

AIR QUALITY ASSESSMENT

Artis Assisted Living Facility Development City of San Marcos, CA

Prepared for:

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COMMON ACRONYMS

Air Quality Impact Assessments (AQIA)
Assembly Bill 32 (AB32)
California Air Resource Board (CARB)
California Ambient Air Quality Standards (CAAQS)
California Environmental Quality Act (CEQA)
Carbon Dioxide (CO₂)
Cubic Yards (CY)
Diesel Particulate Matter (DPM)
Environmental Protection Agency (EPA)
EPA Office of Air Quality Planning and Standards (OAQPS)
Hazardous Air Pollutants (HAPs)
Hydrogen Sulfide (H₂S)
International Residential Code (IRC)
Level of Service (LOS)
Low Carbon Fuel Standard (LCFS)
Methane (CH₄)
National ambient air quality standards (NAAQS)
Nitrous Oxide (N₂O)
Reactive Organic Gas (ROG)
Regional Air Quality Strategy (RAQS)
San Diego Air Basin (SDAB)
San Diego Air Pollution Control District (SDAPCD)
South Coast Air Quality Management District (SCAQMD)
Specific Plan Area (SPA)
State Implementation Plan (SIP)
Toxic Air Contaminants (TACs)
Vehicle Miles Traveled (VMT)

1.0 INTRODUCTION

1.1 Project Description

The project proposes to develop a 64-unit residential assisted living facility focused exclusively on memory care consisting of a 39,951 square foot two story building on an undeveloped lot within the City of San Marcos. All phases (i.e. grading, paving and construction) of the proposed Project are anticipated to start in 2020 and be fully operational in 2021. The project development plan is shown on Figure 1-A of this report.

Requested entitlements for the proposed Project includes a Specific Plan Amendment to the University Commons Specific Plan to modify the current designation on the project site from Light Industrial to Senior Residential and approval of a Site Development Plan.

1.2 Project Location

The Project site is located on the north side of San Elijo Road and east of Rancho Santa Fe Road. The Project site is an undeveloped 2.18 acre parcel. The Project site is bounded by Prestige Preschool and a recreational vehicle parking lot to the west, and Solaire Apartments to the south. A project vicinity map and location map are shown in Figure 1-B.

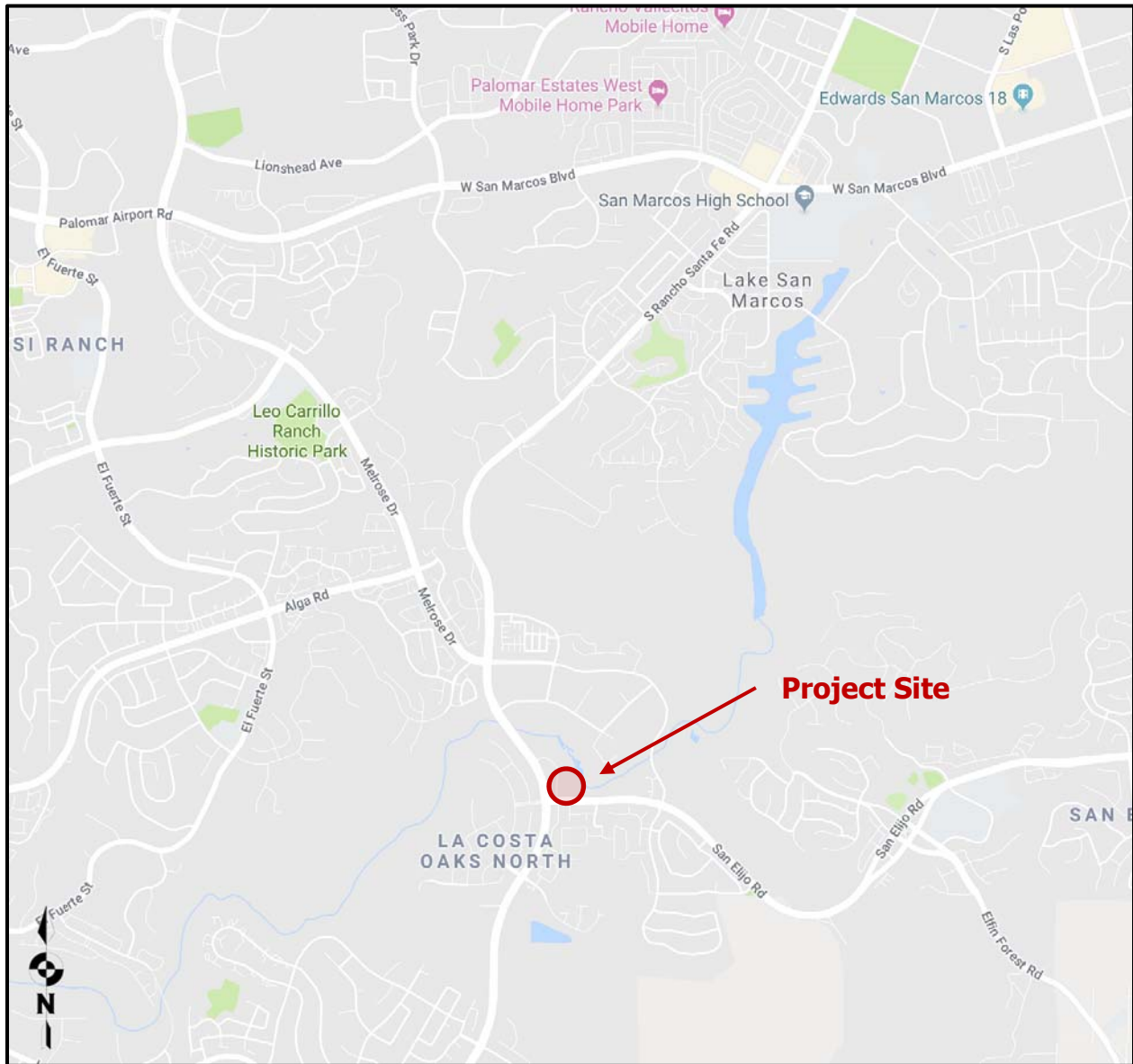
1.3 Purpose of this Study

The purpose of this Air Quality study is to determine potential air quality impacts (if any) that may be generated by construction, area or operational emissions from the proposed Project. Should impacts be determined, the intent of this study would be to recommend suitable mitigation measures to bring those impacts to a level that would be considered less than significant under the California Environmental Quality Act (CEQA).

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Figure 1-B: Project Vicinity Map



Source: (Google, 2018)

2.0 EXISTING ENVIRONMENTAL SETTING

2.1 Existing Setting

The Project site is located on San Elijo Road, east of Rancho Santa Fe Road within San Marcos, California. The existing site is currently undeveloped. The project site is generally depressed with steep topography along the adjacent roadway. Elevations range from approximately 395 feet to 425 feet above mean sea level. The existing site aerial map is shown in Figure 2-A below.

Figure 2-A: Existing Site Layout



Source: (Google Earth Pro, 2018)

2.2 Climate and Meteorology

Climate within the San Diego Air Basin (SDAB) area often varies dramatically over short geographical distances with cooler temperatures on the western coast gradually warming to the east as prevailing winds from the west heats up. Most of southern California is dominated by high-pressure systems for much of the year, which keeps San Diego mostly sunny and warm. Typically, during the winter months, the high-pressure system drops to the south and brings cooler, moister weather from the north. It is common for inversion layers to develop within high-pressure areas, which mostly define pressure patterns over the SDAB. These inversions are caused when a thin layer of the atmosphere increases in temperature with height. An inversion acts like a lid preventing vertical mixing of air through convective overturning. The City of San Marcos is within the SDAB so the same generalizations are true for the City.

Meteorological trends within the City of San Marcos produce daytime highs typically ranging between 69°F in the winter to approximately 85°F in the summer with August usually being the hottest month. Median temperatures range from approximately 55°F in the winter to approximately 74°F in the summer. The average humidity is approximately 64% in the winter and about 74% in the summer (City-Data, 2018).

2.3 Regulatory Standards

2.3.1 Federal Standards and Definitions

The Federal Air Quality Standards were developed per the requirements of The Federal Clean Air Act, which is a federal law that was passed in 1970 and further amended in 1990. This law provides the basis for the national air pollution control effort. An important element of the act included the development of national ambient air quality standards (NAAQS) for major air pollutants.

The Clean Air Act established two types of air quality standards otherwise known as primary and secondary standards. **Primary Standards** set limits to protect public health which includes sensitive populations such as asthmatics, children and elderly. **Secondary Standards** set limits to protect public welfare and include protection against decreased visibility, damage to animals, crops, vegetation and buildings.

The Environmental Protection Agency's (EPA Office of Air Quality Planning and Standards (OAQPS) has set National Ambient Air Quality Standards for principal pollutants, which are called "criteria" pollutants. These pollutants are defined below:

1. **Carbon Monoxide (CO):** *is a colorless, odorless, and tasteless gas and is produced from the partial combustion of carbon-containing compounds, notably in internal-combustion engines. Carbon monoxide usually forms when there is a reduced availability of oxygen present during the combustion process. Exposure to CO near the levels of the ambient air quality standards can lead to fatigue, headaches, confusion, and dizziness. CO interferes with the blood's ability to carry oxygen.*
2. **Lead (Pb):** *is a potent neurotoxin that accumulates in soft tissues and bone over time. The major sources of lead emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Because lead is only slowly excreted, exposures to small amounts of lead from a variety of sources can accumulate to harmful levels. Effects from inhalation of lead near the level of the ambient air quality standard include impaired blood formation and nerve conduction. Lead can adversely affect the nervous, reproductive, digestive, immune, and blood-forming systems. Symptoms can include fatigue, anxiety, short-term memory loss, depression, weakness in the extremities, and learning disabilities in children.*
3. **Nitrogen Dioxide (NO₂):** *is a reactive, oxidizing gas capable of damaging cells lining the respiratory tract and is one of the nitrogen oxides emitted from high-temperature combustion, such as those occurring in trucks, cars, power plants, home heaters, and gas stoves. In the presence of other air contaminants, NO₂ is usually visible as a reddish-brown air layer over urban areas. NO₂ along with other traffic-related pollutants is associated with respiratory symptoms, respiratory illness and respiratory impairment. Studies in animals have reported biochemical, structural, and cellular changes in the lung when exposed to NO₂ above the level of the current state air quality standard. Clinical studies of human subjects suggest that NO₂ exposure to levels near the current standard may worsen the effect of allergens in allergic asthmatics, especially in children.*
4. **Particulate Matter (PM₁₀ or PM_{2.5}):** *is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary in shape, size and chemical composition, and can be made up of multiple materials such as metal, soot, soil, and dust. PM₁₀ particles are 10 microns (µm) or less and PM_{2.5} particles are 2.5 (µm) or less. These particles can contribute significantly to regional haze and reduction of visibility in California. Exposure to PM levels exceeding current air quality standards increases the risk of allergies such as asthma and respiratory illness.*
5. **Ozone (O₃):** *is a highly oxidative unstable gas capable of damaging the linings of the respiratory tract. This pollutant forms in the atmosphere through reactions between chemicals directly emitted from vehicles, industrial plants, and many other sources. Exposure to ozone above ambient air quality standards can lead to human health effects such as lung inflammation, tissue damage and impaired lung functioning. Ozone can also damage materials such as rubber, fabrics and plastics.*

6. **Sulfur Dioxide (SO₂):** *is a gaseous compound of sulfur and oxygen and is formed when sulfur-containing fuel is burned by mobile sources, such as locomotives, ships, and off-road diesel equipment. SO₂ is also emitted from several industrial processes, such as petroleum refining and metal processing. Effects from SO₂ exposures at levels near the one-hour standard include bronchoconstriction accompanied by symptoms, which may include wheezing, shortness of breath and chest tightness, especially during exercise or physical activity. Children, the elderly, and people with asthma, cardiovascular disease or chronic lung disease (such as bronchitis or emphysema) are most susceptible to these symptoms. Continued exposure at elevated levels of SO₂ results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality.*

2.3.2 State Standards and Definitions

The State of California Air Resources Board (ARB) sets the laws and regulations for air quality at State level. The California Ambient Air Quality Standards (CAAQS) are either the same as or more restrictive than the NAAQS in that the State standards also restrict four additional contaminants. Table 2.1 on the following page identifies both the NAAQS and CAAQS. The additional contaminants as regulated by the CAAQS are defined below:

1. **Visibility Reducing Particles:** *Particles in the Air that obstruct the visibility.*
2. **Sulfates:** *are salts of Sulfuric Acid. Sulfates occur as microscopic particles (aerosols) resulting from fossil fuel and biomass combustion. They increase the acidity of the atmosphere and form acid rain.*
3. **Hydrogen Sulfide (H₂S):** *is a colorless, toxic and flammable gas with a recognizable smell of rotten eggs or flatulence. H₂S occurs naturally in crude petroleum, natural gas, volcanic gases, and hot springs. Usually, H₂S is formed from bacterial breakdown of organic matter. Exposure to low concentrations of hydrogen sulfide may cause irritation to the eyes, nose, or throat. It may also cause difficulty in breathing for some asthmatics. Brief exposures to high concentrations of hydrogen sulfide (greater than 500 ppm) can cause a loss of consciousness and possibly death.*
4. **Vinyl Chloride:** *also known as chloroethene and is a toxic, carcinogenic, colorless gas with a sweet odor. It is an industrial chemical mainly used to produce its polymer, polyvinyl chloride (PVC).*

Table 2.1: Ambient Air Quality Standards

Ambient Air Quality Standards						
Pollutant	Average Time	California Standards ¹		Federal Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone (O ₃) ⁸	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	-	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)		
Respirable Particulate Matter (PM ₁₀) ⁹	24 Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		-		
Fine Particulate Matter (PM _{2.5}) ⁹	24 Hour	No Separate State Standard		35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	12.0 µg/m ³	15 µg/m ³	
Carbon Monoxide (CO)	8 hour	9.0 ppm (10mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m ³)	-	Non-Dispersive Infrared Photometry
	1 hour	20 ppm (23 mg/m ³)		35 ppm (40 mg/m ³)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		-		
Nitrogen Dioxide (NO ₂) ¹⁰	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m ³) ⁸	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.18 ppm (339 µg/m ³)		0.100 ppm ⁸ (188/ µg/m ³)	-	
Sulfur Dioxide (SO ₂) ¹¹	Annual Arithmetic Mean	-	Ultraviolet Fluorescence	0.030 ppm ¹⁰ (for Certain Areas)	-	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method) ⁹
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm ¹⁰ (for Certain Areas) (See Footnote 9)	-	
	3 Hour	-		-	0.5 ppm (1300 µg/m ³)	
	1 Hour	0.25 ppm (655 µg/m ³)		75 ppb (196 µg/m ³)	-	
Lead ^{12,13}	30 Day Average	1.5 µg/m ³	Atomic Absorption	-	Same as Primary Standard	-
	Calendar Quarter	-		1.5 µg/m ³		
	Rolling 3-Month Average	-		0.15 µg/m ³		
Visibility Reducing Particles	8 Hour	See footnote 13				
Sulfates	24 Hour	25 µg/m ³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence			
Vinyl Chloride ¹²	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography			

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m3 is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. Any equivalent procedure which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

7. Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.

8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 µg/m3 to 12.0 µg/m3 . The existing national 24- hour PM2.5 standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15 µg/m3 . The existing 24-hour PM10 standards (primary and secondary) of 150 µg/m3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

11. On June 2, 2010, a new 1-hour SO2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

12. The ARB has identified lead and vinyl chloride as "toxic air contaminants" with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Source: (California Air Resources Board, 05/04/2016)

2.3.3 Regional Standards

The State of California has 35 specific air districts, which are each responsible for ensuring that the criteria pollutants are below the NAAQS and CAAQS. Air basins that exceed either the NAAQS or the CAAQS for any criteria pollutants are designated as “non-attainment areas” for that pollutant. Currently, there are 15 non-attainment areas for the federal ozone standard and two non-attainment areas for the PM_{2.5} standard and many areas are in non-attainment for PM₁₀ as well. The state therefore created the California State Implementation Plan (SIP), which is designed to provide control measures needed for California Air basins to attain ambient air quality standards.

The San Diego Air Pollution Control District (SDAPCD) is the government agency which regulates sources of air pollution within San Diego County. Therefore, the SDAPCD developed a Regional Air Quality Strategy (RAQS) to provide control measures to try to achieve attainment status. Currently, San Diego County is in “non-attainment” status for federal and State O₃ and the State PM₁₀ and PM_{2.5} however, an attainment plan is only available for O₃ as the state does not set a requirement for attainment of PM standards. The RAQS was adopted in 1992 and has been updated as recently as 2016 which was the latest update incorporating minor changes to the prior 2009 update.

The 2016 update mostly summarizes how the 2009 update has lowered VOC and NOX emissions and clarifies and enhances emission reductions by introducing for discussion three new VOC and four new NOX reduction measures. The criteria pollutant standards are generally attained when each monitor within the region has had no exceedances during the previous three calendar years. A complete listing of the current attainment status with respect to both federal and state nonattainment status by pollutants for San Diego County is shown in Table 2.2 on the following page.

The air quality emission estimates used to develop the RAQS is largely based on population and traffic predictions by the San Diego Association of Governments (SANDAG). Projects that produce less growth than predicted by SANDAG would generally conform to the RAQS and projects that create more growth than projected by SANDAG may create a significant impact assuming the project either produces unmitigable emission generation in excess of the regional standards. Also, the project would be considered a significant impact if the project produces cumulative impacts.

Table 2.2: San Diego County Air Basin Attainment Status by Pollutant

San Diego County Air Basin Attainment Status by Pollutant		
Criteria Pollutant	Federal Designation	State Designation
Ozone (8-Hour)	Nonattainment	Nonattainment
Ozone (1-Hour)	Attainment *	Nonattainment
Carbon Monoxide	Attainment	Attainment
PM10	Unclassifiable **	Nonattainment
PM2.5	Attainment	Nonattainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	No Federal Standard	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Visibility	No Federal Standard	Unclassified
* The federal 1-hour standard of 12 ppm was in effect from 1979 through June 15, 2005. The revoked standard is referenced here because it was employed for such a long period and because this benchmark is addressed in State Implementation Plans. ** At the time of designation, if the available data does not support a designation of attainment or nonattainment, the area is designated as unclassifiable. Source: (SDAPCD, 2018)		

2.4 California Environmental Quality Act (CEQA) Significance Thresholds

The California Environmental Quality Act has provided a checklist to identify the significance of air quality impacts. These guidelines are found in Appendix G of the CEQA guidelines and are as follows:

AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the Project:

- A: Conflict with or obstruct implementation of the San Diego Regional Air Quality Strategy (RAQS) or applicable portions of the State Implementation Plan (SIP)?
- B: Result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation?
- C: Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable Federal or State ambient air quality standard (PM10, PM2.5 or exceed quantitative thresholds for O3 precursors, oxides of nitrogen [NOX] and Volatile Organic Compounds [VOCs])?
- D: Expose sensitive receptors (including, but not limited to, schools, hospitals, resident care facilities, or day-care centers) to substantial pollutant concentrations?
- E: Create objectionable odors affecting a substantial number of people?

2.5 Applicable Air Quality Screening Thresholds

The SDAPCD does not provide specific numeric thresholds for determining the significance of air quality impacts under CEQA. However, the SDAPCD does specify Air Quality Impact Analysis (AQIA) trigger levels for new, modified, or relocated stationary sources (SDAPCD Rules 20.1, 20.2, and 20.3). These AQIA trigger levels do not generally apply to construction, mobile sources, or general land development projects; however, for comparative purposes, these levels are used to evaluate the increased emissions that would be discharged to the SDAB if the proposed project were approved. SDAPCD Rules 20.2 and 20.3 do not specify thresholds for Volatile Organic Compounds (VOC). However, Rule 20.1 equates VOC and oxides of nitrogen (NOX) emissions and applies the same limitation on VOC and NOX emissions in ozone non-attainment areas; therefore, the VOC threshold is set equal to the NOX threshold. Should emissions be found to exceed these thresholds, additional modeling is required to demonstrate that the project's total air quality impacts are below the state and federal ambient air quality standards. These screening thresholds for construction and daily operations are shown in Table 2.3 below.

SDAPCD Rule 20.2 – Air Quality Impact Assessment Screening Thresholds

The SDAPCD has established trigger levels in Rule 20.2 for new or modified stationary sources to determine when an air quality impact analysis (AQIA) was required. The County's Guidelines for Determining Significance and Report Format and Content Requirements utilize the SDAPCD trigger levels as screening level thresholds for use in all County related Air Quality Impact reports and for determining CEQA air quality impacts. These screening criteria can be used to demonstrate that a project's total emissions would not result in a significant impact as defined by CEQA. Also, since SDAPCD does not identify a trigger level for Volatile Organic Compounds (VOCs), it is acceptable to use the Coachella Valley VOC threshold from South Coast Air Quality Management District. Should emissions be found to exceed these thresholds, additional modeling is required to demonstrate that the project's total air quality impacts are below the state and federal ambient air quality standards. These screening thresholds for construction and daily operations are shown in Table 2.3 on the following page.

Non Criteria pollutants such as Hazardous Air Pollutants (HAPs) or Toxic Air Contaminants (TACs) are also regulated by the SDAPCD. Rule 1200 (Toxic Air Contaminants - New Source Review) adopted on June 12, 1996, requires evaluation of potential health risks for any new, relocated, or modified emission unit which may increase emissions of one or more toxic air contaminants. The rule requires that projects that propose to increase cancer risk to between 1 and 10 in one million need to implement toxics best available control technology (T-BACT) or impose the most effective emission limitation, emission control device or control technique to reduce the cancer risk. At no time shall the project increase the cancer risk to over 10 in

one million. At no time shall the project increase the cancer risk to over 10 in one million or a health hazard index (chronic and acute) greater than one. Projects creating cancer risks less than one in one million are not required to implement T-BACT technology.

Table 2.3: Screening Level Thresholds for Criteria Pollutants

Pollutant	Total Emissions (Pounds per Day)
Construction Emissions	
Respirable Particulate Matter (PM ₁₀ and PM _{2.5})	100 and 55
Nitrogen Oxide (NO _x)	250
Sulfur Oxide (SO _x)	250
Carbon Monoxide (CO)	550
Volatile Organic Compounds (VOCs)	75
Reactive Organic Gases (ROG) SCAQMD	75
Operational Emissions	
Respirable Particulate Matter (PM ₁₀ and PM _{2.5})	100 and 55
Nitrogen Oxide (NO _x)	250
Sulfur Oxide (SO _x)	250
Carbon Monoxide (CO)	550
Lead and Lead Compounds	3.2
Volatile Organic Compounds (VOCs)	75
Reactive Organic Gases (ROG) SCAQMD	75

The U.S. Environmental Protection Agency (U.S. EPA) uses the term Volatile Organic Compounds (VOC) and the California Air Resources Board's (CARB's) Emission Inventory Branch (EIB) uses the term Reactive Organic Gases (ROG) to essentially define the same thing. There are minor deviations between compounds that define each term however for purposes of this study we will assume they are essentially the same due to the fact SCAQMD interchanges these words and because CalEEMