters~~. The unmitigated~~ and were projected to remain constant between 2020 and 2035 as the population for the project is to remain constant. The 2020 and 2035 "unmitigated" solid waste emissions were estimated to be 854.14 $MTCO_2E$ per year.

The proposed project would include a ~~California Redemption Value (CRV) recycling center~~RF and green waste drop-off center. According to the Specific Plan, "the purpose of the recycling facility is to provide and encourage recycling by project residents in addition to the weekly collection of green waste." As envisioned in the Specific Plan, the facility would include office functions as well as storage for any equipment or materials. The facility would also include temporary roll-off bins or storage containers where recyclables and/or green waste generated from local residents can be consolidated for efficient off-site processing. The Specific Plan also considers a future buy-back center at this location for residents to redeem CRV containers. Anticipated processing equipment would include material conveyors and an aluminum can compactor while mobile equipment would typically be limited to natural gas- or propane-powered forklifts with occasional heavy trucks to haul material to larger facilities.

The proposed collection of recycling and green waste is initially seen as a simple storage operation with little on-site operation other than the delivery of empty containers and the pick-up of full containers by large trucks, with occasional resident vehicles accessing the site. Emissions associated with these activities are anticipated to be similar to typical activities and assumptions defined as CalEEMod estimates the volume of solid waste, and waste categorization percentages (e.g., paper products, food waste, and plant debris) based on rates identified by the California Department of Resources Recycling and Recovery (CalRecycle). ~~CalEEMod determines the~~The GHG emissions associated with disposal of solid waste into landfills ~~using~~is based on the U.S. EPA's WARM software that quantifies GHG emissions from solid waste based on the IPCC method using the degradable organic content of waste. The reductions in emissions associated with these measures are expected to be approximately 20 percent, which were directly inputted into CalEEMod. This reduction would result from the preparation of waste management plans (WMPs) for each project phase ~~individual developments~~ per the ~~County Guidelines~~County Guidelines. The WMPs would contain educational materials for individual developers during the operational and construction phases of each proposed development. The total annual 2020 and 2035 "mitigated" emissions associated with the waste disposal practices of the project would be 683.31 $MTCO_2E$ of GHGs per year.

5.4 Direct Emissions

The project's construction and operational GHG emissions described above consist of both direct and indirect emissions of GHGs. The project's direct emissions would occur from activities that directly generate the emissions (e.g., natural gas fuel combustion for space and water heating, fireplace combustion, landscape maintenance equipment) and direct on- and off-site project-generated vehicle trips ~~for~~if residents, employees, and visitors. Construction emissions, largely attributed to off-road vehicle and equipment use, would also be considered direct emissions.

Table ~~12~~13 provides a rough estimate of the project's direct emissions of GHGs for the 2020 "mitigated" and the "unmitigated" scenarios. These emissions were estimated in CalEEMod as part of the construction and operational modeling described above in subchapters 5.1 and 5.2. As indicated in Table 12, annual direct emissions would total 28,~~417.65~~561.15 $MTCO_2E$ for the "mitigated" scenario and 38,069.75 $MTCO_2E$ for the "unmitigated" scenario; with 567.12 $MTCO_2E$ attributed to construction activities. These estimates are rough estimates of the direct emissions, as some aspects of water/wastewater and solid waste disposal emissions are also considered direct, however the distinction between the two is difficult to assess in CalEEMod and the modeled emissions from those two sources is typically wholly attributed to the category of indirect emissions as included in subchapter 5.4 below.

TABLE ~~12~~13
ANNUAL ESTIMATED DIRECT GHG EMISSIONS
FOR UNMITIGATED AND MITIGATED SCENARIOS IN 2020

Project Emission Sources	2020 Unmitigated Emissions (in $MTCO_2E$)	2020 Mitigated Emissions (in $MTCO_2E$)
Construction	567.12	567.12
Vehicles	26,863.73	22,884.92
Natural Gas Consumption	3,163.9	2,350.76
Area Sources	4,229.82	2,758.35
TOTAL	**38,069.75**	**28,561.15**

Table 14 provides a rough estimate of the project's direct emissions of GHGs for the 2035 "mitigated" and the "unmitigated" scenarios. These emissions were also estimated in CalEEMod as part of the construction and operational modeling described above in subchapters 5.1 and 5.2.

TABLE 14
ANNUAL ESTIMATED DIRECT GHG EMISSIONS
FOR UNMITIGATED AND MITIGATED SCENARIOS IN 2035

Project Emission Sources	2035 Unmitigated Emissions (in $MTCO_2E$)	2035 Mitigated Emissions (in $MTCO_2E$)
Construction	567.12	567.12
Vehicles	23,918.03	20,417.44
Natural Gas Consumption	3,163.9	2,332.16
Area Sources	4,229.82	2,758.35
TOTAL	**31,878.87**	**26,075.07**

As described in subchapters 5.1 and 5.2, construction activity would be restricted to using minimum Tier III equipment; vehicles would be subject to the Pavley I and II, the Tire Pressure Program, and LCFS standards on GHG emissions; VMT would be influenced (i.e., reduced) by the mixed-use and walkable design of the project; energy emissions would be reduced through implementation of the RPS and improvements over Title 24 2008 standards, and area source emissions would be restricted to only natural gas hearths.

5.5 Indirect Emissions

The project's indirect emissions would occur from indirect sources of emissions, such as those emissions that would occur off-site at utility providers associated with the project's energy, water, and waste requirements. While electricity-related GHG emissions are considered indirect emissions associated with electricity production occurring in a different jurisdiction, the project's consumers are considered accountable for the generation of those emissions.

Table ~~13~~15 provides a rough estimate of the project's indirect emissions of GHGs for the "mitigated" and the "unmitigated" scenarios. These emissions were estimated in CalEEMod as part of the operational energy, water and solid waste modeling described above in subchapter 5.2. The project's electricity-related GHG emissions associated with the project's energy, water and waste requirements were quantified in CalEEMod using SDG&E-specific emissions factors obtained from the California Climate Action Registry. ~~These are shown in Table 11 above~~.

Table ~~13~~15 provides a rough estimate of the project's indirect emissions of GHGs for the 2020 "mitigated" and the "unmitigated" scenarios. The proposed project's 2020 "mitigated" and "unmitigated" annual indirect emissions would total 4,~~950.89~~973.73 and 6,412.83 $MTCO_2E$ respectively. ~~This~~The "mitigated" estimate takes into account the project design features that require: exceedance of 2008 Title 24 energy efficiency standards by 30 percent; installation of high-efficiency lighting and appliances; the use of Smart Meters; a 20 percent reduction in solid waste generation; and the reduction of indoor and outdoor water use by 20 percent.

TABLE ~~13~~15
ANNUAL ESTIMATED INDIRECT GHG EMISSIONS
FOR UNMITIGATED AND MITIGATED SCENARIOS IN 2020

Project Emission Sources	2020 Unmitigated Emissions (in $MTCO_2E$)	2020 Mitigated Emissions (in $MTCO_2E$)
Electricity Consumption	3,812.33	2,~~870.49~~893.33
Water Use	1,746.36	1,397.09
Solid Waste	854.14	683.31
TOTAL	**6,412.83**	**4,~~950.89~~973.73**

Table 16 provides a rough estimate of the project's indirect emissions of GHGs for the 2035 "mitigated" and the "unmitigated" scenarios. The proposed project's 2035 "mitigated" and "unmitigated" annual indirect emissions would total 4,564.93 and 5,905.55 $MTCO_2E$ respectively. These estimates include the same project design features used for the 2020 scenario.

TABLE 16
ANNUAL ESTIMATED INDIRECT GHG EMISSIONS
FOR UNMITIGATED AND MITIGATED SCENARIOS IN 2035

Project Emission Sources	2035 Unmitigated Emissions (in $MTCO_2E$)	2035 Mitigated Emissions (in $MTCO_2E$)
Electricity Consumption	3,812.33	2,890.36
Water Use	1,239.08	991.26
Solid Waste	854.14	683.31
TOTAL	**5,905.55**	**4,564.93**

It should also be noted that reductions from the tire pressure program, LEV III, and RPS were also included as reductions in these indirect emissions categories in order to reflect the full emissions reductions with project design measures.

6.0 Impact Summary

The significance analysis provided in Chapters 6.0 and 7.0 of this report is multi-faceted and evaluates the significance of the project's GHG emissions by reference to: (a) the existing environmental conditions on the project site; (b) the County's Guidelines, and particularly the performance threshold for 2020 emissions levels; (c) the County CAP, and particularly it GHG emissions reduction targets for 2020 and 2035; (d) the EO-S3-05 goal for 2050; and SE 375 and the 2050 RTP/SCS.

6.1 Existing Emissions

In accordance with State CEQA Guidance Section 15064.4(b)(1), this report considers the "extent to which the project may increase or reduce [GHG] emissions as compared to the existing environmental setting."

As shown in Table 17, the existing land uses emissions are calculated at 563.74 $MTCO_2E$ in 2008, and the project emissions are quantified at 33,050.68 $MTCO_2E$ in 2020. Therefore, the GHG emissions from the proposed project would be greater than the existing emissions, increasing emissions on the project site over and above existing conditions by 32,486.94 $MTCO_2E$.

The existing science on climate change is inadequate to quantify the specific amount of GHG emissions that would impact the global climate. Therefore, it is not possible to determine what particular quantity of GHG emissions would be significant and no agency with regulatory expertise in California has identified a specific mass emission limit applicable to land use development. As a result this numeric change is an obvious increase in emissions, but does not itself provide a meaningful or informative indicator of project impacts.

TABLE 17
ANNUAL ESTIMATED GHG EMISSIONS
FOR EXISTING USES AND 2020 MITIGATED PROJECT EMISSIONS

Project Emission Sources	2008 Existing Emissions ($MTCO_2E$)	2020 Project "Mitigated" Emissions ($MTCO_2E$)	Increase
Construction		567.12	567.12
Vehicles	392.54	22,884.92	22492.38
Energy Use	95.26	5,244.09	5148.83
Area Sources	52.70	2,758.35	2705.65
Water Use	11.49	1,397.09	1385.6
Solid Waste	11.75	683.31	671.56
TOTAL	**563.74**	**33,534.88**	**32,971.14**

6.2 2020 Emissions

In accordance with State CEQA Guidelines Section 15064.4(b)(2)-(3), this report considers (i) whether the project's emissions "exceed a threshold of significance that the lead agency determines applies" and (ii) "the extent to which the project complies with regulations or requirements adopted to implement statewide, regional, or local plans for the reduction or mitigation of GHG emissions." In assessing the project's significance under these two criteria, reference is made to the County Guidelines, particularly its performance threshold and the County CAP.

6.2.1 Stationary Threshold

As discussed, the stationary threshold is only relevant to the proposed stationary sources, such as the project's WRF. As this stationary source is included in the larger project, the stationary source alone would not be appropriate for this analysis.

6.2.2 Efficiency Threshold

The efficiency threshold requires the development of a service population to assess the significance of GHG emissions. For this project, the calculation of residences for typical multiple- and single-family units can be based on the average person per household from the last census. However, there is known data to determine the population within the proposed age restricted or group facilities. The employment requirement for the group facility is not known and no specific employer/operator of the facility has been identified. Similar issues arise from the commercial uses, the school, church, and other on-site employers.

Due to the level of speculation required to calculate the service population, the analysis under the efficiency threshold would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual impacts attributable the proposed project. Therefore, the efficiency threshold was determined to be inappropriate for assessing the project.

6.2.3 Performance Threshold

The performance threshold requires the calculation of "unmitigated" emissions and "mitigated" emissions based on the available information. Therefore, the performance threshold is most appropriate for this project to assess project impacts. The following analysis uses the performance threshold comparing the "unmitigated" emissions and "mitigated" emissions for the year 2020.

Table 18 provides a summary of the project's total 2020 emissions including construction and direct and indirect operational emissions for the "unmitigated" and the "mitigated" scenarios, as calculated using the performance threshold. As indicated, annual construction emissions would total 567.12 $MTCO_2E$ and gross annual operational emissions would total 33,~~368.54~~534.88 $MTCO_2E$. ~~After subtracting the existing use~~The emissions ~~of 484.2,~~associated with existing land uses have been subtracted from both the "unmitigated" and "mitigated" scenarios as either scenario would remove the existing land uses. The resulting emissions ~~total~~for the "mitigated" project would be ~~32,884.34~~33,073.68 $MTCO_2E$ per year as shown in Table ~~14~~18 below.

TABLE ~~14~~18
TOTAL ANNUAL ESTIMATED GHG EMISSIONS
FOR THE UNMITIGATED PROJECT AND THE MITIGATED PROJECT IN 2020 – PERFORMANCE THRESHOLD

Project Emission Sources	2020 Project Emissions Unmitigated (in $MTCO_2E$)	2020 Project Emissions Mitigated (in $MTCO_2E$)	Percent Reduction
Construction	567.12	567.12	0%
Vehicles	26,863.73	22,884.~~921~~92	14.8%
Energy Use	6,976.23	5,~~077.75~~244.09	~~27.2~~24.8%
Area Sources	4,229.82	2,758.35	34.8%
Water Use	1,746.36	1,397.09	20%
Solid Waste	854.14	683.31	20%
SUBTOTAL	**41,237.41**	**33,~~368.54~~534.88**	**~~19.1~~18.7%**
Existing Uses	-~~484~~461.2	-~~484~~461.2	
TOTAL	**40,~~753~~776.21**	**~~32,884.34~~33,073.68**	**~~19.3~~18.9%**
Performance Threshold percent reduction	**--**	**~~19.3~~18.9%**	

As indicated in Table ~~14~~18, area sources account for the largest percent reduction of emissions of 34.8 percent. These account for the increase of natural gas fire places and the elimination of wood fire places. The reductions from energy use are the second greatest at ~~27.2~~24.8 percent, and reflect reductions from electricity from implementation of the RPS standard. The incorporation of these measures into the project design result in a ~~19.3~~18.9

percent decrease in emissions from the "unmitigated" to the "mitigated" scenario, surpassing the 16 percent requirement established by the ~~Performance Threshold~~performance threshold.

The design features incorporated into the project, for the "mitigated" scenario, to achieve the ~~Performance Threshold~~performance threshold are described in Chapter 8.0 (and in subchapter 1.2.3). When ~~subsequent phases~~any phase under the Specific Plan comes forward, ~~they~~it will be subject to the requirements of the Specific Plan that outline the project design features modeled in this analysis through conditions of approval of the project and all ~~subsequent~~ phases. ~~The subsequent~~All phases, with the implementation of the design features, would exceed the County's ~~Performance Threshold~~performance threshold of 16 percent. Impacts associated with the project's contribution to cumulative GHG emissions would thus be considered less than significant, given project design features. No mitigation is necessary. Therefore, the efficiency threshold was determined to be inappropriate for assessing the project, see Appendix.

~~Impacts associated with the project's contribution to cumulative GHG emissions would thus be considered less than significant, given project design features, and no additional mitigation is necessary.~~

6.3 2035 Emissions

In accordance with state CEQA Guidelines Section 15064.4(b)(3), this report considers "the extent to which the project complies with regulations or requirements adopted to implement statewide, regional, or local plans for the reduction or mitigation of [GHG] emissions." In assessing the project's significance, reference is made to the County CAP.

Table 19 provides a summary of the project's total 2035 emissions including construction and direct and indirect operational emissions for the "unmitigated" and the "mitigated" scenarios, as calculated for the performance threshold. The annual construction emissions would total 567.12 $MTCO_2E$, equaling the 2020 total, and gross annual operational emissions would total 30,640.01 $MTCO_2E$. After subtracting the existing use emissions of 461.2, the resulting emissions total would be 30,178.81 $MTCO_2E$ per year as shown in Table 19 below.

TABLE 19
TOTAL ANNUAL ESTIMATED GHG EMISSIONS
FOR THE UNMITIGATED PROJECT AND THE MITIGATED PROJECT IN 2035 – PERFORMANCE THRESHOLD

Project Emission Sources	2035 Project Emissions Unmitigated (in $MTCO_2E$)	2035 Project Emissions Mitigated (in $MTCO_2E$)	Percent Reduction
Construction	567.12	567.12	0%
Vehicles	23,918.03	20,417.44	14.6%
Energy Use	6,976.23	5,222.52	25.1%
Area Sources	4,229.82	2,758.35	34.8%
Water Use	1,239.08	991.26	20%
Solid Waste	854.14	683.31	20%
SUBTOTAL	**37,784.43**	**30,640.01**	**18.9%**
Existing Uses	-461.2	-461.2	
TOTAL	**37,323.23**	**30,178.81**	**19.1%**
Performance Threshold percent reduction	**--**	**19.1%**	

The 2035 "mitigated" project calculations reflect the adjustments from the 2035 GHG reduction measures as presented in the County CAP. Based on the County CAP measures there are increased percentage reductions from smart meters from 0.6 in 2020 to 1.3 percent in 2035 and decreased percentage reductions from the tire pressure program from 0.6 to 0.4 percent. The remaining GHG reductions from the other categories taken from the 2020 scenario, as described in subchapters 5.1 and 5.2, are also applied to the 2035 scenario. Additionally, if the sequestration reduction from planting of 35,000 trees was considered in the 2035 reduction, this value would be reduced an additional 2,726.5, which reflects sequestration only. Additional, reductions are possible from energy savings if the trees were located in proximity to buildings to provide shade. If the trees are planted with the intent to shade buildings, they would result in a reduction of up to 5,936 $MTCO_2E$ over the emission projected in 2035. Therefore, depending on how the trees are planted, they could result in a reduction in GHG emission on ranging from 2,726.5 to 8,662.5 $MTCO_2E$, or a 26.4 percent to 42.2 percent reduction, over those reported in Tables 18 and 19.

Certain emissions categories are constant in the 2035 calculation, including the existing uses, construction, solid waste and area sources. These activities would emit the same amount independent of the year; therefore, they would remain the same as the 2020 modeled scenario.

Without consideration of any tree sequestration or associated energy efficiencies, the "mitigated" project would achieve a 19.1 percent reduction over the "unmitigated" project in 2035. With consideration of only the sequestration benefits associated planting 35,000 trees, the "mitigated" project would achieve a 26.1 percent reduction from the "unmitigated" scenario in 2035. If the trees were planted to provide shade to structures, the emissions reductions would be on the order of 42 percent.

Meeting the GHG-reduction goals beyond 2020 will require greater participation in existing measures, inclusion of additional measures, guidance from the state and federal authorities, additional state and federal regulations, improved technology, and infrastructure changes (County of San Diego 2012b). Reducing emissions from an "unmitigated" scenario will require mitigating more than 4 $MMTCO_2E$, which will only be achievable through additional local, state, and federal actions (County of San Diego 2012b). The County has included in Appendix F of the County CAP, an alternative scenario of how the 2035 goal could be achieved. This scenario includes measures that may not be currently economically, technically, or politically feasible such as implementing net-zero energy requirements on new buildings, increasing the LCFS to 30 percent at the state/federal level, and requiring organic waste diversion and 20 percent reduction in VMT at the local level.

The project would achieve a 19.1 percent emissions reduction from the "unmitigated" scenario in 2035, which exceeds the current rate of 13.7 percent emissions reductions contemplated by the County (County of San Diego 2013~~2a~~) for the year 2035. Therefore, as additional local, state, and federal actions are necessary to reach the 49 percent goal, the ~~21.2~~19.1 percent reduction is considered the fair-share contribution from the project in the current regulatory environment.

6.4 2050 Emissions

EO S-3-05 cites 2050 as a long-term timeframe and sets forth executive policy that the state achieve an 80 percent reduction in GHG emission below 1990 levels by that date (California Council on Science and Technology [CCST] 2011). While the County CAP states the EO 2050 goal is not a binding mandate, the County does recognize the need to reduce GHG emissions beyond 2020 (County of San Diego 2013~~2a~~). However, as discussed in the 2035 analysis, the County would have to rely on state and federal actions to reach the interim goal of 49 percent in 2035, as CARB has not released guidance or developed methods to achieve even that goal, the 2050 goal is even more speculative and does not provide meaningful information for decision making.

The CCST has prepared a combination of potential pathways that may be required to arrive at 80 percent below 1990 GHG emission levels by 2050 (CCST 2011) which include the following:

1. Develop the technology to make Carbon, Capture and Sequestration (CCS) 100 percent effective and economical.

2. Eliminate fossil fuels with CCS from the electricity mix.

3. Increase the amount of load balancing that is achieved without emissions from 50 percent to 100 percent, resulting in zero emission load balancing.

4. Produce biomass with net zero carbon emissions.

5. Burn all domestic biomass supplies with natural gas and use CCS to make electricity with net negative GHG emissions, creating an offset for the required fossil fuel use.

6. Reform hydrogen fuel from natural gas with CCS and use it to reduce fuel and electricity use.

7. Increase the supply of sustainable biomass twofold, and use it to make low-carbon biofuels, using feedstocks that best fit efficient conversion to the needed energy mix.

While these are possible strategies, they are not considered comprehensive and their relative efficiencies and costs have not been evaluated. Additionally, many of the strategies depend on further development and innovation of technologies for successful implementation, such as the zero emission load balancing and using biomass with CCS to produce electricity rather than biofuels (CCST 2011).

According to the 2011 Scoping Plan, achieving an 80 percent reduction by 2050 will require aggressive development and deployment of the cleanest technologies, but that rapid market penetration will be required to significantly accelerate emission reductions through the following:

1. Energy demand reduction via efficiency and activity changes,

2. Large-scale electrification of on-road vehicles and building and industrial appliances, and

3. Decarbonization of electricity and fuel supplies through renewable or other near-zero carbon technologies.

The measures identified by the CCST and CARB are beyond the scope and ability of a single project or jurisdiction to implement. Additionally, neither the state nor federal government has developed a plan to implement the measures. Therefore, as information is incomplete or unavailable to credibly predict the specific GHG emission reductions in the future, the outcome of an assessment, adverse or not, would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual impacts attributable the proposed project.

7.0 Plan, Policy, and Regulatory Conflicts

7.1 ~~AB 32, EO S-3-05, SB 97, the~~ County CAP

In accordance with state CEQA Guidelines Section 15064.4(b)(3), this report considers "the extent to which the project complies with regulations or requirements adopted to implement statewide, regional, or local plans for the reduction or mitigation of [GHG] emissions." In assessing the project's significance, reference is made to the County CAP.

The County's CAP, approved in June 2012, addresses issues of growth and climate change relevant to the County. Specifically, the County ~~The County's CAP, approved in June 2012, addresses issues of growth and climate change relevant to the County. Specifically, the~~ CAP is designed to mitigate impacts of climate change by achieving meaningful GHG reductions within the County. ~~, consistent with AB 32, EO S-3-05,~~ SB 97, ~~and SB 97~~375 (refer to subchapter 3.2). ~~The~~ County ~~CAP provides the overall framework for assessing significance and demonstrates a range of feasible reduction measures that can be implemented to achieve an overall reduction target that is supportive of the state-mandated reduction targets embodied in AB 32, EO S-3-05 and SB 97.~~ Project type-specific implementing thresholds are included in the County ~~Guidelines g~~Guidelines in order to allow projects to clearly demonstrate compliance with the County CAP and the County's GHG emission reduction target (County of San Diego 2012b, page 23).

The project, by demonstrating compliance with the relevant County implementing threshold in Chapters 5.0 and 6.0 ~~above~~, would, as identified in the County ~~Guidelinesg~~Guidelines, also be consistent with the County's CAP and, by extension, AB 32 and its implementing Climate Change Scoping Plan (including the Scoping Plan's GHG reduction measures).

Specifically, by achieving the ~~Performance Threshold~~performance threshold and exceeding the 16 percent reduction in emissions (~~19.3~~18.9 percent), the project not only complies with the County's GHG significance threshold per CEQA, but complies with the County CAP reduction target for 2020 (i.e., 15 percent below 2005 level by 2020). The project achieves this by incorporating design features that are consistent with applicable County CAP measures and with the GHG reduction strategies of the AB 32/Scoping Plan and other relevant plans and regulations adopted for the purpose of reducing GHG emissions.

As discussed in the Project Description, subchapter 1.2.3, and Chapters 5.0 and 8.0, the project includes several GHG-reducing design features that comply with County CAP measures and AB 32/Scoping Plan strategies. These include land use mix/density measures per County CAP measure LU1, neighborhood walkability per County CAP measure T2, energy efficiency measures per County CAP measures E1 and E3, the use of

Smart Meters per County CAP measure E4, and an additional category of planting trees per County CAP measure LS1. ~~As previously mentioned, the tree planting emission reductions are not included in the 19.3~~18.9 ~~percent reduction and are expected to achieve additional reductions.~~ The project also includes several water conservation, waste reduction, area source, and other design measures that result in reducing GHG emissions. For example, by increasing density and diversity (mixed--use), improving walkability design, and integrating below market-rate housing opportunities, the project reduces its GHG emissions associated with vehicle use and VMT. By establishing minimum building energy efficiency and water and waste conservation standards, the project reduces its GHG emissions associated with the production of energy needed to supply building occupancy, water use and waste disposal energy needs.

Through the incorporation of these project features, ~~GHG emissions would be reduced to below threshold levels. P~~potential impacts associated with plan or policy conflict would thus be less than significant.

7.2 SB 375 and 2050 RTP/SCS

In accordance with state CEQA Guidelines Section 15064.4(b)(3), this report considers "the extent to which the project complies with regulations or requirements adopted to implement statewide, regional, or local plans for the reduction or mitigation of [GHG] emissions." In assessing the project's significance, reference is made to SB 375 and the 2050 RTP/SCS adopted by SANDAG.

As previously discussed, SB 375 requires the regional transportation plan for regions of the state with a MPO to adopt an SCS, as part of its regional transportation plan, to achieve certain goals for the reduction of greenhouse gas emissions from automobiles and light trucks in a region (State of California 2008). CARB's adopted targets for the region's MPO, SANDAG, include a 7 percent per capita reduction in emissions by 2020 and a 13 percent per capita reduction by 2035. The SANDAG 2050 RTP/SCS Plan is expected to result in regional per capita GHG emission reductions of 14 percent by 2020 and 13 percent by 2035, reaching the goals established by CARB (SANDAG 2013). The elements of the 2050 RTP/SCS plan that contribute to the GHG reductions are large investments in transit, new light rail and bus rapid transit services, and transportation system management. CARB issued EO G-11-114, stating its acceptance of the GHG quantification determination in the final 2050 RTP/SCS plan, thereby acknowledging that the RTP/SCS Plan, if implemented, would meet the targets that CARB established for the region for 2020 and 2035 (CARB 2011c).

SANDAG identified performance metrics and trends to explain and confirm the GHG reduction benefits of the SCS (SANDAG 2013). These include 80 percent of new housing located within a half-mile of transit stations by 2035, 64 percent of all housing within a half-mile of transit stations, along with decreasing per capita vehicle miles (SANDAG 2013). The project would be in-line with the SCS GHG benefits as the project would support and/or provide a range of housing types, services and jobs in a compact pattern of development located within a half-mile (10-minute walk) from at least 7 diverse neighborhood assets such as retail, services, civic facilities, and jobs. This, in turn, would reduce the size of required infrastructure improvements and the number and length of automobile trips. Additionally, the project trip lengths would be shorter from the project site than from within the Valley Center community as identified in the County General Plan and SCS (Chen Ryan 2014).

The project requires less roadway infrastructure because of its compact design, which locates housing in close vicinity to commercial and public services, and its location one quarter mile from a regional transportation corridor, the I-15. The 2050 RTP lists the I-15 as a Regional Transit Corridor in 2020 and 2035. The 2050 RTP increases the transit role of the I-15, and lists the I-15 as a High Quality Transit Corridor in 2050, which is defined to have major transit stops with 15-minute peak period services (SANDAG 2011a).

Based on the project emissions analysis in Chapter 5.0, the “mitigated” project would achieve a 14.8 percent reduction of vehicle emissions in 2020 and a 14.6 percent reduction in 2035, when compared to the “unmitigated” project. These vehicle emissions were modeled in CalEEMod for the proposed projects land uses and include the same vehicles classes as those used in the SCS and to derive the SB 375 targets (CARB 2011d).

Therefore, the GHG emissions percentage reductions associated with the project would exceed the CARB adopted targets for the SANDAG region for vehicle emissions reductions. These percentage reductions equate to a per capita reduction specifically for vehicle emissions. As referenced within the RTP/SCS EIR (SANDAG 2011b), CARB had not developed a target for 2050, and no emissions percentage reduction was included for the year 2050 in the RTP.

In summary, the proposed project would not conflict with the objectives of SB 375 and the 2050 RTP/SCS.

8.0 Mitigation

8.1 Mitigation Measures

Mitigation measures would not be necessary to reduce or avoid impacts. Project design features have been incorporated into the project to reduce GHG emissions to acceptable levels.

8.2 Design Features

Project design features that would have the effect of reducing potential GHG emissions include Specific Plan policies and performance measures for ~~subsequent~~all phases, and a mixed-use project design that is oriented to increase walkability. Existing regulations would also serve to reduce the project's GHG emissions.

8.2.1 Specific Plan Policies and Performance Measures

The project includes a number of design features with which ~~subsequent~~all phases would comply that would have the effect of reducing potential GHG emissions associated with construction, energy use, area sources, water demand, and waste disposal. The benefits of these design features in reducing GHG emissions has been quantified and demonstrated in Chapter 5.0 of this report.

8.2.1.1 Construction

The project includes the following design feature related to equipment used during construction.

Use Tier III Construction Equipment

All construction projects shall use a minimum of Tier III CARB-certified construction equipment for the majority of construction equipment used, during the entire construction period.

8.2.1.2 Energy Conservation

The project includes the following performance measures related to energy use.

a. Exceed 2008 Title 24 Energy Efficiency Standards by 30 Percent

All projects subject to Title 24 shall exceed the 2008 Title 24, Part 6, Energy Efficiency Standards by a minimum of 30 percent. ~~This policy is consistent with the County's 2012 CAP Measure E1.~~

b. Install High-efficiency Lighting

All projects shall install high-efficiency lighting to achieve an overall minimum 15 percent lighting energy reduction relative to baseline lighting energy demand.

c. Install High-efficiency Appliances in Residential Uses

All residential projects, including single-family residential, mixed-use ~~residential,~~residential and senior community residential, shall install Energy Star or equivalent high-efficiency appliances (including clothes washers, dish washers, fans, and refrigerators).

~~This performance measure is consistent with the County's 2012 CAP Measure E3.~~

d. Use of Smart Meters

The project design shall include~~s~~ the installation and use of Smart Meters on all buildings. ~~These meters provide utility customers with access to details energy use and cost information, pricing programs based on peak energy demand, and the ability to program home appliances and devices to respond to energy use preferences based on cost, comfort, and convenience. Smart meters increase awareness thus reducing energy cost and consumption.~~

8.2.1.3 Area Sources

The project includes the following performance measure related to area sources that limits the type of residential fireplaces.

Install Only Natural Gas (No Wood) Fireplaces in Residential Uses

All residential projects intending to install fireplaces, including single-family residential, mixed-use residential, and senior community residential, shall install only natural gas or equivalent non-wood burning fireplaces.

8.2.1.4 Water Conservation

The project includes the following performance measure related to water conservation that will additionally conserve energy use.

Reduce Potable Water Consumption

All projects subject to Title 24 shall be designed to achieve a minimum 20 percent reduction in indoor/potable water demand and a 20 percent reduction in outdoor water use relative to baseline (2008 Title 24 Plumbing Code) indoor/outdoor water use.

8.2.1.5 Waste Diversion/Recycling

The project includes the following performance measure related to reducing solid waste disposal.

Reduce Waste Disposal/Institute Recycling and Composting Services

All projects shall implement recycling and composting services in order to achieve a 20 percent reduction in baseline waste disposal.

8.2.2 Specific Plan Siting and Design Measures

In addition to the above performance measures, required for ~~subsequent~~all phases, the design, density, mix of uses, and mobility network of the phase have the effect of reducing potential GHG emissions associated with vehicle use. The benefits of these project design aspects in reducing VMT and GHG emissions have been quantified and demonstrated in the vehicle emissions discussion in Chapter 5.0 of this report.

8.2.2.1 Vehicle Miles Traveled

The project Specific Plan includes the following locational design features related to VMT reduction.

a. Mixed-use Development

The project proposes to provide residential and resident-serving commercial and civic uses in a pedestrian-oriented mixed-use community where one does not currently exist. The non-residential uses include neighborhood-serving retail and restaurant uses, an elementary/middle school, church site, recreation center, neighborhood park, and a recycling buyback center. All of these uses are to be provided within one-half mile of residential uses.

~~This land use design feature is consistent with the County's 2012 CAP Measure LU1.~~

b. Walking and Biking Opportunities

The project proposes to provide a network of pedestrian and bicycle paths, in a complete and interconnected network, where currently there are very limited bicycling and pedestrian facilities. ~~This mobility network design feature is consistent with the County's 2012 CAP Measure T2.~~

c. Affordable Housing Density

The project includes 40 dwellings at a density of 20 du/ac that would provide opportunity for affordable housing as identified in the Regional Housing Needs Assessment. Affordable housing is associated with potentially decreased per-unit GHG emissions compared to average, due to lower rates of vehicle ownership and VMT.

8.2.3 Existing Regulations

In addition to the Specific Plan policies, performance measures, and project design features, the project's GHG emissions would also be reduced as a result of several existing statewide regulations: Pavley I and II, the LCFS, the RPS, and the Tire Pressure Program. These regulations are included in the County CAP as measures SF1 through SF4. These regulations mandate improved vehicle engine design and low-carbon vehicle fuels that will reduce GHG emissions associated with newer model vehicles, while the RPS promotes diversification of the state's electricity supply and decrease reliance on fossil fuel energy sources. As previously stated, certain regulations apply to the "unmitigated" and "mitigated" scenarios. The benefits of these regulations in reducing the project's vehicle and energy GHG emissions have been quantified and demonstrated in the vehicle and energy emissions discussion in Chapter 5.0 of this report.

8.3 Enforcement

8.3.1 Subsequent Phase Conformance Review

The project is a large~~r~~ discretionary project that will include permits for subsequent development phases, such as site plans, demolition and grading permits, building permits, and final occupancy permits. Future development phases within the project Specific Plan area will be reviewed by the County for conformance with the Specific Plan and Final Environmental Impact Report (FEIR). This ~~subsequent~~ phase-level review process will include review of individual phase submittal materials for compliance with all relevant phase Specific Plan policies and design guidelines, including the performance measures outlined in subchapter 8.2 that serve to reduce GHG emissions. ~~Subsequent~~All phases would have future GHG emissions reduction enforced through the conditions of approval.

For example, the condition to use minimum Tier III construction equipment would be recorded on the demolition/grading permits and construction drawings, and incorporated into the construction contract. The construction contractor shall be responsible for implementing this requirement during construction. The County Building Official shall verify that the construction drawings have incorporated the minimum Tier III recommendations and would not issue a grading or building permit prior to this determination.

Energy efficiency and water conservation measures would also be conditioned on the building permits and construction drawings and compliance would be demonstrated through the standard Title 24 compliance reporting process. For example:

> As a condition of building permit approval, the construction plans and specifications shall indicate in the general notes or individual detail drawings the design features, product specifications and methods of construction and installation that are required

> to surpass the 2008 Title 24 Energy Efficiency Standards by a minimum of 30 percent. Verification of increased energy efficiencies shall be demonstrated based on a performance approach, using a CEC-approved energy compliance software program, in the Title 24 Compliance Reports provided by the applicant to the County prior to issuance of the building permit.
>
> Prior to issuance of a final certificate of occupancy, the energy features shall undergo independent third party inspection and diagnostics as part of the verification and commissioning process; with compliance verified by the County's Building Official. Additional inspections may be conducted as needed to ensure compliance, and during the course of construction and following completion of the phase, the County may require the applicant to provide information and documents showing use of products, equipment and materials specified on the permitted plans and documents.

Typically, improved Title 24 energy efficiency is accomplished through improved HVAC systems and duct seals; enhanced ceiling, attic and wall insulation; energy-efficient three-coat stucco exteriors; energy-efficient lighting systems; and high-efficiency window glazing. Similarly, water conservation in building design is typically accomplished through advanced plumbing systems such as parallel hot water piping or hot water recirculation systems, and fixtures such as ultra-low flow toilets and water-saving showerheads and kitchen faucets. These can also be conditioned on the permits and evaluated through the standard Title 24 compliance reporting process. For example, to comply with the current Title 24, the overall use of potable water within each structure must be reduced by 20 percent consistent with the 2008 Title 24 requirements. In accordance with Title 24 criteria, this percent reduction in potable water use must be demonstrated by verifying each plumbing fixture and fitting meets the 20 percent reduced flow rate or by calculating a 20 percent reduction in the building water use baseline through standardized compliance reporting forms and worksheets.

If any future projects under the project Specific Plan have potentially significant adverse environmental effects that were not examined in the project FEIR, an Initial Study would be prepared for that project, leading to the preparation of either a Negative Declaration, Mitigated Negative Declaration, focused EIR, or supplement to the Specific Plan FEIR.

8.3.2 Alternate Compliance Mechanism

Due to technological advancements related to environmental engineering and design, the changing regulatory environment, and more precise GHG modeling of specific project-level detail, as well as improvements in GHG modeling software/methodology, the menu and intensity of the required GHG-reducing design features modeled in this analysis may not be needed at the individual project level to meet the County's efficiency threshold or other applicable GHG reduction goal. Specifically, because of the continued advancement of technology in regard to building energy efficiencies, water reduction methods, and other

GHG-reducing measures and state requirements, the GHG reductions outlined in Chapter 8.0 could potentially be met by alternative methods not known at this time. Therefore, as an alternative to the identified GHG-reducing Specific Plan policies and design standards, the following study may be conducted to verify the adequacy of GHG reductions:

> Prior to the issuance of building permits, the project shall demonstrate that by incorporating other GHG reducing measures it would meet the County's GHG reduction goals at that time.

9.0 Residual Impacts and Conclusion

Mitigation is not necessary ~~to address significant impacts.~~for the project. Project design features would reduce project emissions by ~~19.3~~18.9 percent from the 2020 "unmitigated" scenario, which is above the 16 percent ~~Performance Threshold. Impacts~~performance threshold established for the year 2020 and in-line with the established methodology in AB 32 for reducing GHG emissions. Project design features would reduce project emissions by 19.1 percent from the 2035 "unmitigated" scenario, which is above the County of San Diego's 13.7 percent reduction contemplated within the County CAP. This does not, however, reach the 49 percent reduction target, set within the County CAP, as it only includes reductions from current technology and existing state and federal regulations. There are likely to be advances in technology that cannot be accounted for now, as well as additional regulations that will enhance the reductions achieved at the state and federal levels by 2035 (County of San Diego 2013~~2a~~). It is, however, analyzed as the fair share contribution from the project in the current regulatory environment. The project would also exceed the CARB adopted targets for vehicle emissions reductions established for 2020 and 2035 in the 2050 RTP/SCS, when comparing the "unmitigated" project to the "mitigated" project. Based on current regulation, impacts associated with the project's contribution to cumulative GHG emissions would thus be considered less than significant, and no additional mitigation is necessary.

The project, by demonstrating compliance with the ~~relevant implementing~~performance threshold, would, ~~as identified in the County's Guidelines,~~ also be consistent with the County's CAP and, ~~by extension,~~ the state's AB 32 Global Warming Solutions Act, the 2050 RTP/SCS, and ~~implementing~~ the 2008 Climate Change Scoping Plan. Potential impacts associated with plan or policy conflict would thus be less than significant.

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11.0 Appendix

1) **GHG Assumptions and Emissions Calculations**
2) **CalEEMod Output—On-Site Construction Emissions**
3) **Road Construction Emissions Model Output – Off-Site Construction Emissions**
4) **Project with Design Features GHG Emissions Calculations**
5) **Project with Design Features GHG Emissions Calculations – with Natural Gas Fireplaces**
6) **Post-processing Calculations**
7) **Climate Action Plan Checklist**
8) **Efficiency Threshold Evaluation**

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1) GHG Assumptions and Emissions Calculations

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Lilac Hills Explanation of GHG Emission Calculations

Vehicles

Unmitigated – CalEEMod estimates that the unmitigated vehicle emissions would be 24,177.36 $MTCO_2E$ per year. This includes reductions due to Pavley I and LCFS. The LCFS does not apply to the unmitigated project scenario, so emissions were divided by 0.9 to obtain emissions that do not account for the 10 percent emissions reduction provided by LCFS. This results in 26,863.73 $MTCO_2E$ per year.

Mitigated – CalEEMod estimates that the mitigated vehicle emissions (including project design features such as walkability and affordable housing) would be 23,592.70 $MTCO_2E$ per year. This includes reductions due to Pavley I and LCFS. Additional reductions would be provided by LEV III (2.4 percent) and the Tire Pressure Program (0.6 percent), so these emissions were reduced by a total of 3 percent. This results in 22,884.92 $MTCO_2E$ per year.

Energy – Natural Gas

Unmitigated – Unmitigated natural gas energy emissions would be those assuming buildings were constructed in accordance with 2008 Title 24. CalEEMod calculations default to 2008 Title 24. CalEEMod calculates that unmitigated natural gas energy emissions would be 3,163.9 $MTCO_2E$ per year.

Mitigated – The project would be constructed to be 30 percent more energy efficient than the 2008 Title 24 requirements. Additionally, the project would provide lighting that is 15 percent more efficient than what is required, install Energy Star appliances in residential units, and install Smart Meters. CalEEMod was used to account for these reductions, and it was estimated that the mitigated natural gas energy emissions would be 2,207.26 $MTCO_2E$ per year.

Energy – Electricity

Unmitigated – Unmitigated electricity energy emissions would be those assuming buildings were constructed in accordance with 2008 Title 24. CalEEMod calculations default to 2008 Title 24. CalEEMod calculates that unmitigated energy emissions would be 3,812.33 $MTCO_2E$ per year. This was reduced by 14.2 percent to account for reductions provided by the RPS from 2008 to 2012, under a no project scenario. Note: 2008 emission factors were used in CalEEMod; therefore, reductions attributable to the RPS are considered to start accruing in 2008.

Mitigated – The project would be constructed to be 30 percent more energy efficient than the 2008 Title 24 requirements. Additionally, the project would provide lighting that is 15 percent more efficient than what is required, install Energy Star appliances in residential units, and install Smart Meters. CalEEMod was used to account for these reductions, and it was estimated that the mitigated energy emissions would be 2,870.49 $MTCO_2E$ per year. This was reduced by 27.2 percent to account for reductions provided by the fully implemented (33 percent) RPS from 2008 to 2020, under a mitigated project scenario.

Area

Unmitigated – Fireplace emissions were calculated using the CalEEMod default proportion for wood burning and natural gas fireplaces. Landscaping emissions were calculated using the assumptions described in the Greenhouse Gas Technical Report. This results in 4,229.82 $MTCO_2E$ per year.

Mitigated – Fireplace emissions were calculated using only natural gas fireplaces. Landscaping emissions were calculated using the assumptions described in the Greenhouse Gas Technical Report. This results in 2,758.35 $MTCO_2E$ per year.

Water

Unmitigated – All CalEEMod defaults were assumed. This results in 1,746.36 $MTCO_2E$ per year.

Mitigated – A 20 percent reduction in water consumption was applied as required by CalGreen. This results in 1,397.09 $MTCO_2E$ per year.

Solid Waste

Unmitigated - All CalEEMod defaults were use. No additional reductions were assumed for the unmitigated project. This results in 854.14 $MTCO_2E$ per year.

Mitigated – A 20 percent reduction in solid waste was applied. This results in 683.31 $MTCO_2E$ per year.

Construction

Unmitigated and Mitigated – Construction emissions were calculated using the assumptions described in the Greenhouse Gas Technical Report. No additional reductions were assumed for the unmitigated or the mitigated project. Both scenarios result in 567.12 $MTCO_2E$ per year.

Existing Land Use

To obtain the net emission in year 2020 from both the unmitigated and the mitigated project, emissions due to the existing land uses were calculated for year 2020. There are 22 single family residences on site. Historical energy emission factors were used because these homes were built prior to 2008 Title 24. Wood fireplaces were assumed based on the ages of the homes. CalEEMod defaults were assumed. These conditions result in 484.2 $MTCO_2E$ per year.

<u>Additional Category - Trees</u>

The project would plant 35,000 trees. Page C-3 of Appendix C of the County CAP indicates that 10,000 trees would result in the sequestration of 779 $MTCO_2E$ per year. Additional reductions energy reductions would also be provided by reducing cooling loads and electrical usage by providing shade. However, only reductions due to sequestration were assumed. The planting of 35,000 trees would result in 2,726.5 $MTCO_2E$ removed from the atmosphere each year. Applying this to the mitigated project results in a 26.9 percent reduction in GHG emissions when compared to the mitigated project.

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2) CalEEMod Output—On-Site Construction Emissions

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Lilac Ranch - Phase 1 - Construction

San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
City Park	3.2	Acre
Single Family Housing	350	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Utility Company**	San Diego Gas & Electric
Climate Zone	13	**Precipitation Freq (Days)**	40		

1.3 User Entered Comments

Project Characteristics -

Land Use - per specific plan summary table 01/2013

Trips and VMT - per SANDAG

Grading - max grading

Architectural Coating - per SDAPCD, rule 67, ROG reductions

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

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					
2014	0.85	6.63	3.57	0.01	0.03	0.34	0.37	0.00	0.34	0.34	0.00	723.28	723.28	0.07	0.00	724.74
2015	1.39	10.13	6.91	0.01	0.19	0.52	0.71	0.00	0.51	0.52	0.00	1,356.91	1,356.91	0.11	0.00	1,359.25
Total	**2.24**	**16.76**	**10.48**	**0.02**	**0.22**	**0.86**	**1.08**	**0.00**	**0.85**	**0.86**	**0.00**	**2,080.19**	**2,080.19**	**0.18**	**0.00**	**2,083.99**

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					
2014	0.61	3.74	4.09	0.01	0.03	0.26	0.29	0.00	0.26	0.26	0.00	723.28	723.28	0.07	0.00	724.74
2015	1.63	7.13	7.94	0.01	0.19	0.48	0.67	0.00	0.48	0.48	0.00	1,356.91	1,356.91	0.11	0.00	1,359.25
Total	**2.24**	**10.87**	**12.03**	**0.02**	**0.22**	**0.74**	**0.96**	**0.00**	**0.74**	**0.74**	**0.00**	**2,080.19**	**2,080.19**	**0.18**	**0.00**	**2,083.99**

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	25.52	0.33	29.72	0.01		0.00	3.84		0.00	3.84	361.54	459.16	820.70	0.34	0.03	838.46
Energy	0.07	0.62	0.26	0.00		0.00	0.05		0.00	0.05	0.00	1,507.06	1,507.06	0.04	0.02	1,515.49
Mobile	3.61	7.72	36.40	0.06	6.49	0.38	6.87	0.10	0.37	0.47	0.00	5,492.11	5,492.11	0.23	0.00	5,496.97
Waste						0.00	0.00		0.00	0.00	83.37	0.00	83.37	4.93	0.00	186.83
Water						0.00	0.00		0.00	0.00	0.00	176.99	176.99	0.70	0.02	197.86
Total	**29.20**	**8.67**	**66.38**	**0.07**	**6.49**	**0.38**	**10.76**	**0.10**	**0.37**	**4.36**	**444.91**	**7,635.32**	**8,080.23**	**6.24**	**0.07**	**8,235.61**

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	25.52	0.33	29.72	0.01		0.00	3.84		0.00	3.84	361.54	459.16	820.70	0.34	0.03	838.46
Energy	0.07	0.62	0.26	0.00		0.00	0.05		0.00	0.05	0.00	1,507.06	1,507.06	0.04	0.02	1,515.49
Mobile	3.61	7.72	36.40	0.06	6.49	0.38	6.87	0.10	0.37	0.47	0.00	5,492.11	5,492.11	0.23	0.00	5,496.97
Waste						0.00	0.00		0.00	0.00	83.37	0.00	83.37	4.93	0.00	186.83
Water						0.00	0.00		0.00	0.00	0.00	176.99	176.99	0.70	0.02	197.86
Total	**29.20**	**8.67**	**66.38**	**0.07**	**6.49**	**0.38**	**10.76**	**0.10**	**0.37**	**4.36**	**444.91**	**7,635.32**	**8,080.23**	**6.24**	**0.07**	**8,235.61**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

3.2 Demolition - 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					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.02	0.12	0.09	0.00		0.01	0.01		0.01	0.01	0.00	11.80	11.80	0.00	0.00	11.83
Total	**0.02**	**0.12**	**0.09**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**11.80**	**11.80**	**0.00**	**0.00**	**11.83**

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	0.56	0.56	0.00	0.00	0.56
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.59	0.00	0.00	0.59
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.15**	**1.15**	**0.00**	**0.00**	**1.15**

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					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.03	0.09	0.08	0.00		0.01	0.01		0.01	0.01	0.00	11.80	11.80	0.00	0.00	11.83
Total	**0.03**	**0.09**	**0.08**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**11.80**	**11.80**	**0.00**	**0.00**	**11.83**

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	0.56	0.56	0.00	0.00	0.56
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.59	0.00	0.00	0.59
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.15**	**1.15**	**0.00**	**0.00**	**1.15**

3.3 Site Preparation - 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					
Fugitive Dust					0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.12	0.75	0.53	0.00		0.06	0.06		0.06	0.06	0.00	67.00	67.00	0.01	0.00	67.21
Total	**0.12**	**0.75**	**0.53**	**0.00**	**0.01**	**0.06**	**0.07**	**0.00**	**0.06**	**0.06**	**0.00**	**67.00**	**67.00**	**0.01**	**0.00**	**67.21**

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	3.40	3.40	0.00	0.00	3.41
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.40**	**3.40**	**0.00**	**0.00**	**3.41**

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					0.00	0.00	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	0.48	0.00		0.04	0.04		0.04	0.04	0.00	67.00	67.00	0.01	0.00	67.21
Total	**0.06**	**0.39**	**0.48**	**0.00**	**0.00**	**0.04**	**0.04**	**0.00**	**0.04**	**0.04**	**0.00**	**67.00**	**67.00**	**0.01**	**0.00**	**67.21**

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	3.40	3.40	0.00	0.00	3.41
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.40**	**3.40**	**0.00**	**0.00**	**3.41**

3.4 Grading - 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					
Fugitive Dust					0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.70	5.74	2.86	0.01		0.26	0.26		0.26	0.26	0.00	630.32	630.32	0.06	0.00	631.52
Total	**0.70**	**5.74**	**2.86**	**0.01**	**0.01**	**0.26**	**0.27**	**0.00**	**0.26**	**0.26**	**0.00**	**630.32**	**630.32**	**0.06**	**0.00**	**631.52**

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	0.01	0.01	0.07	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	9.60	9.60	0.00	0.00	9.61
Total	**0.01**	**0.01**	**0.07**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**9.60**	**9.60**	**0.00**	**0.00**	**9.61**

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					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.51	3.25	3.43	0.01		0.21	0.21		0.21	0.21	0.00	630.32	630.32	0.06	0.00	631.52
Total	**0.51**	**3.25**	**3.43**	**0.01**	**0.00**	**0.21**	**0.21**	**0.00**	**0.21**	**0.21**	**0.00**	**630.32**	**630.32**	**0.06**	**0.00**	**631.52**

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	0.01	0.01	0.07	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	9.60	9.60	0.00	0.00	9.61
Total	**0.01**	**0.01**	**0.07**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**9.60**	**9.60**	**0.00**	**0.00**	**9.61**

3.4 Grading - 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					
Fugitive Dust					0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.77	6.15	3.18	0.01		0.28	0.28		0.28	0.28	0.00	733.47	733.47	0.06	0.00	734.77
Total	**0.77**	**6.15**	**3.18**	**0.01**	**0.01**	**0.28**	**0.29**	**0.00**	**0.28**	**0.28**	**0.00**	**733.47**	**733.47**	**0.06**	**0.00**	**734.77**

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	0.01	0.01	0.07	0.00	0.01	0.00	0.02	0.00	0.00	0.00	0.00	10.92	10.92	0.00	0.00	10.93
Total	**0.01**	**0.01**	**0.07**	**0.00**	**0.01**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**10.92**	**10.92**	**0.00**	**0.00**	**10.93**

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					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.59	3.78	3.99	0.01		0.25	0.25		0.25	0.25	0.00	733.47	733.47	0.06	0.00	734.77
Total	**0.59**	**3.78**	**3.99**	**0.01**	**0.00**	**0.25**	**0.25**	**0.00**	**0.25**	**0.25**	**0.00**	**733.47**	**733.47**	**0.06**	**0.00**	**734.77**

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	0.01	0.01	0.07	0.00	0.01	0.00	0.02	0.00	0.00	0.00	0.00	10.92	10.92	0.00	0.00	10.93
Total	**0.01**	**0.01**	**0.07**	**0.00**	**0.01**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**10.92**	**10.92**	**0.00**	**0.00**	**10.93**

3.5 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	0.50	3.39	2.64	0.00		0.21	0.21		0.21	0.21	0.00	416.57	416.57	0.04	0.00	417.42
Total	**0.50**	**3.39**	**2.64**	**0.00**		**0.21**	**0.21**		**0.21**	**0.21**	**0.00**	**416.57**	**416.57**	**0.04**	**0.00**	**417.42**

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	0.05	0.52	0.33	0.00	0.03	0.02	0.05	0.00	0.02	0.02	0.00	90.10	90.10	0.00	0.00	90.14
Worker	0.06	0.07	0.69	0.00	0.14	0.01	0.15	0.00	0.01	0.01	0.00	105.86	105.86	0.01	0.00	105.99
Total	**0.11**	**0.59**	**1.02**	**0.00**	**0.17**	**0.03**	**0.20**	**0.00**	**0.03**	**0.03**	**0.00**	**195.96**	**195.96**	**0.01**	**0.00**	**196.13**

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	0.92	2.75	2.85	0.00		0.21	0.21		0.21	0.21	0.00	416.57	416.57	0.04	0.00	417.42
Total	**0.92**	**2.75**	**2.85**	**0.00**		**0.21**	**0.21**		**0.21**	**0.21**	**0.00**	**416.57**	**416.57**	**0.04**	**0.00**	**417.42**

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	0.05	0.52	0.33	0.00	0.03	0.02	0.05	0.00	0.02	0.02	0.00	90.10	90.10	0.00	0.00	90.14
Worker	0.06	0.07	0.69	0.00	0.14	0.01	0.15	0.00	0.01	0.01	0.00	105.86	105.86	0.01	0.00	105.99
Total	**0.11**	**0.59**	**1.02**	**0.00**	**0.17**	**0.03**	**0.20**	**0.00**	**0.03**	**0.03**	**0.00**	**195.96**	**195.96**	**0.01**	**0.00**	**196.13**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.61	7.72	36.40	0.06	6.49	0.38	6.87	0.10	0.37	0.47	0.00	5,492.11	5,492.11	0.23	0.00	5,496.97
Unmitigated	3.61	7.72	36.40	0.06	6.49	0.38	6.87	0.10	0.37	0.47	0.00	5,492.11	5,492.11	0.23	0.00	5,496.97
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	5.09	5.09	5.09	12,548	12,548
Single Family Housing	3,349.50	3,528.00	3069.50	12,341,703	12,341,703
Total	3,354.59	3,533.09	3,074.59	12,354,251	12,354,251

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	14.70	6.60	6.60	33.00	48.00	19.00
Single Family Housing	16.80	7.10	7.90	41.60	18.80	39.60

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	794.74	794.74	0.03	0.01	798.83
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	794.74	794.74	0.03	0.01	798.83
NaturalGas Mitigated	0.07	0.62	0.26	0.00		0.00	0.05		0.00	0.05	0.00	712.32	712.32	0.01	0.01	716.66
NaturalGas Unmitigated	0.07	0.62	0.26	0.00		0.00	0.05		0.00	0.05	0.00	712.32	712.32	0.01	0.01	716.66
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
Single Family Housing	1.33484e+007	0.07	0.62	0.26	0.00		0.00	0.05		0.00	0.05	0.00	712.32	712.32	0.01	0.01	716.66
Total		**0.07**	**0.62**	**0.26**	**0.00**		**0.00**	**0.05**		**0.00**	**0.05**	**0.00**	**712.32**	**712.32**	**0.01**	**0.01**	**716.66**

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
Single Family Housing	1.33484e+007	0.07	0.62	0.26	0.00		0.00	0.05		0.00	0.05	0.00	712.32	712.32	0.01	0.01	716.66
Total		**0.07**	**0.62**	**0.26**	**0.00**		**0.00**	**0.05**		**0.00**	**0.05**	**0.00**	**712.32**	**712.32**	**0.01**	**0.01**	**716.66**

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
Single Family Housing	2.24401e+006					794.74	0.03	0.01	798.83
Total						**794.74**	**0.03**	**0.01**	**798.83**

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
Single Family Housing	2.24401e+006					794.74	0.03	0.01	798.83
Total						**794.74**	**0.03**	**0.01**	**798.83**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	25.52	0.33	29.72	0.01		0.00	3.84		0.00	3.84	361.54	459.16	820.70	0.34	0.03	838.46
Unmitigated	25.52	0.33	29.72	0.01		0.00	3.84		0.00	3.84	361.54	459.16	820.70	0.34	0.03	838.46
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	0.98					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	2.46					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hearth	21.99	0.30	27.06	0.01		0.00	3.82		0.00	3.82	361.54	454.87	816.40	0.34	0.03	834.07
Landscaping	0.08	0.03	2.66	0.00		0.00	0.01		0.00	0.01	0.00	4.29	4.29	0.00	0.00	4.39
Total	**25.51**	**0.33**	**29.72**	**0.01**		**0.00**	**3.83**		**0.00**	**3.83**	**361.54**	**459.16**	**820.69**	**0.34**	**0.03**	**838.46**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.98					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	2.46					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	21.99	0.30	27.06	0.01		0.00	3.82		0.00	3.82	361.54	454.87	816.40	0.34	0.03	834.07
Landscaping	0.08	0.03	2.66	0.00		0.00	0.01		0.00	0.01	0.00	4.29	4.29	0.00	0.00	4.39
Total	**25.51**	**0.33**	**29.72**	**0.01**		**0.00**	**3.83**		**0.00**	**3.83**	**361.54**	**459.16**	**820.69**	**0.34**	**0.03**	**838.46**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					176.99	0.70	0.02	197.86
Unmitigated					176.99	0.70	0.02	197.86
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 / 3.81274					15.00	0.00	0.00	15.08
Single Family Housing	22.8039 / 14.3764					161.98	0.70	0.02	182.79
Total						**176.98**	**0.70**	**0.02**	**197.87**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
City Park	0 / 3.81274					15.00	0.00	0.00	15.08
Single Family Housing	22.8039 / 14.3764					161.98	0.70	0.02	182.79
Total						**176.98**	**0.70**	**0.02**	**197.87**

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					83.37	4.93	0.00	186.83
Unmitigated					83.37	4.93	0.00	186.83
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	0.28					0.06	0.00	0.00	0.13
Single Family Housing	410.41					83.31	4.92	0.00	186.70
Total						**83.37**	**4.92**	**0.00**	**186.83**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
City Park	0.28					0.06	0.00	0.00	0.13
Single Family Housing	410.41					83.31	4.92	0.00	186.70
Total						**83.37**	**4.92**	**0.00**	**186.83**

9.0 Vegetation

Lilac Ranch - Phase 1 - Construction

San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
City Park	3.2	Acre
Single Family Housing	350	Dwelling Unit

1.2 Other Project Characteristics

Urbanization Rural

Climate Zone 13

Wind Speed (m/s) 2.6

Precipitation Freq (Days) 40

Utility Company San Diego Gas & Electric

1.3 User Entered Comments

Project Characteristics -

Land Use - per specific plan summary table 01/2013

Grading - max grading

Architectural Coating - per SDAPCD, rule 67, ROG reductions

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Trips and VMT - per SANDAG

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					
2015	1.21	1.34	1.04	0.00	0.02	0.11	0.14	0.00	0.11	0.11	0.00	138.92	138.92	0.02	0.00	139.31
Total	**1.21**	**1.34**	**1.04**	**0.00**	**0.02**	**0.11**	**0.14**	**0.00**	**0.11**	**0.11**	**0.00**	**138.92**	**138.92**	**0.02**	**0.00**	**139.31**

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					
2015	1.27	0.84	0.98	0.00	0.02	0.07	0.10	0.00	0.07	0.07	0.00	138.92	138.92	0.02	0.00	139.31
Total	**1.27**	**0.84**	**0.98**	**0.00**	**0.02**	**0.07**	**0.10**	**0.00**	**0.07**	**0.07**	**0.00**	**138.92**	**138.92**	**0.02**	**0.00**	**139.31**

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	25.52	0.33	29.72	0.01		0.00	3.84		0.00	3.84	361.54	459.16	820.70	0.34	0.03	838.46
Energy	0.07	0.62	0.26	0.00		0.00	0.05		0.00	0.05	0.00	1,507.06	1,507.06	0.04	0.02	1,515.49
Mobile	3.61	7.72	36.40	0.06	6.49	0.38	6.87	0.10	0.37	0.47	0.00	5,492.11	5,492.11	0.23	0.00	5,496.97
Waste						0.00	0.00		0.00	0.00	83.37	0.00	83.37	4.93	0.00	186.83
Water						0.00	0.00		0.00	0.00	0.00	176.99	176.99	0.70	0.02	197.86
Total	**29.20**	**8.67**	**66.38**	**0.07**	**6.49**	**0.38**	**10.76**	**0.10**	**0.37**	**4.36**	**444.91**	**7,635.32**	**8,080.23**	**6.24**	**0.07**	**8,235.61**

Mitigated Operational

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Area	25.52	0.33	29.72	0.01		0.00	3.84		0.00	3.84	361.54	459.16	820.70	0.34	0.03	838.46
Energy	0.07	0.62	0.26	0.00		0.00	0.05		0.00	0.05	0.00	1,507.06	1,507.06	0.04	0.02	1,515.49
Mobile	3.61	7.72	36.40	0.06	6.49	0.38	6.87	0.10	0.37	0.47	0.00	5,492.11	5,492.11	0.23	0.00	5,496.97
Waste						0.00	0.00		0.00	0.00	83.37	0.00	83.37	4.93	0.00	186.83
Water						0.00	0.00		0.00	0.00	0.00	176.99	176.99	0.70	0.02	197.86
Total	**29.20**	**8.67**	**66.38**	**0.07**	**6.49**	**0.38**	**10.76**	**0.10**	**0.37**	**4.36**	**444.91**	**7,635.32**	**8,080.23**	**6.24**	**0.07**	**8,235.61**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

3.2 paving - 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	0.16	0.99	0.68	0.00		0.08	0.08		0.08	0.08	0.00	87.32	87.32	0.01	0.00	87.60
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.16**	**0.99**	**0.68**	**0.00**		**0.08**	**0.08**		**0.08**	**0.08**	**0.00**	**87.32**	**87.32**	**0.01**	**0.00**	**87.60**

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	0.00	0.00	0.00	0.00	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	0.03	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	4.22	4.22	0.00	0.00	4.23
Total	**0.00**	**0.00**	**0.03**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**4.22**	**4.22**	**0.00**	**0.00**	**4.23**

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	0.08	0.51	0.63	0.00		0.05	0.05		0.05	0.05	0.00	87.32	87.32	0.01	0.00	87.60
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.08**	**0.51**	**0.63**	**0.00**		**0.05**	**0.05**		**0.05**	**0.05**	**0.00**	**87.32**	**87.32**	**0.01**	**0.00**	**87.60**

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	0.00	0.00	0.00	0.00	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	0.03	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	4.22	4.22	0.00	0.00	4.23
Total	**0.00**	**0.00**	**0.03**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**4.22**	**4.22**	**0.00**	**0.00**	**4.23**

3.3 architectural coating - 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	0.98					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.05	0.34	0.25	0.00		0.03	0.03		0.03	0.03	0.00	33.41	33.41	0.00	0.00	33.50
Total	**1.03**	**0.34**	**0.25**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**	**0.00**	**33.41**	**33.41**	**0.00**	**0.00**	**33.50**

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	0.01	0.01	0.09	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00	13.97	13.97	0.00	0.00	13.98
Total	**0.01**	**0.01**	**0.09**	**0.00**	**0.02**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**13.97**	**13.97**	**0.00**	**0.00**	**13.98**

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	0.98					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.19	0.32	0.24	0.00		0.02	0.02		0.02	0.02	0.00	33.41	33.41	0.00	0.00	33.50
Total	**1.17**	**0.32**	**0.24**	**0.00**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**33.41**	**33.41**	**0.00**	**0.00**	**33.50**

<u>Mitigated Construction Off-Site</u>

	ROG	NOx	CO	SO2	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	0.01	0.01	0.09	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00	13.97	13.97	0.00	0.00	13.98
Total	**0.01**	**0.01**	**0.09**	**0.00**	**0.02**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**13.97**	**13.97**	**0.00**	**0.00**	**13.98**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.61	7.72	36.40	0.06	6.49	0.38	6.87	0.10	0.37	0.47	0.00	5,492.11	5,492.11	0.23	0.00	5,496.97

Unmitigated	3.61	7.72	36.40	0.06	6.49	0.38	6.87	0.10	0.37	0.47	0.00	5,492.11	5,492.11	0.23	0.00	5,496.97
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	5.09	5.09	5.09	12,548	12,548
Single Family Housing	3,349.50	3,528.00	3069.50	12,341,703	12,341,703
Total	3,354.59	3,533.09	3,074.59	12,354,251	12,354,251

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	14.70	6.60	6.60	33.00	48.00	19.00
Single Family Housing	16.80	7.10	7.90	41.60	18.80	39.60

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	794.74	794.74	0.03	0.01	798.83
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	794.74	794.74	0.03	0.01	798.83
NaturalGas Mitigated	0.07	0.62	0.26	0.00		0.00	0.05		0.00	0.05	0.00	712.32	712.32	0.01	0.01	716.66

NaturalGas Unmitigated	0.07	0.62	0.26	0.00		0.00	0.05		0.00	0.05	0.00	712.32	712.32	0.01	0.01	716.66
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
Single Family Housing	1.33484e+007	0.07	0.62	0.26	0.00		0.00	0.05		0.00	0.05	0.00	712.32	712.32	0.01	0.01	716.66
Total		**0.07**	**0.62**	**0.26**	**0.00**		**0.00**	**0.05**		**0.00**	**0.05**	**0.00**	**712.32**	**712.32**	**0.01**	**0.01**	**716.66**

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
Single Family Housing	1.33484e+007	0.07	0.62	0.26	0.00		0.00	0.05		0.00	0.05	0.00	712.32	712.32	0.01	0.01	716.66
Total		**0.07**	**0.62**	**0.26**	**0.00**		**0.00**	**0.05**		**0.00**	**0.05**	**0.00**	**712.32**	**712.32**	**0.01**	**0.01**	**716.66**

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
Single Family Housing	2.24401e+006					794.74	0.03	0.01	798.83
Total						**794.74**	**0.03**	**0.01**	**798.83**

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
Single Family Housing	2.24401e+006					794.74	0.03	0.01	798.83
Total						**794.74**	**0.03**	**0.01**	**798.83**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	25.52	0.33	29.72	0.01		0.00	3.84		0.00	3.84	361.54	459.16	820.70	0.34	0.03	838.46
Unmitigated	25.52	0.33	29.72	0.01		0.00	3.84		0.00	3.84	361.54	459.16	820.70	0.34	0.03	838.46
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	0.98					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	2.46					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	21.99	0.30	27.06	0.01		0.00	3.82		0.00	3.82	361.54	454.87	816.40	0.34	0.03	834.07
Landscaping	0.08	0.03	2.66	0.00		0.00	0.01		0.00	0.01	0.00	4.29	4.29	0.00	0.00	4.39
Total	**25.51**	**0.33**	**29.72**	**0.01**		**0.00**	**3.83**		**0.00**	**3.83**	**361.54**	**459.16**	**820.69**	**0.34**	**0.03**	**838.46**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.98					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	2.46					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	21.99	0.30	27.06	0.01		0.00	3.82		0.00	3.82	361.54	454.87	816.40	0.34	0.03	834.07
Landscaping	0.08	0.03	2.66	0.00		0.00	0.01		0.00	0.01	0.00	4.29	4.29	0.00	0.00	4.39
Total	**25.51**	**0.33**	**29.72**	**0.01**		**0.00**	**3.83**		**0.00**	**3.83**	**361.54**	**459.16**	**820.69**	**0.34**	**0.03**	**838.46**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					176.99	0.70	0.02	197.86

Unmitigated					176.99	0.70	0.02	197.86
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 / 3.81274					15.00	0.00	0.00	15.08
Single Family Housing	22.8039 / 14.3764					161.98	0.70	0.02	182.79
Total						**176.98**	**0.70**	**0.02**	**197.87**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
City Park	0 / 3.81274					15.00	0.00	0.00	15.08
Single Family Housing	22.8039 / 14.3764					161.98	0.70	0.02	182.79
Total						**176.98**	**0.70**	**0.02**	**197.87**

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					83.37	4.93	0.00	186.83
Unmitigated					83.37	4.93	0.00	186.83
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	0.28					0.06	0.00	0.00	0.13
Single Family Housing	410.41					83.31	4.92	0.00	186.70
Total						**83.37**	**4.92**	**0.00**	**186.83**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
City Park	0.28					0.06	0.00	0.00	0.13
Single Family Housing	410.41					83.31	4.92	0.00	186.70
Total						**83.37**	**4.92**	**0.00**	**186.83**

9.0 Vegetation

Lilac Ranch - Phase 2 - Construction

San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
User Defined Industrial	0.6	User Defined Unit
City Park	2.8	Acre
Single Family Housing	196	Dwelling Unit
User Defined Residential	270	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Utility Company**	San Diego Gas & Electric
Climate Zone	13	**Precipitation Freq (Days)**	40		

1.3 User Entered Comments

Project Characteristics -

Land Use - per specific plan summary table 01/2013 & from 2013 traffic study (ChenRyan)

Trips and VMT - per SANDAG

Grading - max grading

Architectural Coating - per SDAPCD, rule 67, ROG reductions

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Demolition -

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					
2016	1.72	12.68	7.96	0.02	0.16	0.61	0.77	0.00	0.61	0.61	0.00	1,733.23	1,733.23	0.14	0.00	1,736.15
2017	0.39	2.38	2.84	0.01	0.23	0.13	0.37	0.00	0.13	0.13	0.00	507.79	507.79	0.03	0.00	508.46
Total	**2.11**	**15.06**	**10.80**	**0.03**	**0.39**	**0.74**	**1.14**	**0.00**	**0.74**	**0.74**	**0.00**	**2,241.02**	**2,241.02**	**0.17**	**0.00**	**2,244.61**

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					
2016	1.58	8.77	9.74	0.02	0.16	0.59	0.75	0.00	0.59	0.60	0.00	1,733.23	1,733.23	0.14	0.00	1,736.15
2017	0.73	2.34	3.01	0.01	0.23	0.16	0.39	0.00	0.16	0.16	0.00	507.79	507.79	0.03	0.00	508.46
Total	**2.31**	**11.11**	**12.75**	**0.03**	**0.39**	**0.75**	**1.14**	**0.00**	**0.75**	**0.76**	**0.00**	**2,241.02**	**2,241.02**	**0.17**	**0.00**	**2,244.61**

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	35.74	0.44	39.56	0.01		0.00	5.11		0.00	5.11	481.36	611.34	1,092.70	0.46	0.05	1,116.34
Energy	0.04	0.34	0.15	0.00		0.00	0.03		0.00	0.03	0.00	843.96	843.96	0.02	0.01	848.67
Mobile	2.02	4.33	20.39	0.04	3.64	0.21	3.85	0.06	0.21	0.26	0.00	3,077.36	3,077.36	0.13	0.00	3,080.08

Waste						0.00	0.00		0.00	0.00	46.74	0.00	46.74	2.76	0.00	104.74
Water						0.00	0.00		0.00	0.00	0.00	103.84	103.84	0.39	0.01	115.55
Total	**37.80**	**5.11**	**60.10**	**0.05**	**3.64**	**0.21**	**8.99**	**0.06**	**0.21**	**5.40**	**528.10**	**4,636.50**	**5,164.60**	**3.76**	**0.07**	**5,265.38**

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	35.74	0.44	39.56	0.01		0.00	5.11		0.00	5.11	481.36	611.34	1,092.70	0.46	0.05	1,116.34
Energy	0.04	0.34	0.15	0.00		0.00	0.03		0.00	0.03	0.00	843.96	843.96	0.02	0.01	848.67
Mobile	2.02	4.33	20.39	0.04	3.64	0.21	3.85	0.06	0.21	0.26	0.00	3,077.36	3,077.36	0.13	0.00	3,080.08
Waste						0.00	0.00		0.00	0.00	46.74	0.00	46.74	2.76	0.00	104.74
Water						0.00	0.00		0.00	0.00	0.00	103.84	103.84	0.39	0.01	115.55
Total	**37.80**	**5.11**	**60.10**	**0.05**	**3.64**	**0.21**	**8.99**	**0.06**	**0.21**	**5.40**	**528.10**	**4,636.50**	**5,164.60**	**3.76**	**0.07**	**5,265.38**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

3.2 Demolition - 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					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.02	0.10	0.08	0.00		0.01	0.01		0.01	0.01	0.00	11.11	11.11	0.00	0.00	11.13
Total	**0.02**	**0.10**	**0.08**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**11.11**	**11.11**	**0.00**	**0.00**	**11.13**

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	0.56	0.56	0.00	0.00	0.56
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.53	0.00	0.00	0.53
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.09**	**1.09**	**0.00**	**0.00**	**1.09**

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					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.03	0.08	0.08	0.00		0.01	0.01		0.01	0.01	0.00	11.11	11.11	0.00	0.00	11.13

Total	**0.03**	**0.08**	**0.08**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**11.11**	**11.11**	**0.00**	**0.00**	**11.13**

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	0.56	0.56	0.00	0.00	0.56
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.53	0.00	0.00	0.53
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.09**	**1.09**	**0.00**	**0.00**	**1.09**

3.3 Site Preparation - 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					
Fugitive Dust					0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.11	0.65	0.52	0.00		0.05	0.05		0.05	0.05	0.00	67.00	67.00	0.01	0.00	67.18
Total	**0.11**	**0.65**	**0.52**	**0.00**	**0.01**	**0.05**	**0.06**	**0.00**	**0.05**	**0.05**	**0.00**	**67.00**	**67.00**	**0.01**	**0.00**	**67.18**

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	3.25	3.25	0.00	0.00	3.25

Total	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.25	3.25	0.00	0.00	3.25

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					0.00	0.00	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	0.48	0.00		0.04	0.04		0.04	0.04	0.00	67.00	67.00	0.01	0.00	67.18
Total	**0.06**	**0.39**	**0.48**	**0.00**	**0.00**	**0.04**	**0.04**	**0.00**	**0.04**	**0.04**	**0.00**	**67.00**	**67.00**	**0.01**	**0.00**	**67.18**

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	3.25	3.25	0.00	0.00	3.25
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.25**	**3.25**	**0.00**	**0.00**	**3.25**

3.4 Grading - 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					
Fugitive Dust					0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	1.37	10.61	5.74	0.01		0.47	0.47		0.47	0.47	0.00	1,375.25	1,375.25	0.11	0.00	1,377.58
Total	**1.37**	**10.61**	**5.74**	**0.01**	**0.01**	**0.47**	**0.48**	**0.00**	**0.47**	**0.47**	**0.00**	**1,375.25**	**1,375.25**	**0.11**	**0.00**	**1,377.58**

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	0.01	0.01	0.12	0.00	0.03	0.00	0.03	0.00	0.00	0.00	0.00	19.98	19.98	0.00	0.00	20.00
Total	**0.01**	**0.01**	**0.12**	**0.00**	**0.03**	**0.00**	**0.03**	**0.00**	**0.00**	**0.00**	**0.00**	**19.98**	**19.98**	**0.00**	**0.00**	**20.00**

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					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	1.11	7.09	7.49	0.01		0.47	0.47		0.47	0.47	0.00	1,375.25	1,375.25	0.11	0.00	1,377.58
Total	**1.11**	**7.09**	**7.49**	**0.01**	**0.00**	**0.47**	**0.47**	**0.00**	**0.47**	**0.47**	**0.00**	**1,375.25**	**1,375.25**	**0.11**	**0.00**	**1,377.58**

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	0.01	0.01	0.12	0.00	0.03	0.00	0.03	0.00	0.00	0.00	0.00	19.98	19.98	0.00	0.00	20.00
Total	**0.01**	**0.01**	**0.12**	**0.00**	**0.03**	**0.00**	**0.03**	**0.00**	**0.00**	**0.00**	**0.00**	**19.98**	**19.98**	**0.00**	**0.00**	**20.00**

3.5 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	0.15	1.02	0.86	0.00		0.06	0.06		0.06	0.06	0.00	137.45	137.45	0.01	0.00	137.70
Total	**0.15**	**1.02**	**0.86**	**0.00**		**0.06**	**0.06**		**0.06**	**0.06**	**0.00**	**137.45**	**137.45**	**0.01**	**0.00**	**137.70**

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	0.02	0.23	0.15	0.00	0.01	0.01	0.02	0.00	0.01	0.01	0.00	43.44	43.44	0.00	0.00	43.46
Worker	0.04	0.05	0.46	0.00	0.10	0.00	0.11	0.00	0.00	0.01	0.00	74.66	74.66	0.00	0.00	74.75
Total	**0.06**	**0.28**	**0.61**	**0.00**	**0.11**	**0.01**	**0.13**	**0.00**	**0.01**	**0.02**	**0.00**	**118.10**	**118.10**	**0.00**	**0.00**	**118.21**

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	0.30	0.91	0.94	0.00		0.07	0.07		0.07	0.07	0.00	137.45	137.45	0.01	0.00	137.70
Total	**0.30**	**0.91**	**0.94**	**0.00**		**0.07**	**0.07**		**0.07**	**0.07**	**0.00**	**137.45**	**137.45**	**0.01**	**0.00**	**137.70**

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	0.02	0.23	0.15	0.00	0.01	0.01	0.02	0.00	0.01	0.01	0.00	43.44	43.44	0.00	0.00	43.46
Worker	0.04	0.05	0.46	0.00	0.10	0.00	0.11	0.00	0.00	0.01	0.00	74.66	74.66	0.00	0.00	74.75
Total	**0.06**	**0.28**	**0.61**	**0.00**	**0.11**	**0.01**	**0.13**	**0.00**	**0.01**	**0.02**	**0.00**	**118.10**	**118.10**	**0.00**	**0.00**	**118.21**

3.5 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	0.27	1.85	1.72	0.00		0.11	0.11		0.11	0.11	0.00	274.89	274.89	0.02	0.00	275.36
Total	**0.27**	**1.85**	**1.72**	**0.00**		**0.11**	**0.11**		**0.11**	**0.11**	**0.00**	**274.89**	**274.89**	**0.02**	**0.00**	**275.36**

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	0.04	0.44	0.28	0.00	0.03	0.01	0.04	0.00	0.01	0.01	0.00	86.99	86.99	0.00	0.00	87.02
Worker	0.08	0.09	0.84	0.00	0.20	0.01	0.21	0.00	0.01	0.01	0.00	145.91	145.91	0.01	0.00	146.08
Total	**0.12**	**0.53**	**1.12**	**0.00**	**0.23**	**0.02**	**0.25**	**0.00**	**0.02**	**0.02**	**0.00**	**232.90**	**232.90**	**0.01**	**0.00**	**233.10**

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	0.61	1.82	1.88	0.00		0.14	0.14		0.14	0.14	0.00	274.89	274.89	0.02	0.00	275.36
Total	**0.61**	**1.82**	**1.88**	**0.00**		**0.14**	**0.14**		**0.14**	**0.14**	**0.00**	**274.89**	**274.89**	**0.02**	**0.00**	**275.36**

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	0.04	0.44	0.28	0.00	0.03	0.01	0.04	0.00	0.01	0.01	0.00	86.99	86.99	0.00	0.00	87.02
Worker	0.08	0.09	0.84	0.00	0.20	0.01	0.21	0.00	0.01	0.01	0.00	145.91	145.91	0.01	0.00	146.08
Total	**0.12**	**0.53**	**1.12**	**0.00**	**0.23**	**0.02**	**0.25**	**0.00**	**0.02**	**0.02**	**0.00**	**232.90**	**232.90**	**0.01**	**0.00**	**233.10**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

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

Mitigated	2.02	4.33	20.39	0.04	3.64	0.21	3.85	0.06	0.21	0.26	0.00	3,077.36	3,077.36	0.13	0.00	3,080.08
Unmitigated	2.02	4.33	20.39	0.04	3.64	0.21	3.85	0.06	0.21	0.26	0.00	3,077.36	3,077.36	0.13	0.00	3,080.08
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	4.45	4.45	4.45	10,980	10,980
Single Family Housing	1,875.72	1,975.68	1718.92	6,911,354	6,911,354
User Defined Industrial	0.00	0.00	0.00		
User Defined Residential	0.00	0.00	0.00		
Total	1,880.17	1,980.13	1,723.37	6,922,333	6,922,333

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	14.70	6.60	6.60	33.00	48.00	19.00
Single Family Housing	16.80	7.10	7.90	41.60	18.80	39.60
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00
User Defined Residential	16.80	7.10	7.90	41.60	18.80	39.60

5.0 Energy Detail

5.1 Mitigation Measures Energy

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

Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	445.05	445.05	0.02	0.01	447.35
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	445.05	445.05	0.02	0.01	447.35
NaturalGas Mitigated	0.04	0.34	0.15	0.00		0.00	0.03		0.00	0.03	0.00	398.90	398.90	0.01	0.01	401.33
NaturalGas Unmitigated	0.04	0.34	0.15	0.00		0.00	0.03		0.00	0.03	0.00	398.90	398.90	0.01	0.01	401.33
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
Single Family Housing	7.47512e+006	0.04	0.34	0.15	0.00		0.00	0.03		0.00	0.03	0.00	398.90	398.90	0.01	0.01	401.33
User Defined Industrial	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
User Defined Residential	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		**0.04**	**0.34**	**0.15**	**0.00**		**0.00**	**0.03**		**0.00**	**0.03**	**0.00**	**398.90**	**398.90**	**0.01**	**0.01**	**401.33**

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
Single Family Housing	7.47512e+006	0.04	0.34	0.15	0.00		0.00	0.03		0.00	0.03	0.00	398.90	398.90	0.01	0.01	401.33
User Defined Industrial	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
User Defined Residential	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		**0.04**	**0.34**	**0.15**	**0.00**		**0.00**	**0.03**		**0.00**	**0.03**	**0.00**	**398.90**	**398.90**	**0.01**	**0.01**	**401.33**

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
Single Family Housing	1.25665e+006					445.05	0.02	0.01	447.35
User Defined Industrial	0					0.00	0.00	0.00	0.00
User Defined Residential	0					0.00	0.00	0.00	0.00
Total						**445.05**	**0.02**	**0.01**	**447.35**

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
Single Family Housing	1.25665e+006					445.05	0.02	0.01	447.35
User Defined Industrial	0					0.00	0.00	0.00	0.00
User Defined Residential	0					0.00	0.00	0.00	0.00
Total						**445.05**	**0.02**	**0.01**	**447.35**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	35.74	0.44	39.56	0.01		0.00	5.11		0.00	5.11	481.36	611.34	1,092.70	0.46	0.05	1,116.34
Unmitigated	35.74	0.44	39.56	0.01		0.00	5.11		0.00	5.11	481.36	611.34	1,092.70	0.46	0.05	1,116.34
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	1.81					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	4.54					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	29.28	0.40	36.02	0.01		0.00	5.09		0.00	5.09	481.36	605.62	1,086.98	0.45	0.05	1,110.51
Landscaping	0.11	0.04	3.53	0.00		0.00	0.02		0.00	0.02	0.00	5.72	5.72	0.01	0.00	5.84
Total	**35.74**	**0.44**	**39.55**	**0.01**		**0.00**	**5.11**		**0.00**	**5.11**	**481.36**	**611.34**	**1,092.70**	**0.46**	**0.05**	**1,116.35**

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	1.81					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	4.54					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	29.28	0.40	36.02	0.01		0.00	5.09		0.00	5.09	481.36	605.62	1,086.98	0.45	0.05	1,110.51
Landscaping	0.11	0.04	3.53	0.00		0.00	0.02		0.00	0.02	0.00	5.72	5.72	0.01	0.00	5.84
Total	**35.74**	**0.44**	**39.55**	**0.01**		**0.00**	**5.11**		**0.00**	**5.11**	**481.36**	**611.34**	**1,092.70**	**0.46**	**0.05**	**1,116.35**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					103.84	0.39	0.01	115.55
Unmitigated					103.84	0.39	0.01	115.55
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 / 3.33615					13.13	0.00	0.00	13.19
Single Family Housing	12.7702 / 8.05077					90.71	0.39	0.01	102.36
User Defined Industrial	0 / 0					0.00	0.00	0.00	0.00
User Defined Residential	0 / 0					0.00	0.00	0.00	0.00
Total						**103.84**	**0.39**	**0.01**	**115.55**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e

Land Use	Mgal	tons/yr				MT/yr			
City Park	0 / 3.33615					13.13	0.00	0.00	13.19
Single Family Housing	12.7702 / 8.05077					90.71	0.39	0.01	102.36
User Defined Industrial	0 / 0					0.00	0.00	0.00	0.00
User Defined Residential	0 / 0					0.00	0.00	0.00	0.00
Total						**103.84**	**0.39**	**0.01**	**115.55**

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					46.74	2.76	0.00	104.74
Unmitigated					46.74	2.76	0.00	104.74
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	0.24					0.05	0.00	0.00	0.11
Single Family Housing	230.01					46.69	2.76	0.00	104.64

User Defined Industrial	0					0.00	0.00	0.00	0.00
User Defined Residential	0					0.00	0.00	0.00	0.00
Total						**46.74**	**2.76**	**0.00**	**104.75**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
City Park	0.24					0.05	0.00	0.00	0.11
Single Family Housing	230.01					46.69	2.76	0.00	104.64
User Defined Industrial	0					0.00	0.00	0.00	0.00
User Defined Residential	0					0.00	0.00	0.00	0.00
Total						**46.74**	**2.76**	**0.00**	**104.75**

9.0 Vegetation

Lilac Ranch - Phase 2 - Construction

San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
User Defined Industrial	0.6	User Defined Unit
City Park	2.8	Acre
Single Family Housing	196	Dwelling Unit
User Defined Residential	270	Dwelling Unit

1.2 Other Project Characteristics

Urbanization Rural

Climate Zone 13

Wind Speed (m/s) 2.6

Precipitation Freq (Days) 40

Utility Company San Diego Gas & Electric

1.3 User Entered Comments

Project Characteristics -

Land Use - per specific plan summary table 01/2013 & from 2013 traffic study (ChenRyan)

Trips and VMT - per SANDAG

Grading - max grading

Architectural Coating - per SDAPCD, rule 67, ROG reductions

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

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					
2016	0.15	0.92	0.69	0.00	0.01	0.08	0.08	0.00	0.08	0.08	0.00	90.06	90.06	0.01	0.00	90.32
2017	1.87	0.30	0.41	0.00	0.04	0.02	0.06	0.00	0.02	0.02	0.00	62.23	62.23	0.01	0.00	62.34
Total	**2.02**	**1.22**	**1.10**	**0.00**	**0.05**	**0.10**	**0.14**	**0.00**	**0.10**	**0.10**	**0.00**	**152.29**	**152.29**	**0.02**	**0.00**	**152.66**

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					
2016	0.09	0.50	0.64	0.00	0.01	0.05	0.06	0.00	0.05	0.05	0.00	90.06	90.06	0.01	0.00	90.32
2017	2.01	0.33	0.41	0.00	0.04	0.02	0.06	0.00	0.02	0.02	0.00	62.23	62.23	0.01	0.00	62.34
Total	**2.10**	**0.83**	**1.05**	**0.00**	**0.05**	**0.07**	**0.12**	**0.00**	**0.07**	**0.07**	**0.00**	**152.29**	**152.29**	**0.02**	**0.00**	**152.66**

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	35.74	0.44	39.56	0.01		0.00	5.11		0.00	5.11	481.36	611.34	1,092.70	0.46	0.05	1,116.34
Energy	0.04	0.34	0.15	0.00		0.00	0.03		0.00	0.03	0.00	843.96	843.96	0.02	0.01	848.67
Mobile	2.02	4.33	20.39	0.04	3.64	0.21	3.85	0.06	0.21	0.26	0.00	3,077.36	3,077.36	0.13	0.00	3,080.08
Waste						0.00	0.00		0.00	0.00	46.74	0.00	46.74	2.76	0.00	104.74

Water						0.00	0.00		0.00	0.00	0.00	103.84	103.84	0.39	0.01	115.55
Total	**37.80**	**5.11**	**60.10**	**0.05**	**3.64**	**0.21**	**8.99**	**0.06**	**0.21**	**5.40**	**528.10**	**4,636.50**	**5,164.60**	**3.76**	**0.07**	**5,265.38**

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	35.74	0.44	39.56	0.01		0.00	5.11		0.00	5.11	481.36	611.34	1,092.70	0.46	0.05	1,116.34
Energy	0.04	0.34	0.15	0.00		0.00	0.03		0.00	0.03	0.00	843.96	843.96	0.02	0.01	848.67
Mobile	2.02	4.33	20.39	0.04	3.64	0.21	3.85	0.06	0.21	0.26	0.00	3,077.36	3,077.36	0.13	0.00	3,080.08
Waste						0.00	0.00		0.00	0.00	46.74	0.00	46.74	2.76	0.00	104.74
Water						0.00	0.00		0.00	0.00	0.00	103.84	103.84	0.39	0.01	115.55
Total	**37.80**	**5.11**	**60.10**	**0.05**	**3.64**	**0.21**	**8.99**	**0.06**	**0.21**	**5.40**	**528.10**	**4,636.50**	**5,164.60**	**3.76**	**0.07**	**5,265.38**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

3.2 paving - 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	0.15	0.92	0.66	0.00		0.08	0.08		0.08	0.08	0.00	86.00	86.00	0.01	0.00	86.25
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.15**	**0.92**	**0.66**	**0.00**		**0.08**	**0.08**		**0.08**	**0.08**	**0.00**	**86.00**	**86.00**	**0.01**	**0.00**	**86.25**

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	4.06	4.06	0.00	0.00	4.06
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**4.06**	**4.06**	**0.00**	**0.00**	**4.06**

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	0.08	0.50	0.62	0.00		0.05	0.05		0.05	0.05	0.00	86.00	86.00	0.01	0.00	86.25
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.08**	**0.50**	**0.62**	**0.00**		**0.05**	**0.05**		**0.05**	**0.05**	**0.00**	**86.00**	**86.00**	**0.01**	**0.00**	**86.25**

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	4.06	4.06	0.00	0.00	4.06
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**4.06**	**4.06**	**0.00**	**0.00**	**4.06**

3.3 architectural coating - 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	0.00					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	0.00	0.00	0.00	0.00	0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	0.00	0.00	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	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	0.00					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	0.00	0.00	0.00	0.00	0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	0.00	0.00	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	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.3 architectural coating - 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	1.81					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	**1.85**	**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

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	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	0.02	0.02	0.17	0.00	0.04	0.00	0.04	0.00	0.00	0.00	0.00	29.08	29.08	0.00	0.00	29.11
Total	**0.02**	**0.02**	**0.17**	**0.00**	**0.04**	**0.00**	**0.04**	**0.00**	**0.00**	**0.00**	**0.00**	**29.08**	**29.08**	**0.00**	**0.00**	**29.11**

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Archit. Coating	1.81					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.19	0.32	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	**2.00**	**0.32**	**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

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	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	0.02	0.02	0.17	0.00	0.04	0.00	0.04	0.00	0.00	0.00	0.00	29.08	29.08	0.00	0.00	29.11
Total	**0.02**	**0.02**	**0.17**	**0.00**	**0.04**	**0.00**	**0.04**	**0.00**	**0.00**	**0.00**	**0.00**	**29.08**	**29.08**	**0.00**	**0.00**	**29.11**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.02	4.33	20.39	0.04	3.64	0.21	3.85	0.06	0.21	0.26	0.00	3,077.36	3,077.36	0.13	0.00	3,080.08
Unmitigated	2.02	4.33	20.39	0.04	3.64	0.21	3.85	0.06	0.21	0.26	0.00	3,077.36	3,077.36	0.13	0.00	3,080.08
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	4.45	4.45	4.45	10,980	10,980
Single Family Housing	1,875.72	1,975.68	1718.92	6,911,354	6,911,354
User Defined Industrial	0.00	0.00	0.00		
User Defined Residential	0.00	0.00	0.00		
Total	1,880.17	1,980.13	1,723.37	6,922,333	6,922,333

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	14.70	6.60	6.60	33.00	48.00	19.00
Single Family Housing	16.80	7.10	7.90	41.60	18.80	39.60
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00

User Defined Residential	16.80	7.10	7.90	41.60	18.80	39.60

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	445.05	445.05	0.02	0.01	447.35
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	445.05	445.05	0.02	0.01	447.35
NaturalGas Mitigated	0.04	0.34	0.15	0.00		0.00	0.03		0.00	0.03	0.00	398.90	398.90	0.01	0.01	401.33
NaturalGas Unmitigated	0.04	0.34	0.15	0.00		0.00	0.03		0.00	0.03	0.00	398.90	398.90	0.01	0.01	401.33
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
Single Family Housing	7.47512e+006	0.04	0.34	0.15	0.00		0.00	0.03		0.00	0.03	0.00	398.90	398.90	0.01	0.01	401.33
User Defined Industrial	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
User Defined Residential	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		**0.04**	**0.34**	**0.15**	**0.00**		**0.00**	**0.03**		**0.00**	**0.03**	**0.00**	**398.90**	**398.90**	**0.01**	**0.01**	**401.33**

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
Single Family Housing	7.47512e+006	0.04	0.34	0.15	0.00		0.00	0.03		0.00	0.03	0.00	398.90	398.90	0.01	0.01	401.33
User Defined Industrial	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
User Defined Residential	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		**0.04**	**0.34**	**0.15**	**0.00**		**0.00**	**0.03**		**0.00**	**0.03**	**0.00**	**398.90**	**398.90**	**0.01**	**0.01**	**401.33**

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
Single Family Housing	1.25665e+006					445.05	0.02	0.01	447.35
User Defined Industrial	0					0.00	0.00	0.00	0.00
User Defined Residential	0					0.00	0.00	0.00	0.00
Total						**445.05**	**0.02**	**0.01**	**447.35**

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
Single Family Housing	1.25665e+006					445.05	0.02	0.01	447.35
User Defined Industrial	0					0.00	0.00	0.00	0.00

User Defined Residential	0					0.00	0.00	0.00	0.00
Total						**445.05**	**0.02**	**0.01**	**447.35**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	35.74	0.44	39.56	0.01		0.00	5.11		0.00	5.11	481.36	611.34	1,092.70	0.46	0.05	1,116.34
Unmitigated	35.74	0.44	39.56	0.01		0.00	5.11		0.00	5.11	481.36	611.34	1,092.70	0.46	0.05	1,116.34
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	1.81					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	4.54					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	29.28	0.40	36.02	0.01		0.00	5.09		0.00	5.09	481.36	605.62	1,086.98	0.45	0.05	1,110.51
Landscaping	0.11	0.04	3.53	0.00		0.00	0.02		0.00	0.02	0.00	5.72	5.72	0.01	0.00	5.84
Total	**35.74**	**0.44**	**39.55**	**0.01**		**0.00**	**5.11**		**0.00**	**5.11**	**481.36**	**611.34**	**1,092.70**	**0.46**	**0.05**	**1,116.35**

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	1.81					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	4.54					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	29.28	0.40	36.02	0.01		0.00	5.09		0.00	5.09	481.36	605.62	1,086.98	0.45	0.05	1,110.51
Landscaping	0.11	0.04	3.53	0.00		0.00	0.02		0.00	0.02	0.00	5.72	5.72	0.01	0.00	5.84
Total	**35.74**	**0.44**	**39.55**	**0.01**		**0.00**	**5.11**		**0.00**	**5.11**	**481.36**	**611.34**	**1,092.70**	**0.46**	**0.05**	**1,116.35**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					103.84	0.39	0.01	115.55
Unmitigated					103.84	0.39	0.01	115.55
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 / 3.33615					13.13	0.00	0.00	13.19
Single Family Housing	12.7702 / 8.05077					90.71	0.39	0.01	102.36
User Defined Industrial	0 / 0					0.00	0.00	0.00	0.00
User Defined Residential	0 / 0					0.00	0.00	0.00	0.00
Total						**103.84**	**0.39**	**0.01**	**115.55**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
City Park	0 / 3.33615					13.13	0.00	0.00	13.19
Single Family Housing	12.7702 / 8.05077					90.71	0.39	0.01	102.36
User Defined Industrial	0 / 0					0.00	0.00	0.00	0.00
User Defined Residential	0 / 0					0.00	0.00	0.00	0.00
Total						**103.84**	**0.39**	**0.01**	**115.55**

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					46.74	2.76	0.00	104.74
Unmitigated					46.74	2.76	0.00	104.74
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	0.24					0.05	0.00	0.00	0.11
Single Family Housing	230.01					46.69	2.76	0.00	104.64
User Defined Industrial	0					0.00	0.00	0.00	0.00
User Defined Residential	0					0.00	0.00	0.00	0.00
Total						**46.74**	**2.76**	**0.00**	**104.75**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
City Park	0.24					0.05	0.00	0.00	0.11
Single Family Housing	230.01					46.69	2.76	0.00	104.64
User Defined Industrial	0					0.00	0.00	0.00	0.00
User Defined Residential	0					0.00	0.00	0.00	0.00
Total						**46.74**	**2.76**	**0.00**	**104.75**

9.0 Vegetation

Lilac Ranch - Phase 3 - Construction
San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Office Park	3.5	1000sqft
Elementary School	700	Student
User Defined Industrial	2.4	User Defined Unit
City Park	12	Acre
Health Club	40	1000sqft
Condo/Townhouse	105	Dwelling Unit
Single Family Housing	357	Dwelling Unit

1.2 Other Project Characteristics

Urbanization Rural

Climate Zone 13

Wind Speed (m/s) 2.6

Precipitation Freq (Days) 40

Utility Company San Diego Gas & Electric

1.3 User Entered Comments

Project Characteristics -

Land Use - per specific plan summary table.

Grading - max disturbance per equipment

Demolition -

Trips and VMT - per SANDAG

Architectural Coating -

Construction Off-road Equipment Mitigation -

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					
2017	0.71	5.17	3.21	0.01	0.03	0.25	0.28	0.00	0.25	0.25	0.00	720.91	720.91	0.06	0.00	722.12
2018	1.21	8.26	7.07	0.02	0.35	0.39	0.74	0.01	0.39	0.39	0.00	1,522.78	1,522.78	0.10	0.00	1,524.83
2019	0.67	4.16	5.32	0.01	0.44	0.21	0.65	0.01	0.21	0.21	0.00	1,017.06	1,017.06	0.05	0.00	1,018.17
2020	0.63	3.84	5.22	0.01	0.44	0.19	0.63	0.01	0.18	0.19	0.00	1,016.36	1,016.36	0.05	0.00	1,017.39
2021	0.58	3.51	5.09	0.01	0.44	0.16	0.60	0.01	0.16	0.17	0.00	1,010.61	1,010.61	0.05	0.00	1,011.56
Total	**3.80**	**24.94**	**25.91**	**0.06**	**1.70**	**1.20**	**2.90**	**0.04**	**1.19**	**1.21**	**0.00**	**5,287.72**	**5,287.72**	**0.31**	**0.00**	**5,294.07**

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					
2017	0.61	3.73	4.06	0.01	0.02	0.26	0.28	0.00	0.26	0.26	0.00	720.91	720.91	0.06	0.00	722.12
2018	1.69	7.46	8.49	0.02	0.35	0.50	0.84	0.01	0.50	0.50	0.00	1,522.78	1,522.78	0.10	0.00	1,524.83
2019	1.44	4.74	5.70	0.01	0.44	0.32	0.76	0.01	0.32	0.33	0.00	1,017.06	1,017.06	0.05	0.00	1,018.17
2020	1.43	4.71	5.61	0.01	0.44	0.32	0.76	0.01	0.32	0.33	0.00	1,016.36	1,016.36	0.05	0.00	1,017.39
2021	1.42	4.65	5.51	0.01	0.44	0.32	0.76	0.01	0.32	0.33	0.00	1,010.61	1,010.61	0.05	0.00	1,011.56
Total	**6.59**	**25.29**	**29.37**	**0.06**	**1.69**	**1.72**	**3.40**	**0.04**	**1.72**	**1.75**	**0.00**	**5,287.72**	**5,287.72**	**0.31**	**0.00**	**5,294.07**

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	33.74	0.43	39.18	0.01		0.00	5.06		0.00	5.06	477.23	606.09	1,083.32	0.45	0.04	1,106.75
Energy	0.09	0.79	0.35	0.00		0.00	0.06		0.00	0.06	0.00	2,143.97	2,143.97	0.06	0.03	2,155.86
Mobile	4.59	8.76	41.13	0.10	10.19	0.54	10.73	0.16	0.52	0.69	0.00	7,417.24	7,417.24	0.28	0.00	7,423.13
Waste						0.00	0.00		0.00	0.00	167.86	0.00	167.86	9.92	0.00	376.19
Water						0.00	0.00		0.00	0.00	0.00	316.11	316.11	1.07	0.03	348.19
Total	**38.42**	**9.98**	**80.66**	**0.11**	**10.19**	**0.54**	**15.85**	**0.16**	**0.52**	**5.81**	**645.09**	**10,483.41**	**11,128.50**	**11.78**	**0.10**	**11,410.12**

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	33.74	0.43	39.18	0.01		0.00	5.06		0.00	5.06	477.23	606.09	1,083.32	0.45	0.04	1,106.75
Energy	0.09	0.79	0.35	0.00		0.00	0.06		0.00	0.06	0.00	2,143.97	2,143.97	0.06	0.03	2,155.86
Mobile	4.59	8.76	41.13	0.10	10.19	0.54	10.73	0.16	0.52	0.69	0.00	7,417.24	7,417.24	0.28	0.00	7,423.13
Waste						0.00	0.00		0.00	0.00	167.86	0.00	167.86	9.92	0.00	376.19
Water						0.00	0.00		0.00	0.00	0.00	316.11	316.11	1.07	0.03	348.19
Total	**38.42**	**9.98**	**80.66**	**0.11**	**10.19**	**0.54**	**15.85**	**0.16**	**0.52**	**5.81**	**645.09**	**10,483.41**	**11,128.50**	**11.78**	**0.10**	**11,410.12**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

3.2 Demolition - 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					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.09	0.08	0.00		0.01	0.01		0.01	0.01	0.00	10.41	10.41	0.00	0.00	10.43
Total	**0.01**	**0.09**	**0.08**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**10.41**	**10.41**	**0.00**	**0.00**	**10.43**

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	0.57	0.57	0.00	0.00	0.57
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.49	0.00	0.00	0.49
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.06**	**1.06**	**0.00**	**0.00**	**1.06**

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					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.03	0.08	0.07	0.00		0.01	0.01		0.01	0.01	0.00	10.41	10.41	0.00	0.00	10.43
Total	**0.03**	**0.08**	**0.07**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**10.41**	**10.41**	**0.00**	**0.00**	**10.43**

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	0.57	0.57	0.00	0.00	0.57
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.49	0.00	0.00	0.49
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.06**	**1.06**	**0.00**	**0.00**	**1.06**

3.3 Site Preparation - 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					
Fugitive Dust					0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.10	0.61	0.52	0.00		0.05	0.05		0.05	0.05	0.00	67.00	67.00	0.01	0.00	67.17
Total	**0.10**	**0.61**	**0.52**	**0.00**	**0.01**	**0.05**	**0.06**	**0.00**	**0.05**	**0.05**	**0.00**	**67.00**	**67.00**	**0.01**	**0.00**	**67.17**

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	3.17	3.17	0.00	0.00	3.18
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.17**	**3.17**	**0.00**	**0.00**	**3.18**

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					0.00	0.00	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	0.48	0.00		0.04	0.04		0.04	0.04	0.00	67.00	67.00	0.01	0.00	67.17
Total	**0.06**	**0.39**	**0.48**	**0.00**	**0.00**	**0.04**	**0.04**	**0.00**	**0.04**	**0.04**	**0.00**	**67.00**	**67.00**	**0.01**	**0.00**	**67.17**

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					

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	3.17	3.17	0.00	0.00	3.18
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.17**	**3.17**	**0.00**	**0.00**	**3.18**

3.4 Grading - 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					
Fugitive Dust					0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.59	4.47	2.54	0.01		0.20	0.20		0.20	0.20	0.00	630.32	630.32	0.05	0.00	631.33
Total	**0.59**	**4.47**	**2.54**	**0.01**	**0.01**	**0.20**	**0.21**	**0.00**	**0.20**	**0.20**	**0.00**	**630.32**	**630.32**	**0.05**	**0.00**	**631.33**

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	0.05	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	8.95	8.95	0.00	0.00	8.96
Total	**0.00**	**0.01**	**0.05**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**8.95**	**8.95**	**0.00**	**0.00**	**8.96**

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					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.51	3.25	3.43	0.01		0.21	0.21		0.21	0.21	0.00	630.32	630.32	0.05	0.00	631.33
Total	**0.51**	**3.25**	**3.43**	**0.01**	**0.00**	**0.21**	**0.21**	**0.00**	**0.21**	**0.21**	**0.00**	**630.32**	**630.32**	**0.05**	**0.00**	**631.33**

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	0.05	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	8.95	8.95	0.00	0.00	8.96
Total	**0.00**	**0.01**	**0.05**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**8.95**	**8.95**	**0.00**	**0.00**	**8.96**

3.4 Grading - 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					
Fugitive Dust					0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.66	4.85	2.91	0.01		0.21	0.21		0.21	0.21	0.00	744.93	744.93	0.05	0.00	746.06
Total	**0.66**	**4.85**	**2.91**	**0.01**	**0.01**	**0.21**	**0.22**	**0.00**	**0.21**	**0.21**	**0.00**	**744.93**	**744.93**	**0.05**	**0.00**	**746.06**

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	0.01	0.01	0.06	0.00	0.01	0.00	0.02	0.00	0.00	0.00	0.00	10.34	10.34	0.00	0.00	10.35
Total	**0.01**	**0.01**	**0.06**	**0.00**	**0.01**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**10.34**	**10.34**	**0.00**	**0.00**	**10.35**

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					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.60	3.84	4.05	0.01		0.25	0.25		0.25	0.25	0.00	744.93	744.93	0.05	0.00	746.06
Total	**0.60**	**3.84**	**4.05**	**0.01**	**0.00**	**0.25**	**0.25**	**0.00**	**0.25**	**0.25**	**0.00**	**744.93**	**744.93**	**0.05**	**0.00**	**746.06**

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	0.01	0.01	0.06	0.00	0.01	0.00	0.02	0.00	0.00	0.00	0.00	10.34	10.34	0.00	0.00	10.35
Total	**0.01**	**0.01**	**0.06**	**0.00**	**0.01**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**10.34**	**10.34**	**0.00**	**0.00**	**10.35**

3.5 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	0.38	2.54	2.57	0.00		0.14	0.14		0.14	0.14	0.00	414.45	414.45	0.03	0.00	415.09

Total	**0.38**	**2.54**	**2.57**	**0.00**		**0.14**	**0.14**		**0.14**	**0.14**	**0.00**	**414.45**	**414.45**	**0.03**	**0.00**	**415.09**

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	0.07	0.76	0.49	0.00	0.05	0.03	0.08	0.00	0.02	0.03	0.00	160.46	160.46	0.00	0.00	160.52
Worker	0.10	0.11	1.05	0.00	0.28	0.01	0.29	0.00	0.01	0.01	0.00	192.59	192.59	0.01	0.00	192.80
Total	**0.17**	**0.87**	**1.54**	**0.00**	**0.33**	**0.04**	**0.37**	**0.00**	**0.03**	**0.04**	**0.00**	**353.05**	**353.05**	**0.01**	**0.00**	**353.32**

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	0.92	2.74	2.84	0.00		0.21	0.21		0.21	0.21	0.00	414.45	414.45	0.03	0.00	415.09
Total	**0.92**	**2.74**	**2.84**	**0.00**		**0.21**	**0.21**		**0.21**	**0.21**	**0.00**	**414.45**	**414.45**	**0.03**	**0.00**	**415.09**

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	0.07	0.76	0.49	0.00	0.05	0.03	0.08	0.00	0.02	0.03	0.00	160.46	160.46	0.00	0.00	160.52
Worker	0.10	0.11	1.05	0.00	0.28	0.01	0.29	0.00	0.01	0.01	0.00	192.59	192.59	0.01	0.00	192.80

Total	**0.17**	**0.87**	**1.54**	**0.00**	**0.33**	**0.04**	**0.37**	**0.00**	**0.03**	**0.04**	**0.00**	**353.05**	**353.05**	**0.01**	**0.00**	**353.32**

3.5 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	0.46	3.07	3.40	0.01		0.16	0.16		0.16	0.16	0.00	551.90	551.90	0.04	0.00	552.68
Total	**0.46**	**3.07**	**3.40**	**0.01**		**0.16**	**0.16**		**0.16**	**0.16**	**0.00**	**551.90**	**551.90**	**0.04**	**0.00**	**552.68**

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	0.09	0.96	0.61	0.00	0.07	0.03	0.10	0.00	0.03	0.03	0.00	213.91	213.91	0.00	0.00	213.99
Worker	0.13	0.13	1.31	0.00	0.37	0.01	0.38	0.01	0.01	0.02	0.00	251.24	251.24	0.01	0.00	251.50
Total	**0.22**	**1.09**	**1.92**	**0.00**	**0.44**	**0.04**	**0.48**	**0.01**	**0.04**	**0.05**	**0.00**	**465.15**	**465.15**	**0.01**	**0.00**	**465.49**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.22	3.65	3.78	0.01		0.28	0.28		0.28	0.28	0.00	551.90	551.90	0.04	0.00	552.68
Total	**1.22**	**3.65**	**3.78**	**0.01**		**0.28**	**0.28**		**0.28**	**0.28**	**0.00**	**551.90**	**551.90**	**0.04**	**0.00**	**552.68**

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	0.09	0.96	0.61	0.00	0.07	0.03	0.10	0.00	0.03	0.03	0.00	213.91	213.91	0.00	0.00	213.99
Worker	0.13	0.13	1.31	0.00	0.37	0.01	0.38	0.01	0.01	0.02	0.00	251.24	251.24	0.01	0.00	251.50
Total	**0.22**	**1.09**	**1.92**	**0.00**	**0.44**	**0.04**	**0.48**	**0.01**	**0.04**	**0.05**	**0.00**	**465.15**	**465.15**	**0.01**	**0.00**	**465.49**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.42	2.80	3.40	0.01		0.14	0.14		0.14	0.14	0.00	554.02	554.02	0.03	0.00	554.72
Total	**0.42**	**2.80**	**3.40**	**0.01**		**0.14**	**0.14**		**0.14**	**0.14**	**0.00**	**554.02**	**554.02**	**0.03**	**0.00**	**554.72**

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	0.08	0.92	0.59	0.00	0.07	0.03	0.10	0.00	0.03	0.03	0.00	214.94	214.94	0.00	0.00	215.01
Worker	0.12	0.12	1.23	0.00	0.37	0.01	0.38	0.01	0.01	0.02	0.00	247.41	247.41	0.01	0.00	247.66
Total	**0.20**	**1.04**	**1.82**	**0.00**	**0.44**	**0.04**	**0.48**	**0.01**	**0.04**	**0.05**	**0.00**	**462.35**	**462.35**	**0.01**	**0.00**	**462.67**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.22	3.66	3.80	0.01		0.28	0.28		0.28	0.28	0.00	554.02	554.02	0.03	0.00	554.72
Total	**1.22**	**3.66**	**3.80**	**0.01**		**0.28**	**0.28**		**0.28**	**0.28**	**0.00**	**554.02**	**554.02**	**0.03**	**0.00**	**554.72**

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	0.08	0.92	0.59	0.00	0.07	0.03	0.10	0.00	0.03	0.03	0.00	214.94	214.94	0.00	0.00	215.01
Worker	0.12	0.12	1.23	0.00	0.37	0.01	0.38	0.01	0.01	0.02	0.00	247.41	247.41	0.01	0.00	247.66
Total	**0.20**	**1.04**	**1.82**	**0.00**	**0.44**	**0.04**	**0.48**	**0.01**	**0.04**	**0.05**	**0.00**	**462.35**	**462.35**	**0.01**	**0.00**	**462.67**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.38	2.51	3.36	0.01		0.12	0.12		0.12	0.12	0.00	551.90	551.90	0.03	0.00	552.54
Total	**0.38**	**2.51**	**3.36**	**0.01**		**0.12**	**0.12**		**0.12**	**0.12**	**0.00**	**551.90**	**551.90**	**0.03**	**0.00**	**552.54**

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	0.08	0.88	0.56	0.00	0.07	0.03	0.10	0.00	0.03	0.03	0.00	214.31	214.31	0.00	0.00	214.38
Worker	0.12	0.12	1.17	0.00	0.37	0.02	0.38	0.01	0.01	0.02	0.00	244.41	244.41	0.01	0.00	244.64
Total	**0.20**	**1.00**	**1.73**	**0.00**	**0.44**	**0.05**	**0.48**	**0.01**	**0.04**	**0.05**	**0.00**	**458.72**	**458.72**	**0.01**	**0.00**	**459.02**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.22	3.65	3.78	0.01		0.28	0.28		0.28	0.28	0.00	551.90	551.90	0.03	0.00	552.54
Total	**1.22**	**3.65**	**3.78**	**0.01**		**0.28**	**0.28**		**0.28**	**0.28**	**0.00**	**551.90**	**551.90**	**0.03**	**0.00**	**552.54**

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	0.08	0.88	0.56	0.00	0.07	0.03	0.10	0.00	0.03	0.03	0.00	214.31	214.31	0.00	0.00	214.38
Worker	0.12	0.12	1.17	0.00	0.37	0.02	0.38	0.01	0.01	0.02	0.00	244.41	244.41	0.01	0.00	244.64
Total	**0.20**	**1.00**	**1.73**	**0.00**	**0.44**	**0.05**	**0.48**	**0.01**	**0.04**	**0.05**	**0.00**	**458.72**	**458.72**	**0.01**	**0.00**	**459.02**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	4.59	8.76	41.13	0.10	10.19	0.54	10.73	0.16	0.52	0.69	0.00	7,417.24	7,417.24	0.28	0.00	7,423.13
Unmitigated	4.59	8.76	41.13	0.10	10.19	0.54	10.73	0.16	0.52	0.69	0.00	7,417.24	7,417.24	0.28	0.00	7,423.13
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	19.08	19.08	19.08	47,055	47,055
Condo/Townhouse	691.95	751.80	637.35	2,563,448	2,563,448
Elementary School	903.00	0.00	0.00	1,931,890	1,931,890
Health Club	1,317.20	834.80	1069.20	2,176,406	2,176,406
Office Park	39.97	5.74	2.66	86,140	86,140
Single Family Housing	3,416.49	3,598.56	3130.89	12,588,537	12,588,537
User Defined Industrial	0.00	0.00	0.00		
Total	6,387.69	5,209.98	4,859.18	19,393,477	19,393,477

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	14.70	6.60	6.60	33.00	48.00	19.00
Condo/Townhouse	16.80	7.10	7.90	41.60	18.80	39.60
Elementary School	14.70	6.60	6.60	65.00	30.00	5.00
Health Club	14.70	6.60	6.60	16.90	64.10	19.00
Office Park	14.70	6.60	6.60	33.00	48.00	19.00

Single Family Housing	16.80	7.10	7.90	41.60	18.80	39.60
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	1,237.28	1,237.28	0.05	0.02	1,243.65
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	1,237.28	1,237.28	0.05	0.02	1,243.65
NaturalGas Mitigated	0.09	0.79	0.35	0.00		0.00	0.06		0.00	0.06	0.00	906.69	906.69	0.02	0.02	912.21
NaturalGas Unmitigated	0.09	0.79	0.35	0.00		0.00	0.06		0.00	0.06	0.00	906.69	906.69	0.02	0.02	912.21
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	2.42307e+006	0.01	0.11	0.05	0.00		0.00	0.01		0.00	0.01	0.00	129.30	129.30	0.00	0.00	130.09
Elementary School	362839	0.00	0.02	0.01	0.00		0.00	0.00		0.00	0.00	0.00	19.36	19.36	0.00	0.00	19.48
Health Club	471600	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00	0.00	25.17	25.17	0.00	0.00	25.32
Office Park	117880	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00	0.00	6.29	6.29	0.00	0.00	6.33

Single Family Housing	1.36154e+007	0.07	0.63	0.27	0.00		0.00	0.05		0.00	0.05	0.00	726.57	726.57	0.01	0.01	730.99
User Defined Industrial	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		**0.08**	**0.79**	**0.35**	**0.00**		**0.00**	**0.06**		**0.00**	**0.06**	**0.00**	**906.69**	**906.69**	**0.01**	**0.01**	**912.21**

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	2.42307e+006	0.01	0.11	0.05	0.00		0.00	0.01		0.00	0.01	0.00	129.30	129.30	0.00	0.00	130.09
Elementary School	362839	0.00	0.02	0.01	0.00		0.00	0.00		0.00	0.00	0.00	19.36	19.36	0.00	0.00	19.48
Health Club	471600	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00	0.00	25.17	25.17	0.00	0.00	25.32
Office Park	117880	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00	0.00	6.29	6.29	0.00	0.00	6.33
Single Family Housing	1.36154e+007	0.07	0.63	0.27	0.00		0.00	0.05		0.00	0.05	0.00	726.57	726.57	0.01	0.01	730.99
User Defined Industrial	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		**0.08**	**0.79**	**0.35**	**0.00**		**0.00**	**0.06**		**0.00**	**0.06**	**0.00**	**906.69**	**906.69**	**0.01**	**0.01**	**912.21**

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	434278					153.80	0.01	0.00	154.60
Elementary School	348793					123.53	0.00	0.00	124.16
Health Club	360000					127.50	0.00	0.00	128.15
Office Park	61600					21.82	0.00	0.00	21.93
Single Family Housing	2.28889e+006					810.63	0.03	0.01	814.81

User Defined Industrial	0					0.00	0.00	0.00	0.00
Total						**1,237.28**	**0.04**	**0.01**	**1,243.65**

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	434278					153.80	0.01	0.00	154.60
Elementary School	348793					123.53	0.00	0.00	124.16
Health Club	360000					127.50	0.00	0.00	128.15
Office Park	61600					21.82	0.00	0.00	21.93
Single Family Housing	2.28889e+006					810.63	0.03	0.01	814.81
User Defined Industrial	0					0.00	0.00	0.00	0.00
Total						**1,237.28**	**0.04**	**0.01**	**1,243.65**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	33.74	0.43	39.18	0.01		0.00	5.06		0.00	5.06	477.23	606.09	1,083.32	0.45	0.04	1,106.75

Unmitigated	33.74	0.43	39.18	0.01		0.00	5.06		0.00	5.06	477.23	606.09	1,083.32	0.45	0.04	1,106.75
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	1.29					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	3.32					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	29.03	0.39	35.71	0.01		0.00	5.05		0.00	5.04	477.23	600.43	1,077.65	0.45	0.04	1,100.97
Landscaping	0.10	0.04	3.47	0.00		0.00	0.02		0.00	0.02	0.00	5.67	5.67	0.01	0.00	5.78
Total	**33.74**	**0.43**	**39.18**	**0.01**		**0.00**	**5.07**		**0.00**	**5.06**	**477.23**	**606.10**	**1,083.32**	**0.46**	**0.04**	**1,106.75**

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	1.29					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	3.32					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	29.03	0.39	35.71	0.01		0.00	5.05		0.00	5.04	477.23	600.43	1,077.65	0.45	0.04	1,100.97
Landscaping	0.10	0.04	3.47	0.00		0.00	0.02		0.00	0.02	0.00	5.67	5.67	0.01	0.00	5.78
Total	**33.74**	**0.43**	**39.18**	**0.01**		**0.00**	**5.07**		**0.00**	**5.06**	**477.23**	**606.10**	**1,083.32**	**0.46**	**0.04**	**1,106.75**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					316.11	1.07	0.03	348.19
Unmitigated					316.11	1.07	0.03	348.19
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 / 14.2978					56.26	0.00	0.00	56.55
Condo/Townhouse	6.84117 / 4.31291					48.60	0.21	0.01	54.84
Elementary School	1.69697 / 4.36363					25.01	0.05	0.00	26.63
Health Club	2.36573 / 1.44996					16.64	0.07	0.00	18.80
Office Park	0.622068 / 0.381268					4.38	0.02	0.00	4.94
Single Family Housing	23.26 / 14.6639					165.22	0.72	0.02	186.44
User Defined Industrial	0 / 0					0.00	0.00	0.00	0.00
Total						**316.11**	**1.07**	**0.03**	**348.20**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			

City Park	0 / 14.2978					56.26	0.00	0.00	56.55
Condo/Townhouse	6.84117 / 4.31291					48.60	0.21	0.01	54.84
Elementary School	1.69697 / 4.36363					25.01	0.05	0.00	26.63
Health Club	2.36573 / 1.44996					16.64	0.07	0.00	18.80
Office Park	0.622068 / 0.381268					4.38	0.02	0.00	4.94
Single Family Housing	23.26 / 14.6639					165.22	0.72	0.02	186.44
User Defined Industrial	0 / 0					0.00	0.00	0.00	0.00
Total						**316.11**	**1.07**	**0.03**	**348.20**

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					167.86	9.92	0.00	376.19
Unmitigated					167.86	9.92	0.00	376.19
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	1.03					0.21	0.01	0.00	0.47
Condo/Townhouse	48.3					9.80	0.58	0.00	21.97
Elementary School	127.75					25.93	1.53	0.00	58.12
Health Club	228					46.28	2.74	0.00	103.72
Office Park	3.26					0.66	0.04	0.00	1.48
Single Family Housing	418.61					84.97	5.02	0.00	190.43
User Defined Industrial	0					0.00	0.00	0.00	0.00
Total						**167.85**	**9.92**	**0.00**	**376.19**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
City Park	1.03					0.21	0.01	0.00	0.47
Condo/Townhouse	48.3					9.80	0.58	0.00	21.97
Elementary School	127.75					25.93	1.53	0.00	58.12
Health Club	228					46.28	2.74	0.00	103.72
Office Park	3.26					0.66	0.04	0.00	1.48
Single Family Housing	418.61					84.97	5.02	0.00	190.43
User Defined Industrial	0					0.00	0.00	0.00	0.00
Total						**167.85**	**9.92**	**0.00**	**376.19**

9.0 Vegetation

Lilac Ranch - Phase 3 - Construction
San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Office Park	3.5	1000sqft
Elementary School	700	Student
User Defined Industrial	2.4	User Defined Unit
City Park	12	Acre
Health Club	40	1000sqft
Condo/Townhouse	105	Dwelling Unit
Single Family Housing	357	Dwelling Unit

1.2 Other Project Characteristics

Urbanization Rural
Wind Speed (m/s) 2.6
Utility Company San Diego Gas & Electric
Climate Zone 13
Precipitation Freq (Days) 40

1.3 User Entered Comments

Project Characteristics -

Land Use - per specific plan summary table

Grading -

Trips and VMT - per SANDAG

Construction Off-road Equipment Mitigation -

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					
2018	0.37	1.08	1.06	0.00	0.04	0.09	0.13	0.00	0.09	0.09	0.00	148.82	148.82	0.02	0.00	149.14
2019	0.46	0.50	0.74	0.00	0.07	0.04	0.11	0.00	0.04	0.04	0.00	116.40	116.40	0.01	0.00	116.57
2020	0.46	0.47	0.72	0.00	0.07	0.03	0.11	0.00	0.03	0.03	0.00	115.90	115.90	0.01	0.00	116.05
2021	0.45	0.42	0.71	0.00	0.07	0.03	0.10	0.00	0.03	0.03	0.00	115.05	115.05	0.01	0.00	115.19
Total	**1.74**	**2.47**	**3.23**	**0.00**	**0.25**	**0.19**	**0.45**	**0.00**	**0.19**	**0.19**	**0.00**	**496.17**	**496.17**	**0.05**	**0.00**	**496.95**

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					
2018	0.47	0.83	1.02	0.00	0.04	0.07	0.11	0.00	0.07	0.07	0.00	148.82	148.82	0.02	0.00	149.14
2019	0.77	0.66	0.74	0.00	0.07	0.04	0.11	0.00	0.04	0.04	0.00	116.40	116.40	0.01	0.00	116.57
2020	0.77	0.66	0.72	0.00	0.07	0.04	0.11	0.00	0.04	0.04	0.00	115.90	115.90	0.01	0.00	116.05
2021	0.77	0.66	0.71	0.00	0.07	0.04	0.11	0.00	0.04	0.04	0.00	115.05	115.05	0.01	0.00	115.19
Total	**2.78**	**2.81**	**3.19**	**0.00**	**0.25**	**0.19**	**0.44**	**0.00**	**0.19**	**0.19**	**0.00**	**496.17**	**496.17**	**0.05**	**0.00**	**496.95**

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	33.74	0.43	39.18	0.01		0.00	5.06		0.00	5.06	477.23	606.09	1,083.32	0.45	0.04	1,106.75
Energy	0.09	0.79	0.35	0.00		0.00	0.06		0.00	0.06	0.00	2,143.97	2,143.97	0.06	0.03	2,155.86
Mobile	4.59	8.76	41.13	0.10	10.19	0.54	10.73	0.16	0.52	0.69	0.00	7,417.24	7,417.24	0.28	0.00	7,423.13
Waste						0.00	0.00		0.00	0.00	167.86	0.00	167.86	9.92	0.00	376.19
Water						0.00	0.00		0.00	0.00	0.00	316.11	316.11	1.07	0.03	348.19
Total	**38.42**	**9.98**	**80.66**	**0.11**	**10.19**	**0.54**	**15.85**	**0.16**	**0.52**	**5.81**	**645.09**	**10,483.41**	**11,128.50**	**11.78**	**0.10**	**11,410.12**

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	33.74	0.43	39.18	0.01		0.00	5.06		0.00	5.06	477.23	606.09	1,083.32	0.45	0.04	1,106.75
Energy	0.09	0.79	0.35	0.00		0.00	0.06		0.00	0.06	0.00	2,143.97	2,143.97	0.06	0.03	2,155.86
Mobile	4.59	8.76	41.13	0.10	10.19	0.54	10.73	0.16	0.52	0.69	0.00	7,417.24	7,417.24	0.28	0.00	7,423.13
Waste						0.00	0.00		0.00	0.00	167.86	0.00	167.86	9.92	0.00	376.19
Water						0.00	0.00		0.00	0.00	0.00	316.11	316.11	1.07	0.03	348.19
Total	**38.42**	**9.98**	**80.66**	**0.11**	**10.19**	**0.54**	**15.85**	**0.16**	**0.52**	**5.81**	**645.09**	**10,483.41**	**11,128.50**	**11.78**	**0.10**	**11,410.12**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

3.2 paving - 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	0.13	0.80	0.65	0.00		0.06	0.06		0.06	0.06	0.00	86.00	86.00	0.01	0.00	86.22
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.13**	**0.80**	**0.65**	**0.00**		**0.06**	**0.06**		**0.06**	**0.06**	**0.00**	**86.00**	**86.00**	**0.01**	**0.00**	**86.22**

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	0.00	0.00	0.00	0.00	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	3.88	3.88	0.00	0.00	3.88
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**3.88**	**3.88**	**0.00**	**0.00**	**3.88**

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	0.08	0.50	0.62	0.00		0.05	0.05		0.05	0.05	0.00	86.00	86.00	0.01	0.00	86.22
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.08**	**0.50**	**0.62**	**0.00**		**0.05**	**0.05**		**0.05**	**0.05**	**0.00**	**86.00**	**86.00**	**0.01**	**0.00**	**86.22**

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	0.00	0.00	0.00	0.00	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	3.88	3.88	0.00	0.00	3.88
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**3.88**	**3.88**	**0.00**	**0.00**	**3.88**

3.3 architectural coating - 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	0.18					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	33.41	33.41	0.00	0.00	33.47
Total	**0.22**	**0.26**	**0.24**	**0.00**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**33.41**	**33.41**	**0.00**	**0.00**	**33.47**

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	0.01	0.01	0.14	0.00	0.04	0.00	0.04	0.00	0.00	0.00	0.00	25.54	25.54	0.00	0.00	25.56
Total	**0.01**	**0.01**	**0.14**	**0.00**	**0.04**	**0.00**	**0.04**	**0.00**	**0.00**	**0.00**	**0.00**	**25.54**	**25.54**	**0.00**	**0.00**	**25.56**

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	0.18					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.19	0.32	0.24	0.00		0.02	0.02		0.02	0.02	0.00	33.41	33.41	0.00	0.00	33.47
Total	**0.37**	**0.32**	**0.24**	**0.00**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**33.41**	**33.41**	**0.00**	**0.00**	**33.47**

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	0.01	0.01	0.14	0.00	0.04	0.00	0.04	0.00	0.00	0.00	0.00	25.54	25.54	0.00	0.00	25.56
Total	**0.01**	**0.01**	**0.14**	**0.00**	**0.04**	**0.00**	**0.04**	**0.00**	**0.00**	**0.00**	**0.00**	**25.54**	**25.54**	**0.00**	**0.00**	**25.56**

3.3 architectural coating - 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	0.37					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.07	0.48	0.48	0.00		0.03	0.03		0.03	0.03	0.00	66.56	66.56	0.01	0.00	66.68
Total	**0.44**	**0.48**	**0.48**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**	**0.00**	**66.56**	**66.56**	**0.01**	**0.00**	**66.68**

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	0.00	0.00	0.00	0.00	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	0.03	0.03	0.26	0.00	0.07	0.00	0.08	0.00	0.00	0.00	0.00	49.84	49.84	0.00	0.00	49.89
Total	**0.03**	**0.03**	**0.26**	**0.00**	**0.07**	**0.00**	**0.08**	**0.00**	**0.00**	**0.00**	**0.00**	**49.84**	**49.84**	**0.00**	**0.00**	**49.89**

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	0.37					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.37	0.63	0.48	0.00		0.04	0.04		0.04	0.04	0.00	66.56	66.56	0.01	0.00	66.68
Total	**0.74**	**0.63**	**0.48**	**0.00**		**0.04**	**0.04**		**0.04**	**0.04**	**0.00**	**66.56**	**66.56**	**0.01**	**0.00**	**66.68**

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	0.00	0.00	0.00	0.00	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	0.03	0.03	0.26	0.00	0.07	0.00	0.08	0.00	0.00	0.00	0.00	49.84	49.84	0.00	0.00	49.89
Total	**0.03**	**0.03**	**0.26**	**0.00**	**0.07**	**0.00**	**0.08**	**0.00**	**0.00**	**0.00**	**0.00**	**49.84**	**49.84**	**0.00**	**0.00**	**49.89**

3.3 architectural coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.37					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.06	0.44	0.48	0.00		0.03	0.03		0.03	0.03	0.00	66.82	66.82	0.01	0.00	66.92
Total	**0.43**	**0.44**	**0.48**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**	**0.00**	**66.82**	**66.82**	**0.01**	**0.00**	**66.92**

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	0.02	0.02	0.24	0.00	0.07	0.00	0.08	0.00	0.00	0.00	0.00	49.08	49.08	0.00	0.00	49.13
Total	**0.02**	**0.02**	**0.24**	**0.00**	**0.07**	**0.00**	**0.08**	**0.00**	**0.00**	**0.00**	**0.00**	**49.08**	**49.08**	**0.00**	**0.00**	**49.13**

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	0.37					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Off-Road	0.38	0.64	0.48	0.00		0.04	0.04		0.04	0.04	0.00	66.82	66.82	0.01	0.00	66.92
Total	**0.75**	**0.64**	**0.48**	**0.00**		**0.04**	**0.04**		**0.04**	**0.04**	**0.00**	**66.82**	**66.82**	**0.01**	**0.00**	**66.92**

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	0.02	0.02	0.24	0.00	0.07	0.00	0.08	0.00	0.00	0.00	0.00	49.08	49.08	0.00	0.00	49.13
Total	**0.02**	**0.02**	**0.24**	**0.00**	**0.07**	**0.00**	**0.08**	**0.00**	**0.00**	**0.00**	**0.00**	**49.08**	**49.08**	**0.00**	**0.00**	**49.13**

3.3 architectural coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.37					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.06	0.40	0.47	0.00		0.02	0.02		0.02	0.02	0.00	66.56	66.56	0.00	0.00	66.66
Total	**0.43**	**0.40**	**0.47**	**0.00**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**66.56**	**66.56**	**0.00**	**0.00**	**66.66**

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	0.02	0.02	0.23	0.00	0.07	0.00	0.08	0.00	0.00	0.00	0.00	48.49	48.49	0.00	0.00	48.53
Total	**0.02**	**0.02**	**0.23**	**0.00**	**0.07**	**0.00**	**0.08**	**0.00**	**0.00**	**0.00**	**0.00**	**48.49**	**48.49**	**0.00**	**0.00**	**48.53**

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	0.37					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.37	0.63	0.48	0.00		0.04	0.04		0.04	0.04	0.00	66.56	66.56	0.00	0.00	66.66
Total	**0.74**	**0.63**	**0.48**	**0.00**		**0.04**	**0.04**		**0.04**	**0.04**	**0.00**	**66.56**	**66.56**	**0.00**	**0.00**	**66.66**

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	0.02	0.02	0.23	0.00	0.07	0.00	0.08	0.00	0.00	0.00	0.00	48.49	48.49	0.00	0.00	48.53
Total	**0.02**	**0.02**	**0.23**	**0.00**	**0.07**	**0.00**	**0.08**	**0.00**	**0.00**	**0.00**	**0.00**	**48.49**	**48.49**	**0.00**	**0.00**	**48.53**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	4.59	8.76	41.13	0.10	10.19	0.54	10.73	0.16	0.52	0.69	0.00	7,417.24	7,417.24	0.28	0.00	7,423.13
Unmitigated	4.59	8.76	41.13	0.10	10.19	0.54	10.73	0.16	0.52	0.69	0.00	7,417.24	7,417.24	0.28	0.00	7,423.13
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	19.08	19.08	19.08	47,055	47,055
Condo/Townhouse	691.95	751.80	637.35	2,563,448	2,563,448
Elementary School	903.00	0.00	0.00	1,931,890	1,931,890
Health Club	1,317.20	834.80	1069.20	2,176,406	2,176,406
Office Park	39.97	5.74	2.66	86,140	86,140
Single Family Housing	3,416.49	3,598.56	3130.89	12,588,537	12,588,537
User Defined Industrial	0.00	0.00	0.00		
Total	6,387.69	5,209.98	4,859.18	19,393,477	19,393,477

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	14.70	6.60	6.60	33.00	48.00	19.00
Condo/Townhouse	16.80	7.10	7.90	41.60	18.80	39.60
Elementary School	14.70	6.60	6.60	65.00	30.00	5.00
Health Club	14.70	6.60	6.60	16.90	64.10	19.00
Office Park	14.70	6.60	6.60	33.00	48.00	19.00
Single Family Housing	16.80	7.10	7.90	41.60	18.80	39.60
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	1,237.28	1,237.28	0.05	0.02	1,243.65
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	1,237.28	1,237.28	0.05	0.02	1,243.65
NaturalGas Mitigated	0.09	0.79	0.35	0.00		0.00	0.06		0.00	0.06	0.00	906.69	906.69	0.02	0.02	912.21
NaturalGas Unmitigated	0.09	0.79	0.35	0.00		0.00	0.06		0.00	0.06	0.00	906.69	906.69	0.02	0.02	912.21
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	2.42307e+006	0.01	0.11	0.05	0.00		0.00	0.01		0.00	0.01	0.00	129.30	129.30	0.00	0.00	130.09
Elementary School	362839	0.00	0.02	0.01	0.00		0.00	0.00		0.00	0.00	0.00	19.36	19.36	0.00	0.00	19.48
Health Club	471600	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00	0.00	25.17	25.17	0.00	0.00	25.32
Office Park	117880	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00	0.00	6.29	6.29	0.00	0.00	6.33
Single Family Housing	1.36154e+007	0.07	0.63	0.27	0.00		0.00	0.05		0.00	0.05	0.00	726.57	726.57	0.01	0.01	730.99
User Defined Industrial	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		0.08	0.79	0.35	0.00		0.00	0.06		0.00	0.06	0.00	906.69	906.69	0.01	0.01	912.21

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	2.42307e+006	0.01	0.11	0.05	0.00		0.00	0.01		0.00	0.01	0.00	129.30	129.30	0.00	0.00	130.09
Elementary School	362839	0.00	0.02	0.01	0.00		0.00	0.00		0.00	0.00	0.00	19.36	19.36	0.00	0.00	19.48
Health Club	471600	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00	0.00	25.17	25.17	0.00	0.00	25.32
Office Park	117880	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00	0.00	6.29	6.29	0.00	0.00	6.33
Single Family Housing	1.36154e+007	0.07	0.63	0.27	0.00		0.00	0.05		0.00	0.05	0.00	726.57	726.57	0.01	0.01	730.99
User Defined Industrial	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		**0.08**	**0.79**	**0.35**	**0.00**		**0.00**	**0.06**		**0.00**	**0.06**	**0.00**	**906.69**	**906.69**	**0.01**	**0.01**	**912.21**

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	434278					153.80	0.01	0.00	154.60
Elementary School	348793					123.53	0.00	0.00	124.16
Health Club	360000					127.50	0.00	0.00	128.15
Office Park	61600					21.82	0.00	0.00	21.93
Single Family Housing	2.28889e+006					810.63	0.03	0.01	814.81
User Defined Industrial	0					0.00	0.00	0.00	0.00
Total						**1,237.28**	**0.04**	**0.01**	**1,243.65**

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	434278					153.80	0.01	0.00	154.60
Elementary School	348793					123.53	0.00	0.00	124.16
Health Club	360000					127.50	0.00	0.00	128.15
Office Park	61600					21.82	0.00	0.00	21.93
Single Family Housing	2.28889e+006					810.63	0.03	0.01	814.81
User Defined Industrial	0					0.00	0.00	0.00	0.00
Total						**1,237.28**	**0.04**	**0.01**	**1,243.65**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	33.74	0.43	39.18	0.01		0.00	5.06		0.00	5.06	477.23	606.09	1,083.32	0.45	0.04	1,106.75
Unmitigated	33.74	0.43	39.18	0.01		0.00	5.06		0.00	5.06	477.23	606.09	1,083.32	0.45	0.04	1,106.75
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	1.29					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	3.32					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	29.03	0.39	35.71	0.01		0.00	5.05		0.00	5.04	477.23	600.43	1,077.65	0.45	0.04	1,100.97
Landscaping	0.10	0.04	3.47	0.00		0.00	0.02		0.00	0.02	0.00	5.67	5.67	0.01	0.00	5.78
Total	**33.74**	**0.43**	**39.18**	**0.01**		**0.00**	**5.07**		**0.00**	**5.06**	**477.23**	**606.10**	**1,083.32**	**0.46**	**0.04**	**1,106.75**

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	1.29					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	3.32					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	29.03	0.39	35.71	0.01		0.00	5.05		0.00	5.04	477.23	600.43	1,077.65	0.45	0.04	1,100.97
Landscaping	0.10	0.04	3.47	0.00		0.00	0.02		0.00	0.02	0.00	5.67	5.67	0.01	0.00	5.78
Total	**33.74**	**0.43**	**39.18**	**0.01**		**0.00**	**5.07**		**0.00**	**5.06**	**477.23**	**606.10**	**1,083.32**	**0.46**	**0.04**	**1,106.75**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					316.11	1.07	0.03	348.19
Unmitigated					316.11	1.07	0.03	348.19
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 / 14.2978					56.26	0.00	0.00	56.55
Condo/Townhouse	6.84117 / 4.31291					48.60	0.21	0.01	54.84
Elementary School	1.69697 / 4.36363					25.01	0.05	0.00	26.63
Health Club	2.36573 / 1.44996					16.64	0.07	0.00	18.80
Office Park	0.622068 / 0.381268					4.38	0.02	0.00	4.94
Single Family Housing	23.26 / 14.6639					165.22	0.72	0.02	186.44
User Defined Industrial	0 / 0					0.00	0.00	0.00	0.00
Total						**316.11**	**1.07**	**0.03**	**348.20**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
City Park	0 / 14.2978					56.26	0.00	0.00	56.55
Condo/Townhouse	6.84117 / 4.31291					48.60	0.21	0.01	54.84

Elementary School	1.69697 / 4.36363					25.01	0.05	0.00	26.63
Health Club	2.36573 / 1.44996					16.64	0.07	0.00	18.80
Office Park	0.622068 / 0.381268					4.38	0.02	0.00	4.94
Single Family Housing	23.26 / 14.6639					165.22	0.72	0.02	186.44
User Defined Industrial	0 / 0					0.00	0.00	0.00	0.00
Total						**316.11**	**1.07**	**0.03**	**348.20**

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					167.86	9.92	0.00	376.19
Unmitigated					167.86	9.92	0.00	376.19
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	1.03					0.21	0.01	0.00	0.47
Condo/Townhouse	48.3					9.80	0.58	0.00	21.97

Elementary School	127.75					25.93	1.53	0.00	58.12
Health Club	228					46.28	2.74	0.00	103.72
Office Park	3.26					0.66	0.04	0.00	1.48
Single Family Housing	418.61					84.97	5.02	0.00	190.43
User Defined Industrial	0					0.00	0.00	0.00	0.00
Total						**167.85**	**9.92**	**0.00**	**376.19**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
City Park	1.03					0.21	0.01	0.00	0.47
Condo/Townhouse	48.3					9.80	0.58	0.00	21.97
Elementary School	127.75					25.93	1.53	0.00	58.12
Health Club	228					46.28	2.74	0.00	103.72
Office Park	3.26					0.66	0.04	0.00	1.48
Single Family Housing	418.61					84.97	5.02	0.00	190.43
User Defined Industrial	0					0.00	0.00	0.00	0.00
Total						**167.85**	**9.92**	**0.00**	**376.19**

9.0 Vegetation

Lilac Ranch - Phase 4 - Construction
San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
City Park	3.7	Acre
Congregate Care (Assisted Living)	200	Dwelling Unit
Congregate Care (Assisted Living)	171	Dwelling Unit

1.2 Other Project Characteristics

Urbanization Rural

Climate Zone 13

Wind Speed (m/s) 2.6

Precipitation Freq (Days) 40

Utility Company San Diego Gas & Electric

1.3 User Entered Comments

Project Characteristics -

Land Use - per specific plan summary table 01/2013

Trips and VMT - per SANDAG

Grading - max grading

Architectural Coating - per SDAPCD, rule 67, ROG reductions

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

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					
2015	1.60	12.45	6.78	0.02	0.05	0.59	0.64	0.00	0.59	0.59	0.00	1,489.07	1,489.07	0.13	0.00	1,491.79
2016	0.63	3.73	4.27	0.01	0.33	0.22	0.55	0.01	0.22	0.22	0.00	729.28	729.28	0.05	0.00	730.35
Total	**2.23**	**16.18**	**11.05**	**0.03**	**0.38**	**0.81**	**1.19**	**0.01**	**0.81**	**0.81**	**0.00**	**2,218.35**	**2,218.35**	**0.18**	**0.00**	**2,222.14**

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					
2015	1.23	7.64	8.26	0.02	0.04	0.52	0.56	0.00	0.52	0.52	0.00	1,489.07	1,489.07	0.13	0.00	1,491.79
2016	1.09	3.40	4.51	0.01	0.33	0.24	0.57	0.01	0.24	0.24	0.00	729.28	729.28	0.05	0.00	730.35
Total	**2.32**	**11.04**	**12.77**	**0.03**	**0.37**	**0.76**	**1.13**	**0.01**	**0.76**	**0.76**	**0.00**	**2,218.35**	**2,218.35**	**0.18**	**0.00**	**2,222.14**

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	48.74	0.66	60.18	0.02		0.00	8.12		0.00	8.12	766.45	968.87	1,735.33	0.72	0.07	1,772.88
Energy	0.02	0.18	0.08	0.00		0.00	0.01		0.00	0.01	0.00	666.87	666.87	0.02	0.01	670.49
Mobile	1.06	2.26	10.64	0.02	1.90	0.11	2.01	0.03	0.11	0.14	0.00	1,605.61	1,605.61	0.07	0.00	1,607.03
Waste						0.00	0.00		0.00	0.00	68.79	0.00	68.79	4.07	0.00	154.15
Water						0.00	0.00		0.00	0.00	0.00	189.05	189.05	0.74	0.02	211.19

Total	49.82	3.10	70.90	0.04	1.90	0.11	10.14	0.03	0.11	8.27	835.24	3,430.40	4,265.65	5.62	0.10	4,415.74

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	48.74	0.66	60.18	0.02		0.00	8.12		0.00	8.12	766.45	968.87	1,735.33	0.72	0.07	1,772.88
Energy	0.02	0.18	0.08	0.00		0.00	0.01		0.00	0.01	0.00	666.87	666.87	0.02	0.01	670.49
Mobile	1.06	2.26	10.64	0.02	1.90	0.11	2.01	0.03	0.11	0.14	0.00	1,605.61	1,605.61	0.07	0.00	1,607.03
Waste						0.00	0.00		0.00	0.00	68.79	0.00	68.79	4.07	0.00	154.15
Water						0.00	0.00		0.00	0.00	0.00	189.05	189.05	0.74	0.02	211.19
Total	**49.82**	**3.10**	**70.90**	**0.04**	**1.90**	**0.11**	**10.14**	**0.03**	**0.11**	**8.27**	**835.24**	**3,430.40**	**4,265.65**	**5.62**	**0.10**	**4,415.74**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

3.2 Demolition - 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					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.02	0.11	0.09	0.00		0.01	0.01		0.01	0.01	0.00	11.80	11.80	0.00	0.00	11.83
Total	**0.02**	**0.11**	**0.09**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**11.80**	**11.80**	**0.00**	**0.00**	**11.83**

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	0.19	0.19	0.00	0.00	0.19
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.58	0.00	0.00	0.58
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.77**	**0.77**	**0.00**	**0.00**	**0.77**

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					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.03	0.09	0.08	0.00		0.01	0.01		0.01	0.01	0.00	11.80	11.80	0.00	0.00	11.83
Total	**0.03**	**0.09**	**0.08**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**11.80**	**11.80**	**0.00**	**0.00**	**11.83**

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	0.19	0.19	0.00	0.00	0.19
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.58	0.00	0.00	0.58
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.77**	**0.77**	**0.00**	**0.00**	**0.77**

3.3 Site Preparation - 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					
Fugitive Dust					0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.11	0.69	0.51	0.00		0.06	0.06		0.06	0.06	0.00	65.88	65.88	0.01	0.00	66.07
Total	**0.11**	**0.69**	**0.51**	**0.00**	**0.01**	**0.06**	**0.07**	**0.00**	**0.06**	**0.06**	**0.00**	**65.88**	**65.88**	**0.01**	**0.00**	**66.07**

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	3.27	3.27	0.00	0.00	3.27
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.27**	**3.27**	**0.00**	**0.00**	**3.27**

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.06	0.38	0.47	0.00		0.04	0.04		0.04	0.04	0.00	65.88	65.88	0.01	0.00	66.07
Total	**0.06**	**0.38**	**0.47**	**0.00**	**0.00**	**0.04**	**0.04**	**0.00**	**0.04**	**0.04**	**0.00**	**65.88**	**65.88**	**0.01**	**0.00**	**66.07**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	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	3.27	3.27	0.00	0.00	3.27
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.27**	**3.27**	**0.00**	**0.00**	**3.27**

3.4 Grading - 2015

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Fugitive Dust					0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	1.46	11.63	6.02	0.01		0.52	0.52		0.52	0.52	0.00	1,386.71	1,386.71	0.12	0.00	1,389.18
Total	**1.46**	**11.63**	**6.02**	**0.01**	**0.01**	**0.52**	**0.53**	**0.00**	**0.52**	**0.52**	**0.00**	**1,386.71**	**1,386.71**	**0.12**	**0.00**	**1,389.18**

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	0.01	0.01	0.13	0.00	0.03	0.00	0.03	0.00	0.00	0.00	0.00	20.64	20.64	0.00	0.00	20.67
Total	**0.01**	**0.01**	**0.13**	**0.00**	**0.03**	**0.00**	**0.03**	**0.00**	**0.00**	**0.00**	**0.00**	**20.64**	**20.64**	**0.00**	**0.00**	**20.67**

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					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	1.12	7.15	7.55	0.01		0.47	0.47		0.47	0.47	0.00	1,386.71	1,386.71	0.12	0.00	1,389.18
Total	**1.12**	**7.15**	**7.55**	**0.01**	**0.00**	**0.47**	**0.47**	**0.00**	**0.47**	**0.47**	**0.00**	**1,386.71**	**1,386.71**	**0.12**	**0.00**	**1,389.18**

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	0.01	0.01	0.13	0.00	0.03	0.00	0.03	0.00	0.00	0.00	0.00	20.64	20.64	0.00	0.00	20.67
Total	**0.01**	**0.01**	**0.13**	**0.00**	**0.03**	**0.00**	**0.03**	**0.00**	**0.00**	**0.00**	**0.00**	**20.64**	**20.64**	**0.00**	**0.00**	**20.67**

3.5 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	0.45	3.07	2.61	0.00		0.19	0.19		0.19	0.19	0.00	414.45	414.45	0.04	0.00	415.23
Total	**0.45**	**3.07**	**2.61**	**0.00**		**0.19**	**0.19**		**0.19**	**0.19**	**0.00**	**414.45**	**414.45**	**0.04**	**0.00**	**415.23**

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	0.05	0.52	0.33	0.00	0.03	0.02	0.05	0.00	0.02	0.02	0.00	97.03	97.03	0.00	0.00	97.08
Worker	0.13	0.14	1.33	0.00	0.30	0.01	0.31	0.00	0.01	0.02	0.00	217.79	217.79	0.01	0.00	218.05
Total	**0.18**	**0.66**	**1.66**	**0.00**	**0.33**	**0.03**	**0.36**	**0.00**	**0.03**	**0.04**	**0.00**	**314.82**	**314.82**	**0.01**	**0.00**	**315.13**

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	0.92	2.74	2.84	0.00		0.21	0.21		0.21	0.21	0.00	414.45	414.45	0.04	0.00	415.23
Total	**0.92**	**2.74**	**2.84**	**0.00**		**0.21**	**0.21**		**0.21**	**0.21**	**0.00**	**414.45**	**414.45**	**0.04**	**0.00**	**415.23**

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	0.05	0.52	0.33	0.00	0.03	0.02	0.05	0.00	0.02	0.02	0.00	97.03	97.03	0.00	0.00	97.08
Worker	0.13	0.14	1.33	0.00	0.30	0.01	0.31	0.00	0.01	0.02	0.00	217.79	217.79	0.01	0.00	218.05
Total	**0.18**	**0.66**	**1.66**	**0.00**	**0.33**	**0.03**	**0.36**	**0.00**	**0.03**	**0.04**	**0.00**	**314.82**	**314.82**	**0.01**	**0.00**	**315.13**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.06	2.26	10.64	0.02	1.90	0.11	2.01	0.03	0.11	0.14	0.00	1,605.61	1,605.61	0.07	0.00	1,607.03
Unmitigated	1.06	2.26	10.64	0.02	1.90	0.11	2.01	0.03	0.11	0.14	0.00	1,605.61	1,605.61	0.07	0.00	1,607.03
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	5.88	5.88	5.88	14,509	14,509
Congregate Care (Assisted Living)	548.00	440.00	488.00	1,939,146	1,939,146
Congregate Care (Assisted Living)	468.54	376.20	417.24	1,657,970	1,657,970
Total	1,022.42	822.08	911.12	3,611,625	3,611,625

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	14.70	6.60	6.60	33.00	48.00	19.00
Congregate Care (Assisted Living)	16.80	7.10	7.90	41.60	18.80	39.60
Congregate Care (Assisted Living)	16.80	7.10	7.90	41.60	18.80	39.60

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	458.20	458.20	0.02	0.01	460.56
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	458.20	458.20	0.02	0.01	460.56
NaturalGas Mitigated	0.02	0.18	0.08	0.00		0.00	0.01		0.00	0.01	0.00	208.67	208.67	0.00	0.00	209.94
NaturalGas Unmitigated	0.02	0.18	0.08	0.00		0.00	0.01		0.00	0.01	0.00	208.67	208.67	0.00	0.00	209.94
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

Congregate Care (Assisted Living)	1.80232e+006	0.01	0.08	0.04	0.00		0.00	0.01		0.00	0.01	0.00	96.18	96.18	0.00	0.00	96.76
Congregate Care (Assisted Living)	2.10798e+006	0.01	0.10	0.04	0.00		0.00	0.01		0.00	0.01	0.00	112.49	112.49	0.00	0.00	113.17
Total		**0.02**	**0.18**	**0.08**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**	**0.00**	**208.67**	**208.67**	**0.00**	**0.00**	**209.93**

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
Congregate Care (Assisted Living)	1.80232e+006	0.01	0.08	0.04	0.00		0.00	0.01		0.00	0.01	0.00	96.18	96.18	0.00	0.00	96.76
Congregate Care (Assisted Living)	2.10798e+006	0.01	0.10	0.04	0.00		0.00	0.01		0.00	0.01	0.00	112.49	112.49	0.00	0.00	113.17
Total		**0.02**	**0.18**	**0.08**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**	**0.00**	**208.67**	**208.67**	**0.00**	**0.00**	**209.93**

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
Congregate Care (Assisted Living)	596313					211.19	0.01	0.00	212.28
Congregate Care (Assisted Living)	697442					247.01	0.01	0.00	248.28
Total						**458.20**	**0.02**	**0.00**	**460.56**

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
Congregate Care (Assisted Living)	596313					211.19	0.01	0.00	212.28
Congregate Care (Assisted Living)	697442					247.01	0.01	0.00	248.28
Total						**458.20**	**0.02**	**0.00**	**460.56**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	48.74	0.66	60.18	0.02		0.00	8.12		0.00	8.12	766.45	968.87	1,735.33	0.72	0.07	1,772.88
Unmitigated	48.74	0.66	60.18	0.02		0.00	8.12		0.00	8.12	766.45	968.87	1,735.33	0.72	0.07	1,772.88
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	0.58					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	1.45					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	46.62	0.63	57.36	0.02		0.00	8.10		0.00	8.10	766.45	964.32	1,730.77	0.72	0.07	1,768.23
Landscaping	0.09	0.03	2.82	0.00		0.00	0.02		0.00	0.02	0.00	4.55	4.55	0.00	0.00	4.65

Total	48.74	0.66	60.18	0.02		0.00	8.12		0.00	8.12	766.45	968.87	1,735.32	0.72	0.07	1,772.88

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.58					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	1.45					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	46.62	0.63	57.36	0.02		0.00	8.10		0.00	8.10	766.45	964.32	1,730.77	0.72	0.07	1,768.23
Landscaping	0.09	0.03	2.82	0.00		0.00	0.02		0.00	0.02	0.00	4.55	4.55	0.00	0.00	4.65
Total	**48.74**	**0.66**	**60.18**	**0.02**		**0.00**	**8.12**		**0.00**	**8.12**	**766.45**	**968.87**	**1,735.32**	**0.72**	**0.07**	**1,772.88**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					189.05	0.74	0.02	211.19
Unmitigated					189.05	0.74	0.02	211.19
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 / 4.40848					17.35	0.00	0.00	17.44
Congregate Care (Assisted Living)	24.1721 / 15.239					171.70	0.74	0.02	193.75
Total						**189.05**	**0.74**	**0.02**	**211.19**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
City Park	0 / 4.40848					17.35	0.00	0.00	17.44
Congregate Care (Assisted Living)	24.1721 / 15.239					171.70	0.74	0.02	193.75
Total						**189.05**	**0.74**	**0.02**	**211.19**

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					68.79	4.07	0.00	154.15
Unmitigated					68.79	4.07	0.00	154.15

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	0.32					0.06	0.00	0.00	0.15
Congregate Care (Assisted Living)	338.54					68.72	4.06	0.00	154.01
Total						**68.78**	**4.06**	**0.00**	**154.16**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
City Park	0.32					0.06	0.00	0.00	0.15
Congregate Care (Assisted Living)	338.54					68.72	4.06	0.00	154.01
Total						**68.78**	**4.06**	**0.00**	**154.16**

9.0 Vegetation

Lilac Ranch - Phase 4 - Construction

San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
City Park	3.7	Acre
Congregate Care (Assisted Living)	200	Dwelling Unit
Congregate Care (Assisted Living)	171	Dwelling Unit

1.2 Other Project Characteristics

Urbanization Rural

Wind Speed (m/s) 2.6

Utility Company San Diego Gas & Electric

Climate Zone 13

Precipitation Freq (Days) 40

1.3 User Entered Comments

Project Characteristics -

Land Use - per specific plan summary table 01/2013

Trips and VMT - per SANDAG

Grading - max grading

Architectural Coating - per SDAPCD, rule 67, ROG reductions

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

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					
2016	0.80	1.25	1.11	0.00	0.05	0.10	0.15	0.00	0.10	0.10	0.00	152.36	152.36	0.02	0.00	152.74
Total	**0.80**	**1.25**	**1.11**	**0.00**	**0.05**	**0.10**	**0.15**	**0.00**	**0.10**	**0.10**	**0.00**	**152.36**	**152.36**	**0.02**	**0.00**	**152.74**

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					
2016	0.87	0.84	1.06	0.00	0.05	0.07	0.12	0.00	0.07	0.07	0.00	152.36	152.36	0.02	0.00	152.74
Total	**0.87**	**0.84**	**1.06**	**0.00**	**0.05**	**0.07**	**0.12**	**0.00**	**0.07**	**0.07**	**0.00**	**152.36**	**152.36**	**0.02**	**0.00**	**152.74**

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	48.74	0.66	60.18	0.02		0.00	8.12		0.00	8.12	766.45	968.87	1,735.33	0.72	0.07	1,772.88
Energy	0.02	0.18	0.08	0.00		0.00	0.01		0.00	0.01	0.00	666.87	666.87	0.02	0.01	670.49
Mobile	1.06	2.26	10.64	0.02	1.90	0.11	2.01	0.03	0.11	0.14	0.00	1,605.61	1,605.61	0.07	0.00	1,607.03
Waste						0.00	0.00		0.00	0.00	68.79	0.00	68.79	4.07	0.00	154.15
Water						0.00	0.00		0.00	0.00	0.00	189.05	189.05	0.74	0.02	211.19
Total	**49.82**	**3.10**	**70.90**	**0.04**	**1.90**	**0.11**	**10.14**	**0.03**	**0.11**	**8.27**	**835.24**	**3,430.40**	**4,265.65**	**5.62**	**0.10**	**4,415.74**

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	48.74	0.66	60.18	0.02		0.00	8.12		0.00	8.12	766.45	968.87	1,735.33	0.72	0.07	1,772.88
Energy	0.02	0.18	0.08	0.00		0.00	0.01		0.00	0.01	0.00	666.87	666.87	0.02	0.01	670.49
Mobile	1.06	2.26	10.64	0.02	1.90	0.11	2.01	0.03	0.11	0.14	0.00	1,605.61	1,605.61	0.07	0.00	1,607.03
Waste						0.00	0.00		0.00	0.00	68.79	0.00	68.79	4.07	0.00	154.15
Water						0.00	0.00		0.00	0.00	0.00	189.05	189.05	0.74	0.02	211.19
Total	**49.82**	**3.10**	**70.90**	**0.04**	**1.90**	**0.11**	**10.14**	**0.03**	**0.11**	**8.27**	**835.24**	**3,430.40**	**4,265.65**	**5.62**	**0.10**	**4,415.74**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

3.2 paving - 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	0.15	0.92	0.66	0.00		0.08	0.08		0.08	0.08	0.00	86.00	86.00	0.01	0.00	86.25
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.15**	**0.92**	**0.66**	**0.00**		**0.08**	**0.08**		**0.08**	**0.08**	**0.00**	**86.00**	**86.00**	**0.01**	**0.00**	**86.25**

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	4.06	4.06	0.00	0.00	4.06
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**4.06**	**4.06**	**0.00**	**0.00**	**4.06**

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	0.08	0.50	0.62	0.00		0.05	0.05		0.05	0.05	0.00	86.00	86.00	0.01	0.00	86.25
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.08**	**0.50**	**0.62**	**0.00**		**0.05**	**0.05**		**0.05**	**0.05**	**0.00**	**86.00**	**86.00**	**0.01**	**0.00**	**86.25**

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	4.06	4.06	0.00	0.00	4.06
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**4.06**	**4.06**	**0.00**	**0.00**	**4.06**

3.3 architectural coating - 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	0.58					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	33.41	33.41	0.00	0.00	33.49
Total	**0.63**	**0.31**	**0.25**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**	**0.00**	**33.41**	**33.41**	**0.00**	**0.00**	**33.49**

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	0.02	0.02	0.18	0.00	0.04	0.00	0.04	0.00	0.00	0.00	0.00	28.89	28.89	0.00	0.00	28.93
Total	**0.02**	**0.02**	**0.18**	**0.00**	**0.04**	**0.00**	**0.04**	**0.00**	**0.00**	**0.00**	**0.00**	**28.89**	**28.89**	**0.00**	**0.00**	**28.93**

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	0.58					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.19	0.32	0.24	0.00		0.02	0.02		0.02	0.02	0.00	33.41	33.41	0.00	0.00	33.49
Total	**0.77**	**0.32**	**0.24**	**0.00**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**33.41**	**33.41**	**0.00**	**0.00**	**33.49**

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	0.02	0.02	0.18	0.00	0.04	0.00	0.04	0.00	0.00	0.00	0.00	28.89	28.89	0.00	0.00	28.93
Total	**0.02**	**0.02**	**0.18**	**0.00**	**0.04**	**0.00**	**0.04**	**0.00**	**0.00**	**0.00**	**0.00**	**28.89**	**28.89**	**0.00**	**0.00**	**28.93**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

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

Mitigated	1.06	2.26	10.64	0.02	1.90	0.11	2.01	0.03	0.11	0.14	0.00	1,605.61	1,605.61	0.07	0.00	1,607.03
Unmitigated	1.06	2.26	10.64	0.02	1.90	0.11	2.01	0.03	0.11	0.14	0.00	1,605.61	1,605.61	0.07	0.00	1,607.03
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	5.88	5.88	5.88	14,509	14,509
Congregate Care (Assisted Living)	548.00	440.00	488.00	1,939,146	1,939,146
Congregate Care (Assisted Living)	468.54	376.20	417.24	1,657,970	1,657,970
Total	1,022.42	822.08	911.12	3,611,625	3,611,625

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	14.70	6.60	6.60	33.00	48.00	19.00
Congregate Care (Assisted Living)	16.80	7.10	7.90	41.60	18.80	39.60
Congregate Care (Assisted Living)	16.80	7.10	7.90	41.60	18.80	39.60

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	458.20	458.20	0.02	0.01	460.56

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	458.20	458.20	0.02	0.01	460.56
NaturalGas Mitigated	0.02	0.18	0.08	0.00		0.00	0.01		0.00	0.01	0.00	208.67	208.67	0.00	0.00	209.94
NaturalGas Unmitigated	0.02	0.18	0.08	0.00		0.00	0.01		0.00	0.01	0.00	208.67	208.67	0.00	0.00	209.94
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
Congregate Care (Assisted Living)	1.80232e+006	0.01	0.08	0.04	0.00		0.00	0.01		0.00	0.01	0.00	96.18	96.18	0.00	0.00	96.76
Congregate Care (Assisted Living)	2.10798e+006	0.01	0.10	0.04	0.00		0.00	0.01		0.00	0.01	0.00	112.49	112.49	0.00	0.00	113.17
Total		**0.02**	**0.18**	**0.08**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**	**0.00**	**208.67**	**208.67**	**0.00**	**0.00**	**209.93**

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
Congregate Care (Assisted Living)	1.80232e+006	0.01	0.08	0.04	0.00		0.00	0.01		0.00	0.01	0.00	96.18	96.18	0.00	0.00	96.76
Congregate Care (Assisted Living)	2.10798e+006	0.01	0.10	0.04	0.00		0.00	0.01		0.00	0.01	0.00	112.49	112.49	0.00	0.00	113.17
Total		**0.02**	**0.18**	**0.08**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**	**0.00**	**208.67**	**208.67**	**0.00**	**0.00**	**209.93**

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
Congregate Care (Assisted Living)	596313					211.19	0.01	0.00	212.28
Congregate Care (Assisted Living)	697442					247.01	0.01	0.00	248.28
Total						**458.20**	**0.02**	**0.00**	**460.56**

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
Congregate Care (Assisted Living)	596313					211.19	0.01	0.00	212.28
Congregate Care (Assisted Living)	697442					247.01	0.01	0.00	248.28
Total						**458.20**	**0.02**	**0.00**	**460.56**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	48.74	0.66	60.18	0.02		0.00	8.12		0.00	8.12	766.45	968.87	1,735.33	0.72	0.07	1,772.88
Unmitigated	48.74	0.66	60.18	0.02		0.00	8.12		0.00	8.12	766.45	968.87	1,735.33	0.72	0.07	1,772.88

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	0.58					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	1.45					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	46.62	0.63	57.36	0.02		0.00	8.10		0.00	8.10	766.45	964.32	1,730.77	0.72	0.07	1,768.23
Landscaping	0.09	0.03	2.82	0.00		0.00	0.02		0.00	0.02	0.00	4.55	4.55	0.00	0.00	4.65
Total	**48.74**	**0.66**	**60.18**	**0.02**		**0.00**	**8.12**		**0.00**	**8.12**	**766.45**	**968.87**	**1,735.32**	**0.72**	**0.07**	**1,772.88**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.58					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	1.45					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	46.62	0.63	57.36	0.02		0.00	8.10		0.00	8.10	766.45	964.32	1,730.77	0.72	0.07	1,768.23
Landscaping	0.09	0.03	2.82	0.00		0.00	0.02		0.00	0.02	0.00	4.55	4.55	0.00	0.00	4.65
Total	**48.74**	**0.66**	**60.18**	**0.02**		**0.00**	**8.12**		**0.00**	**8.12**	**766.45**	**968.87**	**1,735.32**	**0.72**	**0.07**	**1,772.88**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					189.05	0.74	0.02	211.19
Unmitigated					189.05	0.74	0.02	211.19
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 / 4.40848					17.35	0.00	0.00	17.44
Congregate Care (Assisted Living)	24.1721 / 15.239					171.70	0.74	0.02	193.75
Total						**189.05**	**0.74**	**0.02**	**211.19**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
City Park	0 / 4.40848					17.35	0.00	0.00	17.44
Congregate Care (Assisted Living)	24.1721 / 15.239					171.70	0.74	0.02	193.75
Total						**189.05**	**0.74**	**0.02**	**211.19**

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					68.79	4.07	0.00	154.15
Unmitigated					68.79	4.07	0.00	154.15
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	0.32					0.06	0.00	0.00	0.15
Congregate Care (Assisted Living)	338.54					68.72	4.06	0.00	154.01
Total						**68.78**	**4.06**	**0.00**	**154.16**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
City Park	0.32					0.06	0.00	0.00	0.15
Congregate Care (Assisted Living)	338.54					68.72	4.06	0.00	154.01
Total						**68.78**	**4.06**	**0.00**	**154.16**

9.0 Vegetation

Lilac Ranch - Phase 5 - Construction

San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Place of Worship	233.05	1000sqft
City Park	2.1	Acre
Congregate Care (Assisted Living)	297	Dwelling Unit
Strip Mall	2.5	1000sqft

1.2 Other Project Characteristics

Urbanization Rural

Climate Zone 13

Wind Speed (m/s) 2.6

Precipitation Freq (Days) 40

Utility Company San Diego Gas & Electric

1.3 User Entered Comments

Project Characteristics -

Land Use - per specific plan summary table 01/2013 & from 2013 traffic study (ChenRyan)

Trips and VMT - per SANDAG

Grading - max grading

Architectural Coating - per SDAPCD, rule 67, ROG reductions

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Demolition -

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					
2016	0.11	0.64	0.53	0.00	0.01	0.05	0.07	0.00	0.05	0.05	0.00	70.01	70.01	0.01	0.00	70.19
2017	1.74	12.38	8.78	0.02	0.31	0.58	0.88	0.01	0.57	0.58	0.00	1,959.60	1,959.60	0.14	0.00	1,962.55
2018	0.19	1.15	1.47	0.00	0.13	0.06	0.20	0.00	0.06	0.06	0.00	274.82	274.82	0.02	0.00	275.14
Total	**2.04**	**14.17**	**10.78**	**0.02**	**0.45**	**0.69**	**1.15**	**0.01**	**0.68**	**0.69**	**0.00**	**2,304.43**	**2,304.43**	**0.17**	**0.00**	**2,307.88**

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					
2016	0.09	0.41	0.50	0.00	0.01	0.04	0.05	0.00	0.04	0.04	0.00	70.01	70.01	0.01	0.00	70.19
2017	1.88	9.65	10.89	0.02	0.30	0.64	0.94	0.01	0.64	0.64	0.00	1,959.60	1,959.60	0.14	0.00	1,962.55
2018	0.37	1.22	1.56	0.00	0.13	0.08	0.22	0.00	0.08	0.08	0.00	274.82	274.82	0.02	0.00	275.14
Total	**2.34**	**11.28**	**12.95**	**0.02**	**0.44**	**0.76**	**1.21**	**0.01**	**0.76**	**0.76**	**0.00**	**2,304.43**	**2,304.43**	**0.17**	**0.00**	**2,307.88**

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	21.55	0.28	25.20	0.01		0.00	3.26		0.00	3.26	306.79	389.63	696.42	0.29	0.03	711.49

Energy	0.03	0.28	0.17	0.00		0.00	0.02		0.00	0.02	0.00	1,436.05	1,436.05	0.05	0.02	1,443.73
Mobile	2.92	5.81	27.81	0.04	4.34	0.26	4.61	0.07	0.25	0.32	0.00	3,735.23	3,735.23	0.17	0.00	3,738.72
Waste						0.00	0.00		0.00	0.00	325.23	0.00	325.23	19.22	0.00	728.87
Water						0.00	0.00		0.00	0.00	0.00	227.19	227.19	0.83	0.02	251.85
Total	**24.50**	**6.37**	**53.18**	**0.05**	**4.34**	**0.26**	**7.89**	**0.07**	**0.25**	**3.60**	**632.02**	**5,788.10**	**6,420.12**	**20.56**	**0.07**	**6,874.66**

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	21.55	0.28	25.20	0.01		0.00	3.26		0.00	3.26	306.79	389.63	696.42	0.29	0.03	711.49
Energy	0.03	0.28	0.17	0.00		0.00	0.02		0.00	0.02	0.00	1,436.05	1,436.05	0.05	0.02	1,443.73
Mobile	2.92	5.81	27.81	0.04	4.34	0.26	4.61	0.07	0.25	0.32	0.00	3,735.23	3,735.23	0.17	0.00	3,738.72
Waste						0.00	0.00		0.00	0.00	325.23	0.00	325.23	19.22	0.00	728.87
Water						0.00	0.00		0.00	0.00	0.00	227.19	227.19	0.83	0.02	251.85
Total	**24.50**	**6.37**	**53.18**	**0.05**	**4.34**	**0.26**	**7.89**	**0.07**	**0.25**	**3.60**	**632.02**	**5,788.10**	**6,420.12**	**20.56**	**0.07**	**6,874.66**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

3.2 Demolition - 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					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.09	0.08	0.00		0.01	0.01		0.01	0.01	0.00	10.41	10.41	0.00	0.00	10.44
Total	**0.01**	**0.09**	**0.08**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**10.41**	**10.41**	**0.00**	**0.00**	**10.44**

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	0.56	0.56	0.00	0.00	0.56
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.00	0.00	0.50
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.06**	**1.06**	**0.00**	**0.00**	**1.06**

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					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.03	0.08	0.07	0.00		0.01	0.01		0.01	0.01	0.00	10.41	10.41	0.00	0.00	10.44
Total	**0.03**	**0.08**	**0.07**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**10.41**	**10.41**	**0.00**	**0.00**	**10.44**

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	0.56	0.56	0.00	0.00	0.56
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.00	0.00	0.50
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.06**	**1.06**	**0.00**	**0.00**	**1.06**

3.3 Site Preparation - 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					
Fugitive Dust					0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.09	0.54	0.43	0.00		0.04	0.04		0.04	0.04	0.00	55.83	55.83	0.01	0.00	55.98
Total	**0.09**	**0.54**	**0.43**	**0.00**	**0.01**	**0.04**	**0.05**	**0.00**	**0.04**	**0.04**	**0.00**	**55.83**	**55.83**	**0.01**	**0.00**	**55.98**

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	2.71	2.71	0.00	0.00	2.71
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.71**	**2.71**	**0.00**	**0.00**	**2.71**

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					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.05	0.32	0.40	0.00		0.03	0.03		0.03	0.03	0.00	55.83	55.83	0.01	0.00	55.98
Total	**0.05**	**0.32**	**0.40**	**0.00**	**0.00**	**0.03**	**0.03**	**0.00**	**0.03**	**0.03**	**0.00**	**55.83**	**55.83**	**0.01**	**0.00**	**55.98**

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	2.71	2.71	0.00	0.00	2.71
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.71**	**2.71**	**0.00**	**0.00**	**2.71**

3.3 Site Preparation - 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					

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.02	0.10	0.09	0.00		0.01	0.01		0.01	0.01	0.00	11.17	11.17	0.00	0.00	11.19
Total	**0.02**	**0.10**	**0.09**	**0.00**	**0.01**	**0.01**	**0.02**	**0.00**	**0.01**	**0.01**	**0.00**	**11.17**	**11.17**	**0.00**	**0.00**	**11.19**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.53	0.00	0.00	0.53
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.53**	**0.53**	**0.00**	**0.00**	**0.53**

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					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.06	0.08	0.00		0.01	0.01		0.01	0.01	0.00	11.17	11.17	0.00	0.00	11.19
Total	**0.01**	**0.06**	**0.08**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**11.17**	**11.17**	**0.00**	**0.00**	**11.19**

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.53	0.00	0.00	0.53
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.53**	**0.53**	**0.00**	**0.00**	**0.53**

3.4 Grading - 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					
Fugitive Dust					0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	1.29	9.75	5.54	0.01		0.43	0.43		0.43	0.43	0.00	1,375.25	1,375.25	0.10	0.00	1,377.45
Total	**1.29**	**9.75**	**5.54**	**0.01**	**0.01**	**0.43**	**0.44**	**0.00**	**0.43**	**0.43**	**0.00**	**1,375.25**	**1,375.25**	**0.10**	**0.00**	**1,377.45**

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	0.01	0.01	0.11	0.00	0.03	0.00	0.03	0.00	0.00	0.00	0.00	19.52	19.52	0.00	0.00	19.54
Total	**0.01**	**0.01**	**0.11**	**0.00**	**0.03**	**0.00**	**0.03**	**0.00**	**0.00**	**0.00**	**0.00**	**19.52**	**19.52**	**0.00**	**0.00**	**19.54**

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					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Off-Road	1.11	7.09	7.49	0.01		0.47	0.47		0.47	0.47	0.00	1,375.25	1,375.25	0.10	0.00	1,377.45
Total	**1.11**	**7.09**	**7.49**	**0.01**	**0.00**	**0.47**	**0.47**	**0.00**	**0.47**	**0.47**	**0.00**	**1,375.25**	**1,375.25**	**0.10**	**0.00**	**1,377.45**

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	0.01	0.01	0.11	0.00	0.03	0.00	0.03	0.00	0.00	0.00	0.00	19.52	19.52	0.00	0.00	19.54
Total	**0.01**	**0.01**	**0.11**	**0.00**	**0.03**	**0.00**	**0.03**	**0.00**	**0.00**	**0.00**	**0.00**	**19.52**	**19.52**	**0.00**	**0.00**	**19.54**

3.5 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	0.27	1.85	1.72	0.00		0.11	0.11		0.11	0.11	0.00	274.89	274.89	0.02	0.00	275.36
Total	**0.27**	**1.85**	**1.72**	**0.00**		**0.11**	**0.11**		**0.11**	**0.11**	**0.00**	**274.89**	**274.89**	**0.02**	**0.00**	**275.36**

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	0.05	0.57	0.36	0.00	0.04	0.02	0.06	0.00	0.02	0.02	0.00	112.76	112.76	0.00	0.00	112.81
Worker	0.09	0.10	0.96	0.00	0.23	0.01	0.24	0.00	0.01	0.01	0.00	165.47	165.47	0.01	0.00	165.66

Total	**0.14**	**0.67**	**1.32**	**0.00**	**0.27**	**0.03**	**0.30**	**0.00**	**0.03**	**0.03**	**0.00**	**278.23**	**278.23**	**0.01**	**0.00**	**278.47**

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	0.61	1.82	1.88	0.00		0.14	0.14		0.14	0.14	0.00	274.89	274.89	0.02	0.00	275.36
Total	**0.61**	**1.82**	**1.88**	**0.00**		**0.14**	**0.14**		**0.14**	**0.14**	**0.00**	**274.89**	**274.89**	**0.02**	**0.00**	**275.36**

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	0.05	0.57	0.36	0.00	0.04	0.02	0.06	0.00	0.02	0.02	0.00	112.76	112.76	0.00	0.00	112.81
Worker	0.09	0.10	0.96	0.00	0.23	0.01	0.24	0.00	0.01	0.01	0.00	165.47	165.47	0.01	0.00	165.66
Total	**0.14**	**0.67**	**1.32**	**0.00**	**0.27**	**0.03**	**0.30**	**0.00**	**0.03**	**0.03**	**0.00**	**278.23**	**278.23**	**0.01**	**0.00**	**278.47**

3.5 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	0.12	0.84	0.85	0.00		0.05	0.05		0.05	0.05	0.00	137.45	137.45	0.01	0.00	137.66
Total	**0.12**	**0.84**	**0.85**	**0.00**		**0.05**	**0.05**		**0.05**	**0.05**	**0.00**	**137.45**	**137.45**	**0.01**	**0.00**	**137.66**

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	0.02	0.27	0.17	0.00	0.02	0.01	0.03	0.00	0.01	0.01	0.00	56.44	56.44	0.00	0.00	56.46
Worker	0.04	0.04	0.44	0.00	0.12	0.00	0.12	0.00	0.00	0.01	0.00	80.94	80.94	0.00	0.00	81.02
Total	**0.06**	**0.31**	**0.61**	**0.00**	**0.14**	**0.01**	**0.15**	**0.00**	**0.01**	**0.02**	**0.00**	**137.38**	**137.38**	**0.00**	**0.00**	**137.48**

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	0.30	0.91	0.94	0.00		0.07	0.07		0.07	0.07	0.00	137.45	137.45	0.01	0.00	137.66
Total	**0.30**	**0.91**	**0.94**	**0.00**		**0.07**	**0.07**		**0.07**	**0.07**	**0.00**	**137.45**	**137.45**	**0.01**	**0.00**	**137.66**

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	0.02	0.27	0.17	0.00	0.02	0.01	0.03	0.00	0.01	0.01	0.00	56.44	56.44	0.00	0.00	56.46
Worker	0.04	0.04	0.44	0.00	0.12	0.00	0.12	0.00	0.00	0.01	0.00	80.94	80.94	0.00	0.00	81.02
Total	**0.06**	**0.31**	**0.61**	**0.00**	**0.14**	**0.01**	**0.15**	**0.00**	**0.01**	**0.02**	**0.00**	**137.38**	**137.38**	**0.00**	**0.00**	**137.48**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.92	5.81	27.81	0.04	4.34	0.26	4.61	0.07	0.25	0.32	0.00	3,735.23	3,735.23	0.17	0.00	3,738.72
Unmitigated	2.92	5.81	27.81	0.04	4.34	0.26	4.61	0.07	0.25	0.32	0.00	3,735.23	3,735.23	0.17	0.00	3,738.72
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	3.34	3.34	3.34	8,235	8,235
Congregate Care (Assisted Living)	813.78	653.40	724.68	2,879,632	2,879,632
Place of Worship	2,123.09	2,416.73	8536.62	5,212,526	5,212,526
Strip Mall	110.80	105.10	51.08	161,917	161,917
Total	3,051.00	3,178.57	9,315.72	8,262,310	8,262,310

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	14.70	6.60	6.60	33.00	48.00	19.00
Congregate Care (Assisted Living)	16.80	7.10	7.90	41.60	18.80	39.60
Place of Worship	14.70	6.60	6.60	0.00	95.00	5.00

Strip Mall	14.70	6.60	6.60	16.60	64.40	19.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	1,122.07	1,122.07	0.04	0.02	1,127.84
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	1,122.07	1,122.07	0.04	0.02	1,127.84
NaturalGas Mitigated	0.03	0.28	0.17	0.00		0.00	0.02		0.00	0.02	0.00	313.98	313.98	0.01	0.01	315.89
NaturalGas Unmitigated	0.03	0.28	0.17	0.00		0.00	0.02		0.00	0.02	0.00	313.98	313.98	0.01	0.01	315.89
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
Congregate Care (Assisted Living)	3.13035e+006	0.02	0.14	0.06	0.00		0.00	0.01		0.00	0.01	0.00	167.05	167.05	0.00	0.00	168.06
Place of Worship	2.74766e+006	0.01	0.13	0.11	0.00		0.00	0.01		0.00	0.01	0.00	146.63	146.63	0.00	0.00	147.52
Strip Mall	5725	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.31	0.31	0.00	0.00	0.31
Total		**0.03**	**0.27**	**0.17**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**	**0.00**	**313.99**	**313.99**	**0.00**	**0.00**	**315.89**

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
Congregate Care (Assisted Living)	3.13035e+006	0.02	0.14	0.06	0.00		0.00	0.01		0.00	0.01	0.00	167.05	167.05	0.00	0.00	168.06
Place of Worship	2.74766e+006	0.01	0.13	0.11	0.00		0.00	0.01		0.00	0.01	0.00	146.63	146.63	0.00	0.00	147.52
Strip Mall	5725	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.31	0.31	0.00	0.00	0.31
Total		**0.03**	**0.27**	**0.17**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**	**0.00**	**313.99**	**313.99**	**0.00**	**0.00**	**315.89**

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
Congregate Care (Assisted Living)	1.0357e+006					366.80	0.01	0.01	368.69
Place of Worship	2.09745e+006					742.83	0.03	0.01	746.66
Strip Mall	35100					12.43	0.00	0.00	12.50
Total						**1,122.06**	**0.04**	**0.02**	**1,127.85**

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
Congregate Care (Assisted Living)	1.0357e+006					366.80	0.01	0.01	368.69
Place of Worship	2.09745e+006					742.83	0.03	0.01	746.66

Strip Mall	35100					12.43	0.00	0.00	12.50
Total						**1,122.06**	**0.04**	**0.02**	**1,127.85**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	21.55	0.28	25.20	0.01		0.00	3.26		0.00	3.26	306.79	389.63	696.42	0.29	0.03	711.49
Unmitigated	21.55	0.28	25.20	0.01		0.00	3.26		0.00	3.26	306.79	389.63	696.42	0.29	0.03	711.49
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

<u>Unmitigated</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.74					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	2.08					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	18.66	0.25	22.96	0.01		0.00	3.24		0.00	3.24	306.79	385.99	692.78	0.29	0.03	707.77
Landscaping	0.07	0.03	2.25	0.00		0.00	0.01		0.00	0.01	0.00	3.64	3.64	0.00	0.00	3.72
Total	**21.55**	**0.28**	**25.21**	**0.01**		**0.00**	**3.25**		**0.00**	**3.25**	**306.79**	**389.63**	**696.42**	**0.29**	**0.03**	**711.49**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.74					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	2.08					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	18.66	0.25	22.96	0.01		0.00	3.24		0.00	3.24	306.79	385.99	692.78	0.29	0.03	707.77
Landscaping	0.07	0.03	2.25	0.00		0.00	0.01		0.00	0.01	0.00	3.64	3.64	0.00	0.00	3.72
Total	**21.55**	**0.28**	**25.21**	**0.01**		**0.00**	**3.25**		**0.00**	**3.25**	**306.79**	**389.63**	**696.42**	**0.29**	**0.03**	**711.49**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					227.19	0.83	0.02	251.85
Unmitigated					227.19	0.83	0.02	251.85
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 / 2.50211					9.85	0.00	0.00	9.90
Congregate Care (Assisted Living)	19.3507 / 12.1994					137.45	0.60	0.02	155.11
Place of Worship	7.29188 / 11.4052					78.58	0.23	0.01	85.37
Strip Mall	0.185181 / 0.113498					1.30	0.01	0.00	1.47
Total						**227.18**	**0.84**	**0.03**	**251.85**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
City Park	0 / 2.50211					9.85	0.00	0.00	9.90
Congregate Care (Assisted Living)	19.3507 / 12.1994					137.45	0.60	0.02	155.11
Place of Worship	7.29188 / 11.4052					78.58	0.23	0.01	85.37
Strip Mall	0.185181 / 0.113498					1.30	0.01	0.00	1.47
Total						**227.18**	**0.84**	**0.03**	**251.85**

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					325.23	19.22	0.00	728.87
Unmitigated					325.23	19.22	0.00	728.87
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	0.18					0.04	0.00	0.00	0.08
Congregate Care (Assisted Living)	271.01					55.01	3.25	0.00	123.29
Place of Worship	1328.39					269.65	15.94	0.00	604.31
Strip Mall	2.63					0.53	0.03	0.00	1.20
Total						**325.23**	**19.22**	**0.00**	**728.88**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
City Park	0.18					0.04	0.00	0.00	0.08
Congregate Care (Assisted Living)	271.01					55.01	3.25	0.00	123.29
Place of Worship	1328.39					269.65	15.94	0.00	604.31
Strip Mall	2.63					0.53	0.03	0.00	1.20
Total						**325.23**	**19.22**	**0.00**	**728.88**

9.0 Vegetation

Lilac Ranch - Phase 5 - Construction

San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Place of Worship	233.05	1000sqft
City Park	2.1	Acre
Congregate Care (Assisted Living)	297	Dwelling Unit
Strip Mall	2.5	1000sqft

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Utility Company**	San Diego Gas & Electric
Climate Zone	13	**Precipitation Freq (Days)**	40		

1.3 User Entered Comments

Project Characteristics -

Land Use - per specific plan summary table 01/2013 & from 2013 traffic study (ChenRyan)

Trips and VMT - per SANDAG

Grading - max grading

Architectural Coating - per SDAPCD, rule 67, ROG reductions

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

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					
2017	0.54	1.01	0.90	0.00	0.03	0.08	0.11	0.00	0.08	0.08	0.00	123.19	123.19	0.01	0.00	123.49
2018	0.40	0.14	0.21	0.00	0.02	0.01	0.03	0.00	0.01	0.01	0.00	32.87	32.87	0.00	0.00	32.92
Total	**0.94**	**1.15**	**1.11**	**0.00**	**0.05**	**0.09**	**0.14**	**0.00**	**0.09**	**0.09**	**0.00**	**156.06**	**156.06**	**0.01**	**0.00**	**156.41**

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					
2017	0.56	0.67	0.86	0.00	0.03	0.06	0.09	0.00	0.06	0.06	0.00	123.19	123.19	0.01	0.00	123.49
2018	0.47	0.17	0.21	0.00	0.02	0.01	0.03	0.00	0.01	0.01	0.00	32.87	32.87	0.00	0.00	32.92
Total	**1.03**	**0.84**	**1.07**	**0.00**	**0.05**	**0.07**	**0.12**	**0.00**	**0.07**	**0.07**	**0.00**	**156.06**	**156.06**	**0.01**	**0.00**	**156.41**

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	21.55	0.28	25.20	0.01		0.00	3.26		0.00	3.26	306.79	389.63	696.42	0.29	0.03	711.49
Energy	0.03	0.28	0.17	0.00		0.00	0.02		0.00	0.02	0.00	1,436.05	1,436.05	0.05	0.02	1,443.73
Mobile	2.92	5.81	27.81	0.04	4.34	0.26	4.61	0.07	0.25	0.32	0.00	3,735.23	3,735.23	0.17	0.00	3,738.72
Waste						0.00	0.00		0.00	0.00	325.23	0.00	325.23	19.22	0.00	728.87

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Water						0.00	0.00		0.00	0.00	0.00	227.19	227.19	0.83	0.02	251.85
Total	**24.50**	**6.37**	**53.18**	**0.05**	**4.34**	**0.26**	**7.89**	**0.07**	**0.25**	**3.60**	**632.02**	**5,788.10**	**6,420.12**	**20.56**	**0.07**	**6,874.66**

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	21.55	0.28	25.20	0.01		0.00	3.26		0.00	3.26	306.79	389.63	696.42	0.29	0.03	711.49
Energy	0.03	0.28	0.17	0.00		0.00	0.02		0.00	0.02	0.00	1,436.05	1,436.05	0.05	0.02	1,443.73
Mobile	2.92	5.81	27.81	0.04	4.34	0.26	4.61	0.07	0.25	0.32	0.00	3,735.23	3,735.23	0.17	0.00	3,738.72
Waste						0.00	0.00		0.00	0.00	325.23	0.00	325.23	19.22	0.00	728.87
Water						0.00	0.00		0.00	0.00	0.00	227.19	227.19	0.83	0.02	251.85
Total	**24.50**	**6.37**	**53.18**	**0.05**	**4.34**	**0.26**	**7.89**	**0.07**	**0.25**	**3.60**	**632.02**	**5,788.10**	**6,420.12**	**20.56**	**0.07**	**6,874.66**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

3.2 paving - 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	0.14	0.86	0.66	0.00		0.07	0.07		0.07	0.07	0.00	86.00	86.00	0.01	0.00	86.24
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.14**	**0.86**	**0.66**	**0.00**		**0.07**	**0.07**		**0.07**	**0.07**	**0.00**	**86.00**	**86.00**	**0.01**	**0.00**	**86.24**

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	3.97	3.97	0.00	0.00	3.97
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**3.97**	**3.97**	**0.00**	**0.00**	**3.97**

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	0.08	0.50	0.62	0.00		0.05	0.05		0.05	0.05	0.00	86.00	86.00	0.01	0.00	86.24
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.08**	**0.50**	**0.62**	**0.00**		**0.05**	**0.05**		**0.05**	**0.05**	**0.00**	**86.00**	**86.00**	**0.01**	**0.00**	**86.24**

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	3.97	3.97	0.00	0.00	3.97
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**3.97**	**3.97**	**0.00**	**0.00**	**3.97**

3.3 architectural coating - 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	0.37					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.02	0.14	0.12	0.00		0.01	0.01		0.01	0.01	0.00	16.58	16.58	0.00	0.00	16.61
Total	**0.39**	**0.14**	**0.12**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**16.58**	**16.58**	**0.00**	**0.00**	**16.61**

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	0.01	0.01	0.10	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00	16.65	16.65	0.00	0.00	16.67
Total	**0.01**	**0.01**	**0.10**	**0.00**	**0.02**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**16.65**	**16.65**	**0.00**	**0.00**	**16.67**

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	0.37					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.09	0.16	0.12	0.00		0.01	0.01		0.01	0.01	0.00	16.58	16.58	0.00	0.00	16.61
Total	**0.46**	**0.16**	**0.12**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**16.58**	**16.58**	**0.00**	**0.00**	**16.61**

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	0.01	0.01	0.10	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00	16.65	16.65	0.00	0.00	16.67
Total	**0.01**	**0.01**	**0.10**	**0.00**	**0.02**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**16.65**	**16.65**	**0.00**	**0.00**	**16.67**

3.3 architectural coating - 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	0.37					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.02	0.13	0.12	0.00		0.01	0.01		0.01	0.01	0.00	16.58	16.58	0.00	0.00	16.61
Total	**0.39**	**0.13**	**0.12**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**16.58**	**16.58**	**0.00**	**0.00**	**16.61**

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	0.01	0.01	0.09	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00	16.29	16.29	0.00	0.00	16.31
Total	**0.01**	**0.01**	**0.09**	**0.00**	**0.02**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**16.29**	**16.29**	**0.00**	**0.00**	**16.31**

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	0.37					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.09	0.16	0.12	0.00		0.01	0.01		0.01	0.01	0.00	16.58	16.58	0.00	0.00	16.61
Total	**0.46**	**0.16**	**0.12**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**16.58**	**16.58**	**0.00**	**0.00**	**16.61**

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	0.01	0.01	0.09	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00	16.29	16.29	0.00	0.00	16.31
Total	**0.01**	**0.01**	**0.09**	**0.00**	**0.02**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**16.29**	**16.29**	**0.00**	**0.00**	**16.31**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.92	5.81	27.81	0.04	4.34	0.26	4.61	0.07	0.25	0.32	0.00	3,735.23	3,735.23	0.17	0.00	3,738.72
Unmitigated	2.92	5.81	27.81	0.04	4.34	0.26	4.61	0.07	0.25	0.32	0.00	3,735.23	3,735.23	0.17	0.00	3,738.72
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	3.34	3.34	3.34	8,235	8,235
Congregate Care (Assisted Living)	813.78	653.40	724.68	2,879,632	2,879,632
Place of Worship	2,123.09	2,416.73	8536.62	5,212,526	5,212,526
Strip Mall	110.80	105.10	51.08	161,917	161,917
Total	3,051.00	3,178.57	9,315.72	8,262,310	8,262,310

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	14.70	6.60	6.60	33.00	48.00	19.00
Congregate Care (Assisted Living)	16.80	7.10	7.90	41.60	18.80	39.60
Place of Worship	14.70	6.60	6.60	0.00	95.00	5.00

Strip Mall	14.70	6.60	6.60	16.60	64.40	19.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	1,122.07	1,122.07	0.04	0.02	1,127.84
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	1,122.07	1,122.07	0.04	0.02	1,127.84
NaturalGas Mitigated	0.03	0.28	0.17	0.00		0.00	0.02		0.00	0.02	0.00	313.98	313.98	0.01	0.01	315.89
NaturalGas Unmitigated	0.03	0.28	0.17	0.00		0.00	0.02		0.00	0.02	0.00	313.98	313.98	0.01	0.01	315.89
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
Congregate Care (Assisted Living)	3.13035e+006	0.02	0.14	0.06	0.00		0.00	0.01		0.00	0.01	0.00	167.05	167.05	0.00	0.00	168.06
Place of Worship	2.74766e+006	0.01	0.13	0.11	0.00		0.00	0.01		0.00	0.01	0.00	146.63	146.63	0.00	0.00	147.52
Strip Mall	5725	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.31	0.31	0.00	0.00	0.31
Total		**0.03**	**0.27**	**0.17**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**	**0.00**	**313.99**	**313.99**	**0.00**	**0.00**	**315.89**

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
Congregate Care (Assisted Living)	3.13035e+006	0.02	0.14	0.06	0.00		0.00	0.01		0.00	0.01	0.00	167.05	167.05	0.00	0.00	168.06
Place of Worship	2.74766e+006	0.01	0.13	0.11	0.00		0.00	0.01		0.00	0.01	0.00	146.63	146.63	0.00	0.00	147.52
Strip Mall	5725	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.31	0.31	0.00	0.00	0.31
Total		**0.03**	**0.27**	**0.17**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**	**0.00**	**313.99**	**313.99**	**0.00**	**0.00**	**315.89**

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
Congregate Care (Assisted Living)	1.0357e+006					366.80	0.01	0.01	368.69
Place of Worship	2.09745e+006					742.83	0.03	0.01	746.66
Strip Mall	35100					12.43	0.00	0.00	12.50
Total						**1,122.06**	**0.04**	**0.02**	**1,127.85**

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
Congregate Care (Assisted Living)	1.0357e+006					366.80	0.01	0.01	368.69
Place of Worship	2.09745e+006					742.83	0.03	0.01	746.66

Strip Mall	35100					12.43	0.00	0.00	12.50
Total						**1,122.06**	**0.04**	**0.02**	**1,127.85**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	21.55	0.28	25.20	0.01		0.00	3.26		0.00	3.26	306.79	389.63	696.42	0.29	0.03	711.49
Unmitigated	21.55	0.28	25.20	0.01		0.00	3.26		0.00	3.26	306.79	389.63	696.42	0.29	0.03	711.49
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	0.74					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	2.08					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	18.66	0.25	22.96	0.01		0.00	3.24		0.00	3.24	306.79	385.99	692.78	0.29	0.03	707.77
Landscaping	0.07	0.03	2.25	0.00		0.00	0.01		0.00	0.01	0.00	3.64	3.64	0.00	0.00	3.72
Total	**21.55**	**0.28**	**25.21**	**0.01**		**0.00**	**3.25**		**0.00**	**3.25**	**306.79**	**389.63**	**696.42**	**0.29**	**0.03**	**711.49**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.74					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	2.08					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	18.66	0.25	22.96	0.01		0.00	3.24		0.00	3.24	306.79	385.99	692.78	0.29	0.03	707.77
Landscaping	0.07	0.03	2.25	0.00		0.00	0.01		0.00	0.01	0.00	3.64	3.64	0.00	0.00	3.72
Total	**21.55**	**0.28**	**25.21**	**0.01**		**0.00**	**3.25**		**0.00**	**3.25**	**306.79**	**389.63**	**696.42**	**0.29**	**0.03**	**711.49**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					227.19	0.83	0.02	251.85
Unmitigated					227.19	0.83	0.02	251.85
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 / 2.50211					9.85	0.00	0.00	9.90
Congregate Care (Assisted Living)	19.3507 / 12.1994					137.45	0.60	0.02	155.11
Place of Worship	7.29188 / 11.4052					78.58	0.23	0.01	85.37
Strip Mall	0.185181 / 0.113498					1.30	0.01	0.00	1.47
Total						**227.18**	**0.84**	**0.03**	**251.85**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
City Park	0 / 2.50211					9.85	0.00	0.00	9.90
Congregate Care (Assisted Living)	19.3507 / 12.1994					137.45	0.60	0.02	155.11
Place of Worship	7.29188 / 11.4052					78.58	0.23	0.01	85.37
Strip Mall	0.185181 / 0.113498					1.30	0.01	0.00	1.47
Total						**227.18**	**0.84**	**0.03**	**251.85**

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					325.23	19.22	0.00	728.87
Unmitigated					325.23	19.22	0.00	728.87
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	0.18					0.04	0.00	0.00	0.08
Congregate Care (Assisted Living)	271.01					55.01	3.25	0.00	123.29
Place of Worship	1328.39					269.65	15.94	0.00	604.31
Strip Mall	2.63					0.53	0.03	0.00	1.20
Total						**325.23**	**19.22**	**0.00**	**728.88**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
City Park	0.18					0.04	0.00	0.00	0.08
Congregate Care (Assisted Living)	271.01					55.01	3.25	0.00	123.29
Place of Worship	1328.39					269.65	15.94	0.00	604.31
Strip Mall	2.63					0.53	0.03	0.00	1.20
Total						**325.23**	**19.22**	**0.00**	**728.88**

9.0 Vegetation

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3) Road Construction Emissions Model Output – Off-Site Construction Emissions

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	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	
On-Site Emissions						
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	
Off-Road*	1,322.57	1,325.62	2,566.65	1,334.70	1,325.03	
Hauling	0.56	0.56	0.57	0.19	0.56	
Vendor	90.10	130.48	803.90	97.08	169.27	
Worker	148.74	277.78	1,136.57	275.56	306.91	
Paving	0.00	0.00	0.00	0.00	0.00	
Arch Coating	0.00	0.00	0.00	0.00	0.00	
Total On-Site Emissions	1,561.97	1,734.44	4,507.69	1,707.53	1,801.77	
Off-Site Emissions	29.00	0.00	0.00	0.00	0.00	
TOTAL EMISSIONS	1,590.97	1,734.44	4,507.69	1,707.53	1,801.77	**11,342.39**
Amortized Over 20 Years	79.55	86.72	225.38	85.38	90.09	**567.12**

*Off-Road emissions reduced by 33% due to outdated exhaust emission load factors

PHASE 1

Demolition 2014	
Fugitive Dust	0
Off-Road	11.83
Hauling	0.56
Vendor	0
Worker	0.59
Site Preparation 2014	
Fugitive Dust	0
Off-Road	67.21
Hauling	0
Vendor	0
Worker	3.41
Grading 2014	
Fugitive Dust	0
Off-Road	631.52
Hauling	0
Vendor	0
Worker	9.61
Grading 2015	
Fugitive Dust	0
Off-Road	734.77
Hauling	0
Vendor	0
Worker	10.93
Building Construction 2015	
Fugitive Dust	0
Off-Road	417.42
Hauling	0
Vendor	90.1
Worker	105.99
Paving 2015	
Off-Road	87.6
Paving	0
Hauling	0
Vendor	0
Worker	4.23
Architectural Coating 2015	
Arch Coating	0
Off-Road	33.5
Hauling	0
Vendor	0
Worker	13.98

PHASE 2

Demolition 2016	
Fugitive Dust	0
Off-Road	11.13
Hauling	0.56
Vendor	0
Worker	0.53
Site Preparation 2016	
Fugitive Dust	0
Off-Road	67.18
Hauling	0
Vendor	0
Worker	3.25
Grading 2016	
Fugitive Dust	0
Off-Road	1377.58
Hauling	0
Vendor	0
Worker	20
Building Construction 2016	
Fugitive Dust	0
Off-Road	137.7
Hauling	0
Vendor	43.46
Worker	74.75
Building Construction 2017	
Fugitive Dust	0
Off-Road	275.36
Hauling	0
Vendor	87.02
Worker	146.08
Paving 2016	
Off-Road	86.25
Paving	0
Hauling	0
Vendor	0
Worker	4.06
Architectural Coating 2016	
Arch Coating	0
Off-Road	0
Hauling	0
Vendor	0
Worker	0
Architectural Coating 2017	
Arch Coating	0
Off-Road	33.23
Hauling	0
Vendor	0
Worker	29.11

PHASE 3

Demolition 2017	
Fugitive Dust	0
Off-Road	10.43
Hauling	0.57
Vendor	0
Worker	0.49
Site Preparation 2017	
Fugitive Dust	0
Off-Road	67.17
Hauling	0
Vendor	0
Worker	3.18
Grading 2017	
Fugitive Dust	0
Off-Road	631.33
Hauling	0
Vendor	0
Worker	8.96
Grading 2018	
Fugitive Dust	0
Off-Road	746.06
Hauling	0
Vendor	0
Worker	10.35
Building Construction 2018	
Fugitive Dust	0
Off-Road	415.09
Hauling	0
Vendor	160.52
Worker	192.8
Building Construction 2019	
Fugitive Dust	0
Off-Road	552.68
Hauling	0
Vendor	213.99
Worker	251.5
Building Construction 2020	
Fugitive Dust	0
Off-Road	554.72
Hauling	0
Vendor	215.01
Worker	247.66
Building Construction 2021	
Fugitive Dust	0
Off-Road	552.54
Hauling	0
Vendor	214.38
Worker	244.64
Paving 2018	
Off-Road	86.22
Paving	0
Hauling	0
Vendor	0

PHASE 4

Demolition 2015	
Fugitive Dust	0
Off-Road	11.83
Hauling	0.19
Vendor	0
Worker	0.58
Site Preparation 2015	
Fugitive Dust	0
Off-Road	66.07
Hauling	0
Vendor	0
Worker	3.27
Grading 2015	
Fugitive Dust	0
Off-Road	1389.18
Hauling	0
Vendor	0
Worker	20.67
Building Construction 2016	
Fugitive Dust	0
Off-Road	415.23
Hauling	0
Vendor	97.08
Worker	218.05
Paving 2016	
Off-Road	86.25
Paving	0
Hauling	0
Vendor	0
Worker	4.06
Architectural Coating 2016	
Arch Coating	0
Off-Road	33.49
Hauling	0
Vendor	0
Worker	28.93

PHASE 5

Demolition 2016	
Fugitive Dust	0
Off-Road	10.44
Hauling	0.56
Vendor	0
Worker	0.5
Site Preparation 2016	
Fugitive Dust	0
Off-Road	55.98
Hauling	0
Vendor	0
Worker	2.71
Site Preparation 2017	
Fugitive Dust	0
Off-Road	11.19
Hauling	0
Vendor	0
Worker	0.53
Grading 2017	
Fugitive Dust	0
Off-Road	1377.45
Hauling	0
Vendor	0
Worker	19.54
Building Construction 2017	
Fugitive Dust	0
Off-Road	275.36
Hauling	0
Vendor	112.81
Worker	165.66
Building Construction 2018	
Fugitive Dust	0
Off-Road	137.66
Hauling	0
Vendor	56.46
Worker	81.02
Paving 2017	
Off-Road	86.24
Paving	0
Hauling	0
Vendor	0
Worker	3.97
Architectural Coating 2017	
Arch Coating	0
Off-Road	16.61
Hauling	0
Vendor	0
Worker	16.67
Architectural Coating 2018	
Arch Coating	0
Off-Road	16.61
Hauling	0
Vendor	0

		Worker	3.88
		Architectural Coating 2018	
		Arch Coating	0
		Off-Road	33.47
		Hauling	0
		Vendor	0
		Worker	25.56
		Architectural Coating 2019	
		Arch Coating	0
		Off-Road	66.68
		Hauling	0
		Vendor	0
		Worker	49.89
		Architectural Coating 2020	
		Arch Coating	0
		Off-Road	66.92
		Hauling	0
		Vendor	0
		Worker	49.13
		Architectural Coating 2021	
		Arch Coating	0
		Off-Road	66.66
		Hauling	0
		Vendor	0
		Worker	48.53

Worker	16.31

TOTAL		TOTAL		TOTAL		TOTAL		TOTAL	
Fugitive Dust	0	Fugitive Dust	0	Fugitive Dust	0	Fugitive Dust	0	Fugitive Dust	0
Off-Road	1983.9	Off-Road	1988.43	Off-Road	3850	Off-Road	2002.05	Off-Road	1987.54
Hauling	0.56	Hauling	0.56	Hauling	0.57	Hauling	0.19	Hauling	0.56
Vendor	90.1	Vendor	130.48	Vendor	803.9	Vendor	97.08	Vendor	169.27
Worker	148.74	Worker	277.78	Worker	1136.6	Worker	275.56	Worker	306.91
Paving	0	Paving	0	Paving	0	Paving	0	Paving	0
Arch Coating	0	Arch Coating	0	Arch Coating	0	Arch Coating	0	Arch Coating	0
TOTAL	2223.3	TOTAL	2397.25	TOTAL	5791	TOTAL	2374.88	TOTAL	2464.28

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4) Project with Design Features GHG missions Calculations

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6153: Lilac Ranch - operational - GHG

San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Office Park	28.5	1000sqft
Elementary School	568	Student
Junior High School	132	Student
User Defined Educational	10.7	User Defined Unit
User Defined Industrial	2.4	User Defined Unit
User Defined Industrial	0.6	User Defined Unit
City Park	23.8	Acre
Hotel	50	Room
User Defined Recreational	40	User Defined Unit
Apartments Low Rise	468	Dwelling Unit
Condo/Townhouse	375	Dwelling Unit
Congregate Care (Assisted Living)	200	Dwelling Unit
Single Family Housing	903	Dwelling Unit
Strip Mall	61.5	1000sqft

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Utility Company**	San Diego Gas & Electric
Climate Zone	13	**Precipitation Freq (Days)**	40		

1.3 User Entered Comments

Project Characteristics -

Land Use - per client

Off-road Equipment -

Woodstoves - defaults and no wood stoves assumed

Area Coating - per client

Energy Use - 10% reduction, energy star; WRF accounted for in next slide

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Construction Phase -

Water And Wastewater - From WRF report, gallons / year.

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	3.13	14.44	27.54	0.04	3.36	0.73	4.09	0.06	0.70	0.75	0.00	3,869.81	3,869.81	0.27	0.00	3,875.53
2012	2.89	13.43	25.57	0.04	3.38	0.68	4.05	0.06	0.65	0.71	0.00	3,832.76	3,832.76	0.25	0.00	3,838.06
2013	2.67	12.43	23.72	0.04	3.38	0.63	4.00	0.06	0.60	0.66	0.00	3,782.57	3,782.57	0.23	0.00	3,787.47
2014	2.47	11.51	22.00	0.04	3.38	0.58	3.95	0.06	0.55	0.61	0.00	3,733.57	3,733.57	0.22	0.00	3,738.11
2015	2.29	10.60	20.48	0.04	3.38	0.53	3.91	0.06	0.51	0.57	0.00	3,681.45	3,681.45	0.20	0.00	3,685.64
2016	2.14	9.80	19.13	0.04	3.38	0.49	3.87	0.06	0.47	0.53	0.00	3,627.47	3,627.47	0.19	0.00	3,631.37
2017	1.98	9.05	17.83	0.04	3.36	0.46	3.82	0.06	0.44	0.49	0.00	3,563.89	3,563.89	0.17	0.00	3,567.48
2018	1.86	8.43	16.80	0.04	3.38	0.42	3.80	0.06	0.40	0.46	0.00	3,531.06	3,531.06	0.16	0.00	3,534.41
2019	1.75	7.86	15.89	0.04	3.38	0.39	3.77	0.06	0.38	0.43	0.00	3,488.74	3,488.74	0.15	0.00	3,491.88
2020	1.66	7.40	15.19	0.04	3.39	0.37	3.76	0.06	0.35	0.41	0.00	3,463.13	3,463.13	0.14	0.00	3,466.09
2021	1.58	6.92	14.59	0.04	3.38	0.35	3.73	0.06	0.33	0.39	0.00	3,433.77	3,433.77	0.13	0.00	3,436.58
2022	1.51	6.52	13.92	0.04	3.36	0.33	3.69	0.06	0.31	0.37	0.00	3,388.12	3,388.12	0.13	0.00	3,390.78
2023	1.44	6.19	13.36	0.04	3.36	0.31	3.68	0.06	0.29	0.35	0.00	3,358.37	3,358.37	0.12	0.00	3,360.91
2024	1.40	5.95	12.96	0.04	3.39	0.30	3.69	0.06	0.28	0.34	0.00	3,357.16	3,357.16	0.12	0.00	3,359.61
2025	1.35	5.69	12.50	0.04	3.38	0.29	3.67	0.06	0.27	0.33	0.00	3,320.11	3,320.11	0.11	0.00	3,322.43
2026	1.35	5.69	12.50	0.04	3.38	0.29	3.67	0.06	0.27	0.33	0.00	3,320.11	3,320.11	0.11	0.00	3,322.43
2027	1.35	5.69	12.50	0.04	3.38	0.29	3.67	0.06	0.27	0.33	0.00	3,320.11	3,320.11	0.11	0.00	3,322.43
2028	1.34	5.67	12.45	0.04	3.36	0.29	3.65	0.06	0.27	0.33	0.00	3,307.39	3,307.39	0.11	0.00	3,309.70

2029	1.35	5.69	12.50	0.04	3.38	0.29	3.67	0.06	0.27	0.33	0.00	3,320.11	3,320.11	0.11	0.00	3,322.43
2030	1.17	4.94	11.07	0.04	3.38	0.26	3.63	0.06	0.24	0.30	0.00	3,233.97	3,233.97	0.10	0.00	3,235.98
2031	1.17	4.94	11.07	0.04	3.38	0.26	3.63	0.06	0.24	0.30	0.00	3,233.97	3,233.97	0.10	0.00	3,235.98
2032	1.17	4.96	11.12	0.04	3.39	0.26	3.65	0.06	0.24	0.30	0.00	3,246.36	3,246.36	0.10	0.00	3,248.38
2033	1.16	4.92	11.03	0.04	3.36	0.26	3.62	0.06	0.24	0.29	0.00	3,221.58	3,221.58	0.10	0.00	3,223.58
2034	0.89	3.79	8.49	0.03	2.59	0.20	2.79	0.04	0.18	0.23	0.00	2,478.14	2,478.14	0.07	0.00	2,479.68
Total	**41.07**	**182.51**	**374.21**	**0.95**	**80.24**	**9.26**	**89.46**	**1.42**	**8.75**	**10.14**	**0.00**	**82,113.72**	**82,113.72**	**3.50**	**0.00**	**82,186.94**

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	3.13	14.44	27.54	0.04	1.79	0.73	2.52	0.06	0.70	0.75	0.00	3,869.81	3,869.81	0.27	0.00	3,875.53
2012	2.89	13.43	25.57	0.04	1.80	0.68	2.48	0.06	0.65	0.71	0.00	3,832.76	3,832.76	0.25	0.00	3,838.06
2013	2.67	12.43	23.72	0.04	1.80	0.63	2.43	0.06	0.60	0.66	0.00	3,782.57	3,782.57	0.23	0.00	3,787.47
2014	2.47	11.51	22.00	0.04	1.80	0.58	2.38	0.06	0.55	0.61	0.00	3,733.57	3,733.57	0.22	0.00	3,738.11
2015	2.29	10.60	20.48	0.04	1.80	0.53	2.33	0.06	0.51	0.57	0.00	3,681.45	3,681.45	0.20	0.00	3,685.64
2016	2.14	9.80	19.13	0.04	1.80	0.49	2.29	0.06	0.47	0.53	0.00	3,627.47	3,627.47	0.19	0.00	3,631.37
2017	1.98	9.05	17.83	0.04	1.79	0.46	2.25	0.06	0.44	0.49	0.00	3,563.89	3,563.89	0.17	0.00	3,567.48
2018	1.86	8.43	16.80	0.04	1.80	0.42	2.22	0.06	0.40	0.46	0.00	3,531.06	3,531.06	0.16	0.00	3,534.41
2019	1.75	7.86	15.89	0.04	1.80	0.39	2.19	0.06	0.38	0.43	0.00	3,488.74	3,488.74	0.15	0.00	3,491.88
2020	1.66	7.40	15.19	0.04	1.81	0.37	2.18	0.06	0.35	0.41	0.00	3,463.13	3,463.13	0.14	0.00	3,466.09
2021	1.58	6.92	14.59	0.04	1.80	0.35	2.15	0.06	0.33	0.39	0.00	3,433.77	3,433.77	0.13	0.00	3,436.58
2022	1.51	6.52	13.92	0.04	1.79	0.33	2.12	0.06	0.31	0.37	0.00	3,388.12	3,388.12	0.13	0.00	3,390.78
2023	1.44	6.19	13.36	0.04	1.79	0.31	2.10	0.06	0.29	0.35	0.00	3,358.37	3,358.37	0.12	0.00	3,360.91

2024	1.40	5.95	12.96	0.04	1.81	0.30	2.11	0.06	0.28	0.34	0.00	3,357.16	3,357.16	0.12	0.00	3,359.61
2025	1.35	5.69	12.50	0.04	1.80	0.29	2.09	0.06	0.27	0.33	0.00	3,320.11	3,320.11	0.11	0.00	3,322.43
2026	1.35	5.69	12.50	0.04	1.80	0.29	2.09	0.06	0.27	0.33	0.00	3,320.11	3,320.11	0.11	0.00	3,322.43
2027	1.35	5.69	12.50	0.04	1.80	0.29	2.09	0.06	0.27	0.33	0.00	3,320.11	3,320.11	0.11	0.00	3,322.43
2028	1.34	5.67	12.45	0.04	1.79	0.29	2.08	0.06	0.27	0.33	0.00	3,307.39	3,307.39	0.11	0.00	3,309.70
2029	1.35	5.69	12.50	0.04	1.80	0.29	2.09	0.06	0.27	0.33	0.00	3,320.11	3,320.11	0.11	0.00	3,322.43
2030	1.17	4.94	11.07	0.04	1.80	0.26	2.06	0.06	0.24	0.30	0.00	3,233.97	3,233.97	0.10	0.00	3,235.98
2031	1.17	4.94	11.07	0.04	1.80	0.26	2.06	0.06	0.24	0.30	0.00	3,233.97	3,233.97	0.10	0.00	3,235.98
2032	1.17	4.96	11.12	0.04	1.81	0.26	2.07	0.06	0.24	0.30	0.00	3,246.36	3,246.36	0.10	0.00	3,248.38
2033	1.16	4.92	11.03	0.04	1.79	0.26	2.05	0.06	0.24	0.29	0.00	3,221.58	3,221.58	0.10	0.00	3,223.58
2034	0.89	3.79	8.49	0.03	1.38	0.20	1.58	0.04	0.18	0.23	0.00	2,478.14	2,478.14	0.07	0.00	2,479.68
Total	**41.07**	**182.51**	**374.21**	**0.95**	**42.75**	**9.26**	**52.01**	**1.42**	**8.75**	**10.14**	**0.00**	**82,113.72**	**82,113.72**	**3.50**	**0.00**	**82,186.94**

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	136.56	1.53	147.08	0.00		0.00	18.39		0.00	18.39	1,616.78	2,552.94	4,169.71	0.07	0.19	4,229.82
Energy	0.32	2.73	1.28	0.02		0.00	0.22		0.00	0.22	0.00	7,565.29	7,565.29	0.22	0.12	7,607.18
Mobile	15.43	30.79	144.07	0.32	32.58	1.77	34.35	0.52	1.71	2.23	0.00	24,154.82	24,154.82	1.07	0.00	24,177.36
Waste						0.00	0.00		0.00	0.00	381.13	0.00	381.13	22.52	0.00	854.14
Water						0.00	0.00		0.00	0.00	0.00	1,538.78	1,538.78	7.02	0.19	1,746.36
Total	**152.31**	**35.05**	**292.43**	**0.34**	**32.58**	**1.77**	**52.96**	**0.52**	**1.71**	**20.84**	**1,997.91**	**35,811.83**	**37,809.73**	**30.90**	**0.50**	**38,614.86**

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	15.72	0.17	14.68	0.00		0.00	0.37		0.00	0.37	0.00	4,162.34	4,162.34	0.10	0.08	4,188.01
Energy	0.22	1.91	0.90	0.01		0.00	0.15		0.00	0.15	0.00	6,116.70	6,116.70	0.19	0.10	6,150.24
Mobile	15.16	30.19	141.22	0.31	31.77	1.73	33.50	0.51	1.67	2.17	0.00	23,570.67	23,570.67	1.05	0.00	23,592.70
Waste						0.00	0.00		0.00	0.00	304.91	0.00	304.91	18.02	0.00	683.31
Water						0.00	0.00		0.00	0.00	0.00	1,231.03	1,231.03	5.61	0.16	1,397.09
Total	**31.10**	**32.27**	**156.80**	**0.32**	**31.77**	**1.73**	**34.02**	**0.51**	**1.67**	**2.69**	**304.91**	**35,080.74**	**35,385.65**	**24.97**	**0.34**	**36,011.35**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Clean Paved Roads

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	0.79	5.23	3.12	0.01		0.36	0.36		0.36	0.36	0.00	476.40	476.40	0.06	0.00	477.75
Total	**0.79**	**5.23**	**3.12**	**0.01**		**0.36**	**0.36**		**0.36**	**0.36**	**0.00**	**476.40**	**476.40**	**0.06**	**0.00**	**477.75**

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	0.67	7.17	4.73	0.01	0.30	0.25	0.54	0.01	0.23	0.23	0.00	903.45	903.45	0.03	0.00	904.08
Worker	1.67	2.04	19.69	0.03	3.07	0.12	3.19	0.05	0.11	0.16	0.00	2,489.97	2,489.97	0.18	0.00	2,493.70
Total	**2.34**	**9.21**	**24.42**	**0.04**	**3.37**	**0.37**	**3.73**	**0.06**	**0.34**	**0.39**	**0.00**	**3,393.42**	**3,393.42**	**0.21**	**0.00**	**3,397.78**

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	0.79	5.23	3.12	0.01		0.36	0.36		0.36	0.36	0.00	476.40	476.40	0.06	0.00	477.75
Total	**0.79**	**5.23**	**3.12**	**0.01**		**0.36**	**0.36**		**0.36**	**0.36**	**0.00**	**476.40**	**476.40**	**0.06**	**0.00**	**477.75**

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	0.67	7.17	4.73	0.01	0.16	0.25	0.41	0.01	0.23	0.23	0.00	903.45	903.45	0.03	0.00	904.08
Worker	1.67	2.04	19.69	0.03	1.63	0.12	1.75	0.05	0.11	0.16	0.00	2,489.97	2,489.97	0.18	0.00	2,493.70
Total	**2.34**	**9.21**	**24.42**	**0.04**	**1.79**	**0.37**	**2.16**	**0.06**	**0.34**	**0.39**	**0.00**	**3,393.42**	**3,393.42**	**0.21**	**0.00**	**3,397.78**

3.2 Building - 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	0.73	4.87	3.10	0.01		0.33	0.33		0.33	0.33	0.00	478.23	478.23	0.06	0.00	479.48
Total	**0.73**	**4.87**	**3.10**	**0.01**		**0.33**	**0.33**		**0.33**	**0.33**	**0.00**	**478.23**	**478.23**	**0.06**	**0.00**	**479.48**

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	0.62	6.68	4.39	0.01	0.30	0.23	0.52	0.01	0.21	0.22	0.00	908.60	908.60	0.03	0.00	909.18
Worker	1.54	1.88	18.09	0.03	3.08	0.12	3.20	0.05	0.11	0.16	0.00	2,445.94	2,445.94	0.16	0.00	2,449.39
Total	**2.16**	**8.56**	**22.48**	**0.04**	**3.38**	**0.35**	**3.72**	**0.06**	**0.32**	**0.38**	**0.00**	**3,354.54**	**3,354.54**	**0.19**	**0.00**	**3,358.57**

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	0.73	4.87	3.10	0.01		0.33	0.33		0.33	0.33	0.00	478.23	478.23	0.06	0.00	479.48
Total	**0.73**	**4.87**	**3.10**	**0.01**		**0.33**	**0.33**		**0.33**	**0.33**	**0.00**	**478.23**	**478.23**	**0.06**	**0.00**	**479.48**

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	0.62	6.68	4.39	0.01	0.16	0.23	0.39	0.01	0.21	0.22	0.00	908.60	908.60	0.03	0.00	909.18
Worker	1.54	1.88	18.09	0.03	1.64	0.12	1.75	0.05	0.11	0.16	0.00	2,445.94	2,445.94	0.16	0.00	2,449.39
Total	**2.16**	**8.56**	**22.48**	**0.04**	**1.80**	**0.35**	**2.14**	**0.06**	**0.32**	**0.38**	**0.00**	**3,354.54**	**3,354.54**	**0.19**	**0.00**	**3,358.57**

3.2 Building - 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	0.67	4.52	3.06	0.01		0.30	0.30		0.30	0.30	0.00	478.23	478.23	0.05	0.00	479.38
Total	**0.67**	**4.52**	**3.06**	**0.01**		**0.30**	**0.30**		**0.30**	**0.30**	**0.00**	**478.23**	**478.23**	**0.05**	**0.00**	**479.38**

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	0.57	6.19	4.08	0.01	0.30	0.21	0.51	0.01	0.19	0.20	0.00	910.17	910.17	0.03	0.00	910.71
Worker	1.43	1.72	16.59	0.03	3.08	0.12	3.20	0.05	0.11	0.16	0.00	2,394.18	2,394.18	0.15	0.00	2,397.39
Total	**2.00**	**7.91**	**20.67**	**0.04**	**3.38**	**0.33**	**3.71**	**0.06**	**0.30**	**0.36**	**0.00**	**3,304.35**	**3,304.35**	**0.18**	**0.00**	**3,308.10**

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	0.67	4.52	3.06	0.01		0.30	0.30		0.30	0.30	0.00	478.23	478.23	0.05	0.00	479.38
Total	**0.67**	**4.52**	**3.06**	**0.01**		**0.30**	**0.30**		**0.30**	**0.30**	**0.00**	**478.23**	**478.23**	**0.05**	**0.00**	**479.38**

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	0.57	6.19	4.08	0.01	0.16	0.21	0.37	0.01	0.19	0.20	0.00	910.17	910.17	0.03	0.00	910.71
Worker	1.43	1.72	16.59	0.03	1.64	0.12	1.76	0.05	0.11	0.16	0.00	2,394.18	2,394.18	0.15	0.00	2,397.39
Total	**2.00**	**7.91**	**20.67**	**0.04**	**1.80**	**0.33**	**2.13**	**0.06**	**0.30**	**0.36**	**0.00**	**3,304.35**	**3,304.35**	**0.18**	**0.00**	**3,308.10**

3.2 Building - 2014

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Off-Road	0.62	4.18	3.03	0.01		0.26	0.26		0.26	0.26	0.00	478.23	478.23	0.05	0.00	479.28
Total	**0.62**	**4.18**	**3.03**	**0.01**		**0.26**	**0.26**		**0.26**	**0.26**	**0.00**	**478.23**	**478.23**	**0.05**	**0.00**	**479.28**

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	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	0.53	5.74	3.78	0.01	0.30	0.19	0.49	0.01	0.18	0.19	0.00	911.70	911.70	0.02	0.00	912.20
Worker	1.32	1.58	15.20	0.03	3.08	0.12	3.20	0.05	0.11	0.16	0.00	2,343.64	2,343.64	0.14	0.00	2,346.63
Total	**1.85**	**7.32**	**18.98**	**0.04**	**3.38**	**0.31**	**3.69**	**0.06**	**0.29**	**0.35**	**0.00**	**3,255.34**	**3,255.34**	**0.16**	**0.00**	**3,258.83**

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Off-Road	0.62	4.18	3.03	0.01		0.26	0.26		0.26	0.26	0.00	478.23	478.23	0.05	0.00	479.28
Total	**0.62**	**4.18**	**3.03**	**0.01**		**0.26**	**0.26**		**0.26**	**0.26**	**0.00**	**478.23**	**478.23**	**0.05**	**0.00**	**479.28**

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	0.53	5.74	3.78	0.01	0.16	0.19	0.36	0.01	0.18	0.19	0.00	911.70	911.70	0.02	0.00	912.20
Worker	1.32	1.58	15.20	0.03	1.64	0.12	1.76	0.05	0.11	0.16	0.00	2,343.64	2,343.64	0.14	0.00	2,346.63
Total	**1.85**	**7.32**	**18.98**	**0.04**	**1.80**	**0.31**	**2.12**	**0.06**	**0.29**	**0.35**	**0.00**	**3,255.34**	**3,255.34**	**0.16**	**0.00**	**3,258.83**

3.2 Building - 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	0.57	3.80	3.00	0.01		0.23	0.23		0.23	0.23	0.00	478.23	478.23	0.05	0.00	479.20
Total	**0.57**	**3.80**	**3.00**	**0.01**		**0.23**	**0.23**		**0.23**	**0.23**	**0.00**	**478.23**	**478.23**	**0.05**	**0.00**	**479.20**

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	0.49	5.35	3.50	0.01	0.30	0.18	0.48	0.01	0.16	0.17	0.00	913.07	913.07	0.02	0.00	913.53
Worker	1.24	1.45	13.98	0.03	3.08	0.12	3.20	0.05	0.11	0.16	0.00	2,290.16	2,290.16	0.13	0.00	2,292.92
Total	**1.73**	**6.80**	**17.48**	**0.04**	**3.38**	**0.30**	**3.68**	**0.06**	**0.27**	**0.33**	**0.00**	**3,203.23**	**3,203.23**	**0.15**	**0.00**	**3,206.45**

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	0.57	3.80	3.00	0.01		0.23	0.23		0.23	0.23	0.00	478.23	478.23	0.05	0.00	479.20
Total	**0.57**	**3.80**	**3.00**	**0.01**		**0.23**	**0.23**		**0.23**	**0.23**	**0.00**	**478.23**	**478.23**	**0.05**	**0.00**	**479.20**

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	0.49	5.35	3.50	0.01	0.16	0.18	0.34	0.01	0.16	0.17	0.00	913.07	913.07	0.02	0.00	913.53
Worker	1.24	1.45	13.98	0.03	1.64	0.12	1.76	0.05	0.11	0.16	0.00	2,290.16	2,290.16	0.13	0.00	2,292.92
Total	**1.73**	**6.80**	**17.48**	**0.04**	**1.80**	**0.30**	**2.10**	**0.06**	**0.27**	**0.33**	**0.00**	**3,203.23**	**3,203.23**	**0.15**	**0.00**	**3,206.45**

3.2 Building - 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	0.52	3.46	2.97	0.01		0.21	0.21		0.21	0.21	0.00	478.23	478.23	0.04	0.00	479.11
Total	**0.52**	**3.46**	**2.97**	**0.01**		**0.21**	**0.21**		**0.21**	**0.21**	**0.00**	**478.23**	**478.23**	**0.04**	**0.00**	**479.11**

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	0.46	5.01	3.27	0.01	0.30	0.17	0.46	0.01	0.15	0.16	0.00	914.37	914.37	0.02	0.00	914.80
Worker	1.16	1.33	12.89	0.03	3.08	0.12	3.20	0.05	0.11	0.16	0.00	2,234.87	2,234.87	0.12	0.00	2,237.45
Total	**1.62**	**6.34**	**16.16**	**0.04**	**3.38**	**0.29**	**3.66**	**0.06**	**0.26**	**0.32**	**0.00**	**3,149.24**	**3,149.24**	**0.14**	**0.00**	**3,152.25**

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	3.46	2.97	0.01		0.21	0.21		0.21	0.21	0.00	478.23	478.23	0.04	0.00	479.11
Total	**0.52**	**3.46**	**2.97**	**0.01**		**0.21**	**0.21**		**0.21**	**0.21**	**0.00**	**478.23**	**478.23**	**0.04**	**0.00**	**479.11**

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	0.46	5.01	3.27	0.01	0.16	0.17	0.33	0.01	0.15	0.16	0.00	914.37	914.37	0.02	0.00	914.80
Worker	1.16	1.33	12.89	0.03	1.64	0.12	1.76	0.05	0.11	0.16	0.00	2,234.87	2,234.87	0.12	0.00	2,237.45
Total	**1.62**	**6.34**	**16.16**	**0.04**	**1.80**	**0.29**	**2.09**	**0.06**	**0.26**	**0.32**	**0.00**	**3,149.24**	**3,149.24**	**0.14**	**0.00**	**3,152.25**

3.2 Building - 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	0.48	3.13	2.94	0.01		0.18	0.18		0.18	0.18	0.00	476.40	476.40	0.04	0.00	477.20
Total	**0.48**	**3.13**	**2.94**	**0.01**		**0.18**	**0.18**		**0.18**	**0.18**	**0.00**	**476.40**	**476.40**	**0.04**	**0.00**	**477.20**

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	0.43	4.70	3.06	0.01	0.30	0.16	0.45	0.01	0.14	0.15	0.00	912.03	912.03	0.02	0.00	912.43
Worker	1.08	1.23	11.83	0.03	3.07	0.12	3.19	0.05	0.11	0.16	0.00	2,175.46	2,175.46	0.11	0.00	2,177.85
Total	**1.51**	**5.93**	**14.89**	**0.04**	**3.37**	**0.28**	**3.64**	**0.06**	**0.25**	**0.31**	**0.00**	**3,087.49**	**3,087.49**	**0.13**	**0.00**	**3,090.28**

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	0.48	3.13	2.94	0.01		0.18	0.18		0.18	0.18	0.00	476.40	476.40	0.04	0.00	477.20
Total	**0.48**	**3.13**	**2.94**	**0.01**		**0.18**	**0.18**		**0.18**	**0.18**	**0.00**	**476.40**	**476.40**	**0.04**	**0.00**	**477.20**

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	0.43	4.70	3.06	0.01	0.16	0.16	0.32	0.01	0.14	0.15	0.00	912.03	912.03	0.02	0.00	912.43
Worker	1.08	1.23	11.83	0.03	1.63	0.12	1.75	0.05	0.11	0.16	0.00	2,175.46	2,175.46	0.11	0.00	2,177.85
Total	**1.51**	**5.93**	**14.89**	**0.04**	**1.79**	**0.28**	**2.07**	**0.06**	**0.25**	**0.31**	**0.00**	**3,087.49**	**3,087.49**	**0.13**	**0.00**	**3,090.28**

3.2 Building - 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	0.44	2.84	2.93	0.01		0.16	0.16		0.16	0.16	0.00	478.23	478.23	0.04	0.00	478.97
Total	**0.44**	**2.84**	**2.93**	**0.01**		**0.16**	**0.16**		**0.16**	**0.16**	**0.00**	**478.23**	**478.23**	**0.04**	**0.00**	**478.97**

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	4.46	2.90	0.01	0.30	0.15	0.44	0.01	0.14	0.14	0.00	916.58	916.58	0.02	0.00	916.96
Worker	1.02	1.13	10.96	0.03	3.08	0.12	3.20	0.05	0.11	0.16	0.00	2,136.24	2,136.24	0.11	0.00	2,138.49
Total	**1.42**	**5.59**	**13.86**	**0.04**	**3.38**	**0.27**	**3.64**	**0.06**	**0.25**	**0.30**	**0.00**	**3,052.82**	**3,052.82**	**0.13**	**0.00**	**3,055.45**

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	0.44	2.84	2.93	0.01		0.16	0.16		0.16	0.16	0.00	478.23	478.23	0.04	0.00	478.97
Total	**0.44**	**2.84**	**2.93**	**0.01**		**0.16**	**0.16**		**0.16**	**0.16**	**0.00**	**478.23**	**478.23**	**0.04**	**0.00**	**478.97**

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	4.46	2.90	0.01	0.16	0.15	0.31	0.01	0.14	0.14	0.00	916.58	916.58	0.02	0.00	916.96
Worker	1.02	1.13	10.96	0.03	1.64	0.12	1.76	0.05	0.11	0.16	0.00	2,136.24	2,136.24	0.11	0.00	2,138.49
Total	**1.42**	**5.59**	**13.86**	**0.04**	**1.80**	**0.27**	**2.07**	**0.06**	**0.25**	**0.30**	**0.00**	**3,052.82**	**3,052.82**	**0.13**	**0.00**	**3,055.45**

3.2 Building - 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	0.40	2.57	2.92	0.01		0.13	0.13		0.13	0.13	0.00	478.23	478.23	0.03	0.00	478.91
Total	**0.40**	**2.57**	**2.92**	**0.01**		**0.13**	**0.13**		**0.13**	**0.13**	**0.00**	**478.23**	**478.23**	**0.03**	**0.00**	**478.91**

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	0.38	4.24	2.74	0.01	0.30	0.14	0.44	0.01	0.13	0.14	0.00	917.72	917.72	0.02	0.00	918.07
Worker	0.97	1.05	10.23	0.03	3.08	0.12	3.20	0.05	0.11	0.16	0.00	2,092.80	2,092.80	0.10	0.00	2,094.91
Total	**1.35**	**5.29**	**12.97**	**0.04**	**3.38**	**0.26**	**3.64**	**0.06**	**0.24**	**0.30**	**0.00**	**3,010.52**	**3,010.52**	**0.12**	**0.00**	**3,012.98**

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	0.40	2.57	2.92	0.01		0.13	0.13		0.13	0.13	0.00	478.23	478.23	0.03	0.00	478.91
Total	**0.40**	**2.57**	**2.92**	**0.01**		**0.13**	**0.13**		**0.13**	**0.13**	**0.00**	**478.23**	**478.23**	**0.03**	**0.00**	**478.91**

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	0.38	4.24	2.74	0.01	0.16	0.14	0.30	0.01	0.13	0.14	0.00	917.72	917.72	0.02	0.00	918.07
Worker	0.97	1.05	10.23	0.03	1.64	0.12	1.76	0.05	0.11	0.16	0.00	2,092.80	2,092.80	0.10	0.00	2,094.91
Total	**1.35**	**5.29**	**12.97**	**0.04**	**1.80**	**0.26**	**2.06**	**0.06**	**0.24**	**0.30**	**0.00**	**3,010.52**	**3,010.52**	**0.12**	**0.00**	**3,012.98**

3.2 Building - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.37	2.34	2.91	0.01		0.11	0.11		0.11	0.11	0.00	480.06	480.06	0.03	0.00	480.68
Total	**0.37**	**2.34**	**2.91**	**0.01**		**0.11**	**0.11**		**0.11**	**0.11**	**0.00**	**480.06**	**480.06**	**0.03**	**0.00**	**480.68**

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	0.36	4.06	2.62	0.01	0.30	0.13	0.43	0.01	0.12	0.13	0.00	922.19	922.19	0.02	0.00	922.53
Worker	0.94	0.99	9.65	0.03	3.09	0.12	3.21	0.05	0.11	0.16	0.00	2,060.88	2,060.88	0.10	0.00	2,062.88
Total	**1.30**	**5.05**	**12.27**	**0.04**	**3.39**	**0.25**	**3.64**	**0.06**	**0.23**	**0.29**	**0.00**	**2,983.07**	**2,983.07**	**0.12**	**0.00**	**2,985.41**

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	0.37	2.34	2.91	0.01		0.11	0.11		0.11	0.11	0.00	480.06	480.06	0.03	0.00	480.68
Total	**0.37**	**2.34**	**2.91**	**0.01**		**0.11**	**0.11**		**0.11**	**0.11**	**0.00**	**480.06**	**480.06**	**0.03**	**0.00**	**480.68**

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	0.36	4.06	2.62	0.01	0.16	0.13	0.30	0.01	0.12	0.13	0.00	922.19	922.19	0.02	0.00	922.53
Worker	0.94	0.99	9.65	0.03	1.64	0.12	1.76	0.05	0.11	0.16	0.00	2,060.88	2,060.88	0.10	0.00	2,062.88
Total	**1.30**	**5.05**	**12.27**	**0.04**	**1.80**	**0.25**	**2.06**	**0.06**	**0.23**	**0.29**	**0.00**	**2,983.07**	**2,983.07**	**0.12**	**0.00**	**2,985.41**

3.2 Building - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.33	2.10	2.88	0.01		0.10	0.10		0.10	0.10	0.00	478.23	478.23	0.03	0.00	478.79
Total	**0.33**	**2.10**	**2.88**	**0.01**		**0.10**	**0.10**		**0.10**	**0.10**	**0.00**	**478.23**	**478.23**	**0.03**	**0.00**	**478.79**

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	0.35	3.90	2.49	0.01	0.30	0.13	0.43	0.01	0.12	0.13	0.00	919.58	919.58	0.02	0.00	919.90
Worker	0.90	0.93	9.22	0.03	3.08	0.12	3.20	0.05	0.11	0.16	0.00	2,035.96	2,035.96	0.09	0.00	2,037.89
Total	**1.25**	**4.83**	**11.71**	**0.04**	**3.38**	**0.25**	**3.63**	**0.06**	**0.23**	**0.29**	**0.00**	**2,955.54**	**2,955.54**	**0.11**	**0.00**	**2,957.79**

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	0.33	2.10	2.88	0.01		0.10	0.10		0.10	0.10	0.00	478.23	478.23	0.03	0.00	478.79
Total	**0.33**	**2.10**	**2.88**	**0.01**		**0.10**	**0.10**		**0.10**	**0.10**	**0.00**	**478.23**	**478.23**	**0.03**	**0.00**	**478.79**

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	0.35	3.90	2.49	0.01	0.16	0.13	0.29	0.01	0.12	0.13	0.00	919.58	919.58	0.02	0.00	919.90
Worker	0.90	0.93	9.22	0.03	1.64	0.12	1.76	0.05	0.11	0.16	0.00	2,035.96	2,035.96	0.09	0.00	2,037.89
Total	**1.25**	**4.83**	**11.71**	**0.04**	**1.80**	**0.25**	**2.05**	**0.06**	**0.23**	**0.29**	**0.00**	**2,955.54**	**2,955.54**	**0.11**	**0.00**	**2,957.79**

3.2 Building - 2022

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	0.31	1.89	2.86	0.01		0.08	0.08		0.08	0.08	0.00	476.40	476.40	0.02	0.00	476.92
Total	**0.31**	**1.89**	**2.86**	**0.01**		**0.08**	**0.08**		**0.08**	**0.08**	**0.00**	**476.40**	**476.40**	**0.02**	**0.00**	**476.92**

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	0.33	3.76	2.37	0.01	0.30	0.12	0.42	0.01	0.11	0.12	0.00	916.86	916.86	0.01	0.00	917.17
Worker	0.87	0.87	8.69	0.03	3.07	0.12	3.19	0.05	0.11	0.16	0.00	1,994.86	1,994.86	0.09	0.00	1,996.69
Total	**1.20**	**4.63**	**11.06**	**0.04**	**3.37**	**0.24**	**3.61**	**0.06**	**0.22**	**0.28**	**0.00**	**2,911.72**	**2,911.72**	**0.10**	**0.00**	**2,913.86**

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	0.31	1.89	2.86	0.01		0.08	0.08		0.08	0.08	0.00	476.40	476.40	0.02	0.00	476.92
Total	**0.31**	**1.89**	**2.86**	**0.01**		**0.08**	**0.08**		**0.08**	**0.08**	**0.00**	**476.40**	**476.40**	**0.02**	**0.00**	**476.92**

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	0.33	3.76	2.37	0.01	0.16	0.12	0.29	0.01	0.11	0.12	0.00	916.86	916.86	0.01	0.00	917.17
Worker	0.87	0.87	8.69	0.03	1.63	0.12	1.75	0.05	0.11	0.16	0.00	1,994.86	1,994.86	0.09	0.00	1,996.69
Total	**1.20**	**4.63**	**11.06**	**0.04**	**1.79**	**0.24**	**2.04**	**0.06**	**0.22**	**0.28**	**0.00**	**2,911.72**	**2,911.72**	**0.10**	**0.00**	**2,913.86**

3.2 Building - 2023

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	0.29	1.72	2.86	0.01		0.07	0.07		0.07	0.07	0.00	476.40	476.40	0.02	0.00	476.89
Total	**0.29**	**1.72**	**2.86**	**0.01**		**0.07**	**0.07**		**0.07**	**0.07**	**0.00**	**476.40**	**476.40**	**0.02**	**0.00**	**476.89**

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	0.32	3.65	2.28	0.01	0.30	0.12	0.42	0.01	0.11	0.12	0.00	917.61	917.61	0.01	0.00	917.90
Worker	0.84	0.82	8.22	0.03	3.07	0.12	3.19	0.05	0.11	0.16	0.00	1,964.37	1,964.37	0.08	0.00	1,966.12
Total	**1.16**	**4.47**	**10.50**	**0.04**	**3.37**	**0.24**	**3.61**	**0.06**	**0.22**	**0.28**	**0.00**	**2,881.98**	**2,881.98**	**0.09**	**0.00**	**2,884.02**

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	0.29	1.72	2.86	0.01		0.07	0.07		0.07	0.07	0.00	476.40	476.40	0.02	0.00	476.89
Total	**0.29**	**1.72**	**2.86**	**0.01**		**0.07**	**0.07**		**0.07**	**0.07**	**0.00**	**476.40**	**476.40**	**0.02**	**0.00**	**476.89**

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	0.32	3.65	2.28	0.01	0.16	0.12	0.28	0.01	0.11	0.12	0.00	917.61	917.61	0.01	0.00	917.90
Worker	0.84	0.82	8.22	0.03	1.63	0.12	1.75	0.05	0.11	0.16	0.00	1,964.37	1,964.37	0.08	0.00	1,966.12
Total	**1.16**	**4.47**	**10.50**	**0.04**	**1.79**	**0.24**	**2.03**	**0.06**	**0.22**	**0.28**	**0.00**	**2,881.98**	**2,881.98**	**0.09**	**0.00**	**2,884.02**

3.2 Building - 2024

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	0.28	1.58	2.87	0.01		0.06	0.06		0.06	0.06	0.00	480.06	480.06	0.02	0.00	480.53
Total	**0.28**	**1.58**	**2.87**	**0.01**		**0.06**	**0.06**		**0.06**	**0.06**	**0.00**	**480.06**	**480.06**	**0.02**	**0.00**	**480.53**

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	3.60	2.21	0.01	0.30	0.12	0.42	0.01	0.11	0.12	0.00	925.43	925.43	0.01	0.00	925.71
Worker	0.81	0.78	7.88	0.03	3.09	0.12	3.22	0.05	0.12	0.16	0.00	1,951.67	1,951.67	0.08	0.00	1,953.36
Total	**1.12**	**4.38**	**10.09**	**0.04**	**3.39**	**0.24**	**3.64**	**0.06**	**0.23**	**0.28**	**0.00**	**2,877.10**	**2,877.10**	**0.09**	**0.00**	**2,879.07**

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	0.28	1.58	2.87	0.01		0.06	0.06		0.06	0.06	0.00	480.06	480.06	0.02	0.00	480.53
Total	**0.28**	**1.58**	**2.87**	**0.01**		**0.06**	**0.06**		**0.06**	**0.06**	**0.00**	**480.06**	**480.06**	**0.02**	**0.00**	**480.53**

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	3.60	2.21	0.01	0.16	0.12	0.28	0.01	0.11	0.12	0.00	925.43	925.43	0.01	0.00	925.71
Worker	0.81	0.78	7.88	0.03	1.64	0.12	1.77	0.05	0.12	0.16	0.00	1,951.67	1,951.67	0.08	0.00	1,953.36
Total	**1.12**	**4.38**	**10.09**	**0.04**	**1.80**	**0.24**	**2.05**	**0.06**	**0.23**	**0.28**	**0.00**	**2,877.10**	**2,877.10**	**0.09**	**0.00**	**2,879.07**

3.2 Building - 2025

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	0.26	1.44	2.86	0.01		0.05	0.05		0.05	0.05	0.00	478.23	478.23	0.02	0.00	478.66
Total	**0.26**	**1.44**	**2.86**	**0.01**		**0.05**	**0.05**		**0.05**	**0.05**	**0.00**	**478.23**	**478.23**	**0.02**	**0.00**	**478.66**

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	0.30	3.51	2.13	0.01	0.30	0.12	0.41	0.01	0.11	0.12	0.00	922.45	922.45	0.01	0.00	922.72
Worker	0.78	0.74	7.50	0.03	3.08	0.12	3.20	0.05	0.12	0.16	0.00	1,919.44	1,919.44	0.08	0.00	1,921.05
Total	**1.08**	**4.25**	**9.63**	**0.04**	**3.38**	**0.24**	**3.61**	**0.06**	**0.23**	**0.28**	**0.00**	**2,841.89**	**2,841.89**	**0.09**	**0.00**	**2,843.77**

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	0.26	1.44	2.86	0.01		0.05	0.05		0.05	0.05	0.00	478.23	478.23	0.02	0.00	478.66
Total	**0.26**	**1.44**	**2.86**	**0.01**		**0.05**	**0.05**		**0.05**	**0.05**	**0.00**	**478.23**	**478.23**	**0.02**	**0.00**	**478.66**

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	0.30	3.51	2.13	0.01	0.16	0.12	0.28	0.01	0.11	0.12	0.00	922.45	922.45	0.01	0.00	922.72
Worker	0.78	0.74	7.50	0.03	1.64	0.12	1.76	0.05	0.12	0.16	0.00	1,919.44	1,919.44	0.08	0.00	1,921.05
Total	**1.08**	**4.25**	**9.63**	**0.04**	**1.80**	**0.24**	**2.04**	**0.06**	**0.23**	**0.28**	**0.00**	**2,841.89**	**2,841.89**	**0.09**	**0.00**	**2,843.77**

3.2 Building - 2026

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	0.26	1.44	2.86	0.01		0.05	0.05		0.05	0.05	0.00	478.23	478.23	0.02	0.00	478.66
Total	**0.26**	**1.44**	**2.86**	**0.01**		**0.05**	**0.05**		**0.05**	**0.05**	**0.00**	**478.23**	**478.23**	**0.02**	**0.00**	**478.66**

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	0.30	3.51	2.13	0.01	0.30	0.12	0.41	0.01	0.11	0.12	0.00	922.45	922.45	0.01	0.00	922.72
Worker	0.78	0.74	7.50	0.03	3.08	0.12	3.20	0.05	0.12	0.16	0.00	1,919.44	1,919.44	0.08	0.00	1,921.05
Total	**1.08**	**4.25**	**9.63**	**0.04**	**3.38**	**0.24**	**3.61**	**0.06**	**0.23**	**0.28**	**0.00**	**2,841.89**	**2,841.89**	**0.09**	**0.00**	**2,843.77**

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	0.26	1.44	2.86	0.01		0.05	0.05		0.05	0.05	0.00	478.23	478.23	0.02	0.00	478.66
Total	**0.26**	**1.44**	**2.86**	**0.01**		**0.05**	**0.05**		**0.05**	**0.05**	**0.00**	**478.23**	**478.23**	**0.02**	**0.00**	**478.66**

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	0.30	3.51	2.13	0.01	0.16	0.12	0.28	0.01	0.11	0.12	0.00	922.45	922.45	0.01	0.00	922.72
Worker	0.78	0.74	7.50	0.03	1.64	0.12	1.76	0.05	0.12	0.16	0.00	1,919.44	1,919.44	0.08	0.00	1,921.05
Total	**1.08**	**4.25**	**9.63**	**0.04**	**1.80**	**0.24**	**2.04**	**0.06**	**0.23**	**0.28**	**0.00**	**2,841.89**	**2,841.89**	**0.09**	**0.00**	**2,843.77**

3.2 Building - 2027

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	0.26	1.44	2.86	0.01		0.05	0.05		0.05	0.05	0.00	478.23	478.23	0.02	0.00	478.66
Total	**0.26**	**1.44**	**2.86**	**0.01**		**0.05**	**0.05**		**0.05**	**0.05**	**0.00**	**478.23**	**478.23**	**0.02**	**0.00**	**478.66**

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	0.30	3.51	2.13	0.01	0.30	0.12	0.41	0.01	0.11	0.12	0.00	922.45	922.45	0.01	0.00	922.72
Worker	0.78	0.74	7.50	0.03	3.08	0.12	3.20	0.05	0.12	0.16	0.00	1,919.44	1,919.44	0.08	0.00	1,921.05
Total	**1.08**	**4.25**	**9.63**	**0.04**	**3.38**	**0.24**	**3.61**	**0.06**	**0.23**	**0.28**	**0.00**	**2,841.89**	**2,841.89**	**0.09**	**0.00**	**2,843.77**

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	0.26	1.44	2.86	0.01		0.05	0.05		0.05	0.05	0.00	478.23	478.23	0.02	0.00	478.66
Total	**0.26**	**1.44**	**2.86**	**0.01**		**0.05**	**0.05**		**0.05**	**0.05**	**0.00**	**478.23**	**478.23**	**0.02**	**0.00**	**478.66**

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	0.30	3.51	2.13	0.01	0.16	0.12	0.28	0.01	0.11	0.12	0.00	922.45	922.45	0.01	0.00	922.72
Worker	0.78	0.74	7.50	0.03	1.64	0.12	1.76	0.05	0.12	0.16	0.00	1,919.44	1,919.44	0.08	0.00	1,921.05
Total	**1.08**	**4.25**	**9.63**	**0.04**	**1.80**	**0.24**	**2.04**	**0.06**	**0.23**	**0.28**	**0.00**	**2,841.89**	**2,841.89**	**0.09**	**0.00**	**2,843.77**

3.2 Building - 2028

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	0.26	1.44	2.85	0.01		0.05	0.05		0.05	0.05	0.00	476.40	476.40	0.02	0.00	476.83
Total	**0.26**	**1.44**	**2.85**	**0.01**		**0.05**	**0.05**		**0.05**	**0.05**	**0.00**	**476.40**	**476.40**	**0.02**	**0.00**	**476.83**

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	0.30	3.50	2.13	0.01	0.30	0.12	0.41	0.01	0.11	0.12	0.00	918.91	918.91	0.01	0.00	919.19
Worker	0.78	0.73	7.48	0.03	3.07	0.12	3.19	0.05	0.11	0.16	0.00	1,912.08	1,912.08	0.08	0.00	1,913.69
Total	**1.08**	**4.23**	**9.61**	**0.04**	**3.37**	**0.24**	**3.60**	**0.06**	**0.22**	**0.28**	**0.00**	**2,830.99**	**2,830.99**	**0.09**	**0.00**	**2,832.88**

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	0.26	1.44	2.85	0.01		0.05	0.05		0.05	0.05	0.00	476.40	476.40	0.02	0.00	476.83
Total	**0.26**	**1.44**	**2.85**	**0.01**		**0.05**	**0.05**		**0.05**	**0.05**	**0.00**	**476.40**	**476.40**	**0.02**	**0.00**	**476.83**

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	0.30	3.50	2.13	0.01	0.16	0.12	0.28	0.01	0.11	0.12	0.00	918.91	918.91	0.01	0.00	919.19
Worker	0.78	0.73	7.48	0.03	1.63	0.12	1.75	0.05	0.11	0.16	0.00	1,912.08	1,912.08	0.08	0.00	1,913.69
Total	**1.08**	**4.23**	**9.61**	**0.04**	**1.79**	**0.24**	**2.03**	**0.06**	**0.22**	**0.28**	**0.00**	**2,830.99**	**2,830.99**	**0.09**	**0.00**	**2,832.88**

3.2 Building - 2029

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	0.26	1.44	2.86	0.01		0.05	0.05		0.05	0.05	0.00	478.23	478.23	0.02	0.00	478.66
Total	**0.26**	**1.44**	**2.86**	**0.01**		**0.05**	**0.05**		**0.05**	**0.05**	**0.00**	**478.23**	**478.23**	**0.02**	**0.00**	**478.66**

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	0.30	3.51	2.13	0.01	0.30	0.12	0.41	0.01	0.11	0.12	0.00	922.45	922.45	0.01	0.00	922.72
Worker	0.78	0.74	7.50	0.03	3.08	0.12	3.20	0.05	0.12	0.16	0.00	1,919.44	1,919.44	0.08	0.00	1,921.05
Total	**1.08**	**4.25**	**9.63**	**0.04**	**3.38**	**0.24**	**3.61**	**0.06**	**0.23**	**0.28**	**0.00**	**2,841.89**	**2,841.89**	**0.09**	**0.00**	**2,843.77**

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	0.26	1.44	2.86	0.01		0.05	0.05		0.05	0.05	0.00	478.23	478.23	0.02	0.00	478.66
Total	**0.26**	**1.44**	**2.86**	**0.01**		**0.05**	**0.05**		**0.05**	**0.05**	**0.00**	**478.23**	**478.23**	**0.02**	**0.00**	**478.66**

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	0.30	3.51	2.13	0.01	0.16	0.12	0.28	0.01	0.11	0.12	0.00	922.45	922.45	0.01	0.00	922.72
Worker	0.78	0.74	7.50	0.03	1.64	0.12	1.76	0.05	0.12	0.16	0.00	1,919.44	1,919.44	0.08	0.00	1,921.05
Total	**1.08**	**4.25**	**9.63**	**0.04**	**1.80**	**0.24**	**2.04**	**0.06**	**0.23**	**0.28**	**0.00**	**2,841.89**	**2,841.89**	**0.09**	**0.00**	**2,843.77**

3.2 Building - 2030

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	0.22	1.05	2.85	0.01		0.02	0.02		0.02	0.02	0.00	478.23	478.23	0.02	0.00	478.60
Total	**0.22**	**1.05**	**2.85**	**0.01**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**478.23**	**478.23**	**0.02**	**0.00**	**478.60**

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	0.28	3.30	1.93	0.01	0.30	0.11	0.41	0.01	0.10	0.11	0.00	924.45	924.45	0.01	0.00	924.70
Worker	0.67	0.59	6.29	0.03	3.08	0.13	3.21	0.05	0.12	0.16	0.00	1,831.29	1,831.29	0.07	0.00	1,832.68
Total	**0.95**	**3.89**	**8.22**	**0.04**	**3.38**	**0.24**	**3.62**	**0.06**	**0.22**	**0.27**	**0.00**	**2,755.74**	**2,755.74**	**0.08**	**0.00**	**2,757.38**

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	0.22	1.05	2.85	0.01		0.02	0.02		0.02	0.02	0.00	478.23	478.23	0.02	0.00	478.60
Total	**0.22**	**1.05**	**2.85**	**0.01**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**478.23**	**478.23**	**0.02**	**0.00**	**478.60**

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	0.28	3.30	1.93	0.01	0.16	0.11	0.27	0.01	0.10	0.11	0.00	924.45	924.45	0.01	0.00	924.70
Worker	0.67	0.59	6.29	0.03	1.64	0.13	1.76	0.05	0.12	0.16	0.00	1,831.29	1,831.29	0.07	0.00	1,832.68
Total	**0.95**	**3.89**	**8.22**	**0.04**	**1.80**	**0.24**	**2.03**	**0.06**	**0.22**	**0.27**	**0.00**	**2,755.74**	**2,755.74**	**0.08**	**0.00**	**2,757.38**

3.2 Building - 2031

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	0.22	1.05	2.85	0.01		0.02	0.02		0.02	0.02	0.00	478.23	478.23	0.02	0.00	478.60
Total	**0.22**	**1.05**	**2.85**	**0.01**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**478.23**	**478.23**	**0.02**	**0.00**	**478.60**

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	0.28	3.30	1.93	0.01	0.30	0.11	0.41	0.01	0.10	0.11	0.00	924.45	924.45	0.01	0.00	924.70
Worker	0.67	0.59	6.29	0.03	3.08	0.13	3.21	0.05	0.12	0.16	0.00	1,831.29	1,831.29	0.07	0.00	1,832.68
Total	**0.95**	**3.89**	**8.22**	**0.04**	**3.38**	**0.24**	**3.62**	**0.06**	**0.22**	**0.27**	**0.00**	**2,755.74**	**2,755.74**	**0.08**	**0.00**	**2,757.38**

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	0.22	1.05	2.85	0.01		0.02	0.02		0.02	0.02	0.00	478.23	478.23	0.02	0.00	478.60
Total	**0.22**	**1.05**	**2.85**	**0.01**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**478.23**	**478.23**	**0.02**	**0.00**	**478.60**

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	0.28	3.30	1.93	0.01	0.16	0.11	0.27	0.01	0.10	0.11	0.00	924.45	924.45	0.01	0.00	924.70
Worker	0.67	0.59	6.29	0.03	1.64	0.13	1.76	0.05	0.12	0.16	0.00	1,831.29	1,831.29	0.07	0.00	1,832.68
Total	**0.95**	**3.89**	**8.22**	**0.04**	**1.80**	**0.24**	**2.03**	**0.06**	**0.22**	**0.27**	**0.00**	**2,755.74**	**2,755.74**	**0.08**	**0.00**	**2,757.38**

3.2 Building - 2032

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	0.22	1.05	2.86	0.01		0.02	0.02		0.02	0.02	0.00	480.06	480.06	0.02	0.00	480.43
Total	**0.22**	**1.05**	**2.86**	**0.01**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**480.06**	**480.06**	**0.02**	**0.00**	**480.43**

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	0.28	3.32	1.94	0.01	0.30	0.11	0.41	0.01	0.10	0.11	0.00	927.99	927.99	0.01	0.00	928.24
Worker	0.68	0.59	6.32	0.03	3.09	0.13	3.22	0.05	0.12	0.16	0.00	1,838.31	1,838.31	0.07	0.00	1,839.70
Total	**0.96**	**3.91**	**8.26**	**0.04**	**3.39**	**0.24**	**3.63**	**0.06**	**0.22**	**0.27**	**0.00**	**2,766.30**	**2,766.30**	**0.08**	**0.00**	**2,767.94**

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Off-Road	0.22	1.05	2.86	0.01		0.02	0.02		0.02	0.02	0.00	480.06	480.06	0.02	0.00	480.43
Total	**0.22**	**1.05**	**2.86**	**0.01**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**480.06**	**480.06**	**0.02**	**0.00**	**480.43**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	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	0.28	3.32	1.94	0.01	0.16	0.11	0.27	0.01	0.10	0.11	0.00	927.99	927.99	0.01	0.00	928.24
Worker	0.68	0.59	6.32	0.03	1.64	0.13	1.77	0.05	0.12	0.16	0.00	1,838.31	1,838.31	0.07	0.00	1,839.70
Total	**0.96**	**3.91**	**8.26**	**0.04**	**1.80**	**0.24**	**2.04**	**0.06**	**0.22**	**0.27**	**0.00**	**2,766.30**	**2,766.30**	**0.08**	**0.00**	**2,767.94**

3.2 Building - 2033

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Off-Road	0.22	1.05	2.84	0.01		0.02	0.02		0.02	0.02	0.00	476.40	476.40	0.02	0.00	476.76
Total	**0.22**	**1.05**	**2.84**	**0.01**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**476.40**	**476.40**	**0.02**	**0.00**	**476.76**

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	0.28	3.29	1.93	0.01	0.30	0.11	0.40	0.01	0.10	0.11	0.00	920.91	920.91	0.01	0.00	921.16
Worker	0.67	0.59	6.27	0.03	3.07	0.12	3.19	0.05	0.11	0.16	0.00	1,824.28	1,824.28	0.07	0.00	1,825.66
Total	**0.95**	**3.88**	**8.20**	**0.04**	**3.37**	**0.23**	**3.59**	**0.06**	**0.21**	**0.27**	**0.00**	**2,745.19**	**2,745.19**	**0.08**	**0.00**	**2,746.82**

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	0.22	1.05	2.84	0.01		0.02	0.02		0.02	0.02	0.00	476.40	476.40	0.02	0.00	476.76
Total	**0.22**	**1.05**	**2.84**	**0.01**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**476.40**	**476.40**	**0.02**	**0.00**	**476.76**

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	0.28	3.29	1.93	0.01	0.16	0.11	0.27	0.01	0.10	0.11	0.00	920.91	920.91	0.01	0.00	921.16
Worker	0.67	0.59	6.27	0.03	1.63	0.12	1.75	0.05	0.11	0.16	0.00	1,824.28	1,824.28	0.07	0.00	1,825.66
Total	**0.95**	**3.88**	**8.20**	**0.04**	**1.79**	**0.23**	**2.02**	**0.06**	**0.21**	**0.27**	**0.00**	**2,745.19**	**2,745.19**	**0.08**	**0.00**	**2,746.82**

3.2 Building - 2034

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	0.17	0.80	2.18	0.00		0.02	0.02		0.02	0.02	0.00	366.46	366.46	0.01	0.00	366.74
Total	**0.17**	**0.80**	**2.18**	**0.00**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**366.46**	**366.46**	**0.01**	**0.00**	**366.74**

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	0.21	2.53	1.48	0.01	0.23	0.08	0.31	0.01	0.08	0.08	0.00	708.39	708.39	0.01	0.00	708.58
Worker	0.52	0.45	4.82	0.02	2.36	0.10	2.46	0.04	0.09	0.12	0.00	1,403.29	1,403.29	0.05	0.00	1,404.35
Total	**0.73**	**2.98**	**6.30**	**0.03**	**2.59**	**0.18**	**2.77**	**0.05**	**0.17**	**0.20**	**0.00**	**2,111.68**	**2,111.68**	**0.06**	**0.00**	**2,112.93**

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	0.17	0.80	2.18	0.00		0.02	0.02		0.02	0.02	0.00	366.46	366.46	0.01	0.00	366.74
Total	**0.17**	**0.80**	**2.18**	**0.00**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**366.46**	**366.46**	**0.01**	**0.00**	**366.74**

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	0.21	2.53	1.48	0.01	0.13	0.08	0.21	0.01	0.08	0.08	0.00	708.39	708.39	0.01	0.00	708.58
Worker	0.52	0.45	4.82	0.02	1.25	0.10	1.35	0.04	0.09	0.12	0.00	1,403.29	1,403.29	0.05	0.00	1,404.35
Total	**0.73**	**2.98**	**6.30**	**0.03**	**1.38**	**0.18**	**1.56**	**0.05**	**0.17**	**0.20**	**0.00**	**2,111.68**	**2,111.68**	**0.06**	**0.00**	**2,112.93**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

Improve Walkability Design

Integrate Below Market Rate Housing

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	15.16	30.19	141.22	0.31	31.77	1.73	33.50	0.51	1.67	2.17	0.00	23,570.67	23,570.67	1.05	0.00	23,592.70
Unmitigated	15.43	30.79	144.07	0.32	32.58	1.77	34.35	0.52	1.71	2.23	0.00	24,154.82	24,154.82	1.07	0.00	24,177.36
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
Apartments Low Rise	3,084.12	3,350.88	2840.76	11,425,652	11,142,286
City Park	37.84	37.84	37.84	93,326	91,012
Condo/Townhouse	2,471.25	2,685.00	2276.25	9,155,170	8,928,114
Congregate Care (Assisted Living)	548.00	440.00	488.00	1,939,146	1,891,054
Elementary School	732.72	0.00	0.00	1,567,591	1,528,713
Hotel	408.50	409.50	297.50	789,173	769,601
Junior High School	213.84	0.00	0.00	481,818	469,868
Office Park	325.47	46.74	21.66	701,428	684,032
Single Family Housing	8,641.71	9,102.24	7919.31	31,841,594	31,051,894
Strip Mall	2,725.68	2,585.46	1256.45	3,983,152	3,884,366
User Defined Educational	0.00	0.00	0.00		
User Defined Industrial	0.00	0.00	0.00		
User Defined Industrial	0.00	0.00	0.00		
User Defined Recreational	0.00	0.00	0.00		
Total	19,189.13	18,657.66	15,137.77	61,978,050	60,440,939

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
Apartments Low Rise	16.80	7.10	7.90	41.60	18.80	39.60
City Park	14.70	6.60	6.60	33.00	48.00	19.00
Condo/Townhouse	16.80	7.10	7.90	41.60	18.80	39.60
Congregate Care (Assisted Living)	16.80	7.10	7.90	41.60	18.80	39.60
Elementary School	14.70	6.60	6.60	65.00	30.00	5.00
Hotel	14.70	6.60	6.60	19.40	61.60	19.00
Junior High School	14.70	6.60	6.60	72.80	22.20	5.00
Office Park	14.70	6.60	6.60	33.00	48.00	19.00
Single Family Housing	16.80	7.10	7.90	41.60	18.80	39.60
Strip Mall	14.70	6.60	6.60	16.60	64.40	19.00
User Defined Educational	14.70	6.60	6.60	0.00	0.00	0.00
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00
User Defined Recreational	14.70	6.60	6.60	0.00	0.00	0.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	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	3,922.79	3,922.79	0.15	0.06	3,942.98
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	4,420.53	4,420.53	0.16	0.06	4,443.28
NaturalGas Mitigated	0.22	1.91	0.90	0.01		0.00	0.15		0.00	0.15	0.00	2,193.91	2,193.91	0.04	0.04	2,207.26
NaturalGas Unmitigated	0.32	2.73	1.28	0.02		0.00	0.22		0.00	0.22	0.00	3,144.76	3,144.76	0.06	0.06	3,163.90
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					
Apartments Low Rise	7.8208e+006	0.04	0.36	0.15	0.00		0.00	0.03		0.00	0.03	0.00	417.35	417.35	0.01	0.01	419.89
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	8.65382e+006	0.05	0.40	0.17	0.00		0.00	0.03		0.00	0.03	0.00	461.80	461.80	0.01	0.01	464.61
Congregate Care (Assisted Living)	2.10798e+006	0.01	0.10	0.04	0.00		0.00	0.01		0.00	0.01	0.00	112.49	112.49	0.00	0.00	113.17
Elementary School	294418	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	15.71	15.71	0.00	0.00	15.81
Hotel	4.41771e+006	0.02	0.22	0.18	0.00		0.00	0.02		0.00	0.02	0.00	235.75	235.75	0.00	0.00	237.18
Junior High School	96212.5	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	5.13	5.13	0.00	0.00	5.17
Office Park	959880	0.01	0.05	0.04	0.00		0.00	0.00		0.00	0.00	0.00	51.22	51.22	0.00	0.00	51.53
Single Family Housing	3.44389e+007	0.19	1.59	0.68	0.01		0.00	0.13		0.00	0.13	0.00	1,837.79	1,837.79	0.04	0.03	1,848.98
Strip Mall	140835	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	7.52	7.52	0.00	0.00	7.56
User Defined Educational	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
User Defined Industrial	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
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		**0.32**	**2.74**	**1.28**	**0.01**		**0.00**	**0.22**		**0.00**	**0.22**	**0.00**	**3,144.76**	**3,144.76**	**0.06**	**0.05**	**3,163.90**

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					
Apartments Low Rise	5.47236e+006	0.03	0.25	0.11	0.00		0.00	0.02		0.00	0.02	0.00	292.03	292.03	0.01	0.01	293.80
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	5.99488e+006	0.03	0.28	0.12	0.00		0.00	0.02		0.00	0.02	0.00	319.91	319.91	0.01	0.01	321.86
Congregate Care (Assisted Living)	1.49219e+006	0.01	0.07	0.03	0.00		0.00	0.01		0.00	0.01	0.00	79.63	79.63	0.00	0.00	80.11
Elementary School	196633	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	10.49	10.49	0.00	0.00	10.56
Hotel	3.11744e+006	0.02	0.15	0.13	0.00		0.00	0.01		0.00	0.01	0.00	166.36	166.36	0.00	0.00	167.37
Junior High School	64257.5	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	3.43	3.43	0.00	0.00	3.45
Office Park	682860	0.00	0.03	0.03	0.00		0.00	0.00		0.00	0.00	0.00	36.44	36.44	0.00	0.00	36.66
Single Family Housing	2.39775e+007	0.13	1.10	0.47	0.01		0.00	0.09		0.00	0.09	0.00	1,279.53	1,279.53	0.02	0.02	1,287.32
Strip Mall	114267	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00	0.00	6.10	6.10	0.00	0.00	6.13
User Defined Educational	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
User Defined Industrial	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
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**	**1.90**	**0.90**	**0.01**		**0.00**	**0.15**		**0.00**	**0.15**	**0.00**	**2,193.92**	**2,193.92**	**0.04**	**0.04**	**2,207.26**

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			
Apartments Low Rise	1.64392e+006					582.21	0.02	0.01	585.21
City Park	0					0.00	0.00	0.00	0.00
Condo/Townhouse	1.55099e+006					549.30	0.02	0.01	552.13
Congregate Care (Assisted Living)	697442					247.01	0.01	0.00	248.28
Elementary School	283021					100.23	0.00	0.00	100.75
Hotel	1.05923e+006					375.14	0.01	0.01	377.07
Junior High School	92488.1					32.76	0.00	0.00	32.92
Office Park	501600					177.65	0.01	0.00	178.56
Single Family Housing	5.78955e+006					2,050.43	0.08	0.03	2,060.98
Strip Mall	863460					305.80	0.01	0.00	307.38
User Defined Educational	0					0.00	0.00	0.00	0.00
User Defined Industrial	0					0.00	0.00	0.00	0.00
User Defined Recreational	0					0.00	0.00	0.00	0.00
Total						**4,420.53**	**0.16**	**0.06**	**4,443.28**

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Apartments Low Rise	1.48382e+006					525.51	0.02	0.01	528.22
City Park	0					0.00	0.00	0.00	0.00
Condo/Townhouse	1.41459e+006					500.99	0.02	0.01	503.57
Congregate Care (Assisted Living)	652435					231.07	0.01	0.00	232.26
Elementary School	230425					81.61	0.00	0.00	82.03
Hotel	851279					301.49	0.01	0.00	303.04
Junior High School	75300.2					26.67	0.00	0.00	26.81
Office Park	409200					144.92	0.01	0.00	145.67
Single Family Housing	5.24639e+006					1,858.06	0.07	0.03	1,867.63
Strip Mall	712853					252.46	0.01	0.00	253.76
User Defined Educational	0					0.00	0.00	0.00	0.00
User Defined Industrial	0					0.00	0.00	0.00	0.00
User Defined Recreational	0					0.00	0.00	0.00	0.00
Total						**3,922.78**	**0.15**	**0.05**	**3,942.99**

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

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	15.72	0.17	14.68	0.00		0.00	0.37		0.00	0.37	0.00	4,162.34	4,162.34	0.10	0.08	4,188.01
Unmitigated	136.56	1.53	147.08	0.00		0.00	18.39		0.00	18.39	1,616.78	2,552.94	4,169.71	0.07	0.19	4,229.82
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	2.94					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	12.88					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	120.29	1.36	132.42	0.00		0.00	18.31		0.00	18.31	1,616.78	2,529.06	4,145.84	0.05	0.19	4,205.46
Landscaping	0.45	0.17	14.66	0.00		0.00	0.08		0.00	0.08	0.00	23.87	23.87	0.02	0.00	24.36
Total	**136.56**	**1.53**	**147.08**	**0.00**		**0.00**	**18.39**		**0.00**	**18.39**	**1,616.78**	**2,552.93**	**4,169.71**	**0.07**	**0.19**	**4,229.82**

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	2.94					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	11.92					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.42	0.00	0.02	0.00		0.00	0.29		0.00	0.29	0.00	4,138.47	4,138.47	0.08	0.08	4,163.66
Landscaping	0.45	0.17	14.66	0.00		0.00	0.08		0.00	0.08	0.00	23.87	23.87	0.02	0.00	24.36
Total	**15.73**	**0.17**	**14.68**	**0.00**		**0.00**	**0.37**		**0.00**	**0.37**	**0.00**	**4,162.34**	**4,162.34**	**0.10**	**0.08**	**4,188.02**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

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					1,231.03	5.61	0.16	1,397.09
Unmitigated					1,538.78	7.02	0.19	1,746.36
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			
Apartments Low Rise	30.4921 / 19.2233					216.60	0.94	0.03	244.41
City Park	0 / 28.3573					111.58	0.00	0.00	112.15
Condo/Townhouse	24.4328 / 15.4033					173.55	0.75	0.02	195.84
Congregate Care (Assisted Living)	13.0308 / 8.21507					92.56	0.40	0.01	104.45
Elementary School	1.37697 / 3.54078					20.30	0.04	0.00	21.61
Hotel	1.26834 / 0.140927					6.42	0.04	0.00	7.56
Junior High School	0.32 / 0.822856					4.72	0.01	0.00	5.02
Office Park	5.06541 / 3.10461					35.63	0.16	0.00	40.25
Single Family Housing	58.8341 / 37.0911					417.92	1.81	0.05	471.59
Strip Mall	4.55546 / 2.79206					32.04	0.14	0.00	36.20
User Defined Educational	0 / 0					0.00	0.00	0.00	0.00
User Defined Industrial	88.6432 / 4.4968					427.47	2.72	0.07	507.29
User Defined Recreational	0 / 0					0.00	0.00	0.00	0.00
Total						**1,538.79**	**7.01**	**0.18**	**1,746.37**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Apartments Low Rise	24.3937 / 15.3786					173.28	0.75	0.02	195.53
City Park	0 / 22.6858					89.26	0.00	0.00	89.72
Condo/Townhouse	19.5462 / 12.3226					138.84	0.60	0.02	156.67
Congregate Care (Assisted Living)	10.4246 / 6.57206					74.05	0.32	0.01	83.56
Elementary School	1.10157 / 2.83262					16.24	0.03	0.00	17.29
Hotel	1.01467 / 0.112741					5.13	0.03	0.00	6.05
Junior High School	0.256 / 0.658285					3.77	0.01	0.00	4.02
Office Park	4.05233 / 2.48369					28.51	0.12	0.00	32.20
Single Family Housing	47.0673 / 29.6728					334.33	1.45	0.04	377.27
Strip Mall	3.64437 / 2.23364					25.64	0.11	0.00	28.96
User Defined Educational	0 / 0					0.00	0.00	0.00	0.00
User Defined Industrial	70.9145 / 3.59744					341.97	2.18	0.06	405.83
User Defined Recreational	0 / 0					0.00	0.00	0.00	0.00
Total						**1,231.02**	**5.60**	**0.15**	**1,397.10**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					304.91	18.02	0.00	683.31
Unmitigated					381.13	22.52	0.00	854.14
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			
Apartments Low Rise	215.28					43.70	2.58	0.00	97.93
City Park	2.05					0.42	0.02	0.00	0.93
Condo/Townhouse	172.5					35.02	2.07	0.00	78.47
Congregate Care (Assisted Living)	182.5					37.05	2.19	0.00	83.02
Elementary School	103.66					21.04	1.24	0.00	47.16
Hotel	27.38					5.56	0.33	0.00	12.46
Junior High School	24.09					4.89	0.29	0.00	10.96
Office Park	26.51					5.38	0.32	0.00	12.06
Single Family Housing	1059.03					214.97	12.70	0.00	481.77
Strip Mall	64.58					13.11	0.77	0.00	29.38
User Defined Educational	0					0.00	0.00	0.00	0.00
User Defined Industrial	0					0.00	0.00	0.00	0.00
User Defined Recreational	0					0.00	0.00	0.00	0.00
Total						**381.14**	**22.51**	**0.00**	**854.14**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Apartments Low Rise	172.224					34.96	2.07	0.00	78.35
City Park	1.64					0.33	0.02	0.00	0.75
Condo/Townhouse	138					28.01	1.66	0.00	62.78
Congregate Care (Assisted Living)	146					29.64	1.75	0.00	66.42
Elementary School	82.928					16.83	0.99	0.00	37.73
Hotel	21.904					4.45	0.26	0.00	9.96
Junior High School	19.272					3.91	0.23	0.00	8.77
Office Park	21.208					4.31	0.25	0.00	9.65
Single Family Housing	847.224					171.98	10.16	0.00	385.42
Strip Mall	51.664					10.49	0.62	0.00	23.50
User Defined Educational	0					0.00	0.00	0.00	0.00
User Defined Industrial	0					0.00	0.00	0.00	0.00
User Defined Recreational	0					0.00	0.00	0.00	0.00
Total						**304.91**	**18.01**	**0.00**	**683.33**

9.0 Vegetation

5) Project with Design Features GHG Emissions Calculations – with Natural Gas Fireplaces

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6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior
Use Low VOC Paint - Non-Residential Interior
Use Low VOC Paint - Non-Residential Exterior
Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	16.07	0.17	14.67	0.00		0.00	0.27		0.00	0.27	0.00	2,741.32	2,741.32	0.08	0.05	2,758.35
Unmitigated	17.03	0.17	14.67	0.00		0.00	0.27		0.00	0.27	0.00	2,741.32	2,741.32	0.08	0.05	2,758.35
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	3.43					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	12.88					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.27	0.00	0.01	0.00		0.00	0.19		0.00	0.19	0.00	2,717.45	2,717.45	0.05	0.05	2,733.99
Landscaping	0.45	0.17	14.66	0.00		0.00	0.08		0.00	0.08	0.00	23.87	23.87	0.02	0.00	24.36
Total	**17.03**	**0.17**	**14.67**	**0.00**		**0.00**	**0.27**		**0.00**	**0.27**	**0.00**	**2,741.32**	**2,741.32**	**0.07**	**0.05**	**2,758.35**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.43					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	11.92					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.27	0.00	0.01	0.00		0.00	0.19		0.00	0.19	0.00	2,717.45	2,717.45	0.05	0.05	2,733.99
Landscaping	0.45	0.17	14.66	0.00		0.00	0.08		0.00	0.08	0.00	23.87	23.87	0.02	0.00	24.36
Total	**16.07**	**0.17**	**14.67**	**0.00**		**0.00**	**0.27**		**0.00**	**0.27**	**0.00**	**2,741.32**	**2,741.32**	**0.07**	**0.05**	**2,758.35**

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6) Post-processing Calculations

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	Unmitigated	Mitigated	% Reduction
Vehicles	26,863.73	22,884.92	14.8%
Energy - natural gas	3,163.90	2,207.26	30.2%
Energy - electricity	3,812.33	2,870.49	24.7%
Area	4,229.82	2,758.35	34.8%
Water	1,746.36	1,397.09	20.0%
Solid Waste	854.14	683.31	20.0%
Construction	567.12	567.12	0.0%
TOTAL GROSS EMISSIONS	41,237.41	33,368.54	19.1%
Emissions from Existing Uses (in Year 2020)	484.20	484.20	
TOTAL NET EMISSIONS	**40,753.21**	**32,884.34**	**19.3%**
Trees (sequestration)		-2,726.50	
With Trees		**30,157.84**	**26.9%**

Unmitigated Includes:
Construction in accordance with 2008 Title 24
Pavley I
RPS percentage reduction - 14.2%

Mitigated Includes:
Construction in accordance with 2013 Title 24 + energy savings beyond Title 24
Lighting Efficiency
Pavley I
LEV III
Tire Pressure Program
RPS additional percentage reduction - 27.2%
LCFS
Energy Star
Smart Meters
No wood fireplaces
Recycling reduction

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7) Climate Action Plan Checklist

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APPENDIX G:

County of San Diego CAP Compliance Checklist for Greenhouse Gas Analysis

PROJECT INFORMATION

Date: March 11, 2013

Project Number: 6153

Project Name: Lilac Hills Ranch

Project Applicant: Accretive LLC

GHG Specialist: William Maddux

Project Owner: Accretive LLC

Does this project meet the screening criteria listed in Table 3 of the County of San Diego's Guidelines for Determining Significance for Climate Change, or has the project demonstrated that it is below the Bright Line Threshold, as described in the Guidelines for Determining Significance?

☐ Yes ☒ No

If Yes, project must complete the following checklist and comply with one or more (or equivalent combination[1]) of the applicable Climate Action Plan (CAP) measures beyond any applicable County of San Diego (County) standards. Specify the measure(s) below.

If No, project must complete the following checklist and should comply with applicable measures listed below for the relevant project type. The project proponent must conduct a technical analysis to demonstrate that the project's design features, along with CAP measures, and, if necessary, additional measures, are incorporated to reduce emissions below the Bright Line Threshold, the Efficiency Threshold, or the Performance Threshold. The Applicability Table may be used as guidance for CAP measures, but any GHG-reducing measures may be included that achieve the Bright Line, Efficiency, or Performance Threshold.

Through the County's discretionary review process and completion of the CAP Compliance Checklist, the design features or mitigation measures applied to individual development projects are considered binding and enforceable, including those applied to projects with GHG emissions that are either above or below the Bright Line Threshold.

[1] A project must demonstrate compliance with a single CAP measure beyond any applicable County standards and requirements. If the project demonstrates one-half of one CAP measure and one-half of another CAP measure, or similar compliance with multiple CAP measures, the project may be determined to be equivalent to complying with one full measure. In these instances, the measure(s) will be subject to approval by the project reviewer. Construction-only projects that meet the Construction Screening Criteria do not need to implement a CAP measure.

General Guidance for Use in Determining Applicability of CAP Measures for Projects Under the Bright Line Threshold[1]

Project Type	CAP Measures														
	EI: Energy Efficiency for New Development	E2: Building Energy Retrofits	E3: Energy Star Appliances	E4: Smart Meters	R1: Solar Water Heating	R2: Alternative Energy Systems	LU1: Mixed-Use Development	TI:Increase Transit Use	T2: Increase Walking and Biking	T3: Increase Ridesharing	T4: Alternative Fuel Vehicles	LS1:Tree Planting	AI: Nitrogen Optimization	A2: Field Equipment Fuel Efficiency	A3: Agricultural Irrigation Pump Efficiency
New Residential	•		•		•	•									
New Commercial	•				•	•									
Industrial	•				•	•									
Mixed-Use	•		•		•	•									
Agriculture + Residential	• [2]	• [2]	•		•	•									
Other[3]	•	•	•		•	•									

[1] The determination of applicability will be made by the County Department of Planning and Land Use (DPLU) with the project applicant at the time of scoping/review; however, for most projects under the Bright Line Threshold, unchecked measures (e.g., as LU1, T1-4) will not result in measurable GHG emissions reductions and, therefore, will likely not be applicable at the project level.

[2] Depending on whether residential is new or existing, this measure may not apply.

[3] For other project types, project reviewer will determine which measures are applicable to the project.

CHECKLIST

Instructions: All projects must complete this checklist for the relevant project type and fill in "Details of Compliance." For projects below the Bright Line Threshold, a description of how the project will achieve conformance with the CAP measure is provided in "Description"; for projects above the Bright Line Threshold, the applicant may comply with each measure at any performance level, but must demonstrate achievement of the Bright Line Threshold, Efficiency Threshold, or Performance Threshold.

Type of Project: New Residential Specific Plan Project Number: 6153

CAP #	Measure	Description[2]	Details of Compliance	% Reduction (for Projects Exceeding the Brightline Threshold)	Percent of Measure compliance (for Projects under the Brightline Threshold)
E1	Energy Efficiency for New Development	10% of square footage (commercial/industrial) or 10% of units (residential) exceeds Title 24 (2008) standards by 15% for projects scoped through Dec. 31, 2014; 100% of square feet per unit exceeding Title 24 (2008) standards by 15% for projects scoped after Dec. 31, 2014	100% of square feet per unit will exceed Title 24 by 30%	Energy – electricity (2.3%) Reflect gains from the RPS.	
E2	Building Energy Retrofits (only for existing structures)	RESIDENTIAL: Achieve overall (across all units) 5% energy efficiency[3] COMMERCIAL: Achieve 12% overall lighting efficiency [4]	NA		
E3	Appliance Upgrades	Energy Star appliances in 95% of new residential units and 40% of existing residential units; appliances include light bulbs, clothes washers, dishwashers, and refrigerators	Energy Star appliances will be installed in 95% of residential units.	Captured in measure E1 and Energy – natural gas measure below.	

APPENDIX G: CAP COMPLIANCE CHECKLIST

CAP #	Measure	Description[2]	Details of Compliance	% Reduction (for Projects Exceeding the Brightline Threshold)	Percent of Measure compliance (for Projects under the Brightline Threshold)
E4	Smart Meters	100% of new construction shall use Smart Meters	100% of new construction will use Smart Meters	Captured in measure E1 and Energy – natural gas measure below.	
R1	Solar Water Heating	19% of overall water heating needs derived from solar	NA		
R2	Alternative Energy Systems	30% of residential electricity and 20% of commercial electricity generated from alternative energy systems	NA		
LU1	Mixed-Use Development	Project shall provide a mix of residential and resident-serving commercial and civic uses.	Non-residential uses will include neighborhood serving retail and restaurant uses, an elementary/middle school, church site, recreation center, neighborhood park, and a recycling collection center. A Fire Station may be included.	Captured in T2 percentages.	
T1	Increase Transit Use	Detail to be provided by applicant	NA		
T2	Increase Walking and Biking	Project shall provide a network of pedestrian and bicycle paths, in a complete and interconnected network.	The project will provide this interconnected network of pedestrian and bicycle paths.	7 % reduction (not including the statewide measures).	
T3	Increase Ridesharing	Detail to be provided by applicant	NA		
T4	Alternative-Fuel Vehicles	Detail to be provided by applicant	NA		

CAP #	Measure	Description[2]	Details of Compliance	% Reduction (for Projects Exceeding the Brightline Threshold)	Percent of Measure compliance (for Projects under the Brightline Threshold)
LS1	Tree Planting	Project will plant 35,000 trees (considered and additional category).	35,000 new trees.	Additional Category (6.7% - not included)	
AI	Nitrogen Optimization	Detail to be provided by applicant	NA		
A2	Field Equipment Fuel Efficiency	Detail to be provided by applicant	NA		
A3	Agriculture Irrigation Pump Efficiency	Detail to be provided by applicant	NA		

[2] Description details compliance with the CAP measure. Projects must meet an equivalent of one CAP measure as described here; for projects over the Bright Line Threshold, any level of compliance is acceptable that results in meeting the threshold, and the applicant must provide substantial evidence to support reduction.

[3] CAP measure includes 15% participation among existing buildings achieving 35% efficiency. At the project level, this translates to (0.15 x 0.35) approximately a 5% overall efficiency goal.

[4] CAP measure includes 30% participation among existing buildings achieving 40% efficiency. At the project level, this translates to (0.30 x 0.40) a 12% overall efficiency goal.

Other measures, not described in the CAP, which would achieve GHG reductions in the proposed project (for projects over the Bright Line Threshold). This includes reductions taken for statewide regulations[1]					
	Measure	Description	Details of Compliance	% Reduction of emissions	
	LEV III	Low Emissions Vehicle III statewide reduction	Will comply	2.4%	
	Tire Pressure Program	Tire Pressure Program statewide reduction	Will comply	0.6%	
	Energy – natural gas	Proposed reduction from modeling	Will comply	2.3%	
	Gas Fireplaces	Only Gas Fireplaces installed	Will comply	3.6%	
	Water reductions	Compliance with CALGreen – 20%	Will comply	0.8%	
	Solid waste reductions	Recycling facility on-site	Will comply	0.4%	

[1] Refer to the County of San Diego Guidelines for Determining Significance for Climate Change for methodology in applying statewide measures. The Performance Threshold includes 20% Renewable Portfolio Standard (RPS) and Pavley I as pre-mitigation; therefore, no additional credit may be taken for these measures by the project. The Bright Line and Efficiency Thresholds do not include statewide measures and, therefore, can be calculated for credit by the project.

Total Reduction % (for Projects Exceeding the Bright Line Threshold) Must Equal 16% or More	Compliance (for Projects Under the Bright Line Threshold) Must Equal 100% or More
19.3%*	

*Differences due to rounding.

8) Efficiency Threshold Evaluation

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Efficiency Threshold Evaluation

The implementing Efficiency Threshold states that:

> A proposed plan or project would have a cumulatively considerable contribution to climate change impacts if it would result in a net increase of construction and operational greenhouse gas emissions, either directly or indirectly, at a level exceeding 4.32 metric tons of CO2e per year, per service population.

As identified in the County Guidelines, "this threshold is designed to be used to evaluate the operational emissions for projects and plans that include residential, commercial, civic, light industrial development, or a mix of these uses" and by "focusing on per-unit rather than mass emissions levels . . . the efficiency approach allows lead agencies to assess whether any given project or plan would accommodate population and employment growth in a way that is consistent with the emissions limit established under AB 32" (County of San Diego 2012:25).

"Service population" is a term used to express the total population plus employment of proposed projects. For land development projects, the use of an efficiency approach that considers emissions per resident plus employee correlates with the activities that are accommodated by development: population growth and additional employment opportunities. As stated in the County Guidelines, development projects and plans do not *create* new population or employment (except temporary construction related employment), but rather *accommodate* population and employment growth.

As identified the "service population" calculation is based on the residential population and the employment population. The residential population for age restricted, single and multiple family dwelling units based on the average household size of 2.96, as reported in the most recent U.S. Census (SANDAG 2010). The residential population for the assisted living facility was assumed to be one resident per bed. This results in a residential population of approximately 5,369. The employment population is generally provided by a project applicant who has an idea of the future tenant or is the future tenant. Developing employment projections without knowledge of the future employer is difficult at best.

School employees can be calculated based local school district data and the teacher to student ratio for K-8 schools. However, as employees as administrative staff are not included in the student to teacher ratios to account for admin staff an assumption such as each school will have a principal, vice principal, an office staff per 250 students, a kitchen staff, and a janitorial staff must be made. Still to develop this projection, an assumption about the number of future elementary school students and the middle school students, would have to be made. As example, with an elementary with 600 students and a middle school with 150 students the schools would be estimated to have a total of 42 employees. However, from another source, education land uses are estimated to employee 300 people per square foot, which could result in over 120 employees for the schools (Snohomish County, *2007 Buildable Lands Report Employment Density Study*).

For general employment, such as for retail and hotel uses, there were no local or regional sources for San Diego County available. Therefore, a literature review of published employment density studies was conducted. Only a few agencies have issued employment data. These are based on a range of inputs, such as employee per square foot, per acre, per bed, per patient, or per room. Additionally, all these data sets are specific to the regions for which they were developed. As example, in the Southern California Association of Government's *2001 Employment Density Study Summary Report*, which include a five County study area, employment density in Retail Centers across the Counties ranged from 12.3 (126) to 20.18 (205) employees per acre depending on the County. Similarly, hotel and motel employment ranged widely by County from 10.5 (54) to 51.91 (265) per acres. Just considering these two categories the employment under this source would range from 180 to 470, a 260 percent difference.

Additionally, the project has many uncommon land uses, such as water reclamation, recycling, and assisted living facilities, which are not included in any of the evaluated employment data. Due to the level of speculation required to calculate the service population, the analysis under the efficiency threshold would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual impacts attributable the proposed project. However, for purposes of disclosure, a high and low range of the project service population has been calculated. Based solely on the Southern California Association of Government's *2001 Employment Density Study Summary Report*, the service population could range from 5,575 to 7,828.

Based on the project GHG analysis, the proposed "mitigated" project would emit 33,073.68 $MTCO_2E$ annually. Under the Efficiency Threshold, the analysis would only consider the project emissions defined under the Performance Threshold as "mitigated". Therefore, assuming a population range of 5,575 to 7,828 the per service population emission would range from 4.22 to 5.93 $MTCO_2E$. As the threshold is 4.32 $MTCO_2E$, due to variability of employment data and the lack of more local data, this analysis would produce conflicting results as to the significance of the project on GHG emissions which does not itself provide a meaningful or informative indicator of project impacts.

References Cited

San Diego Association of Governments (SANDAG)

2010 Population and Housing Estimates (2010), Population and Housing, Valley Center Community Plan Area, County Of San Diego. August.

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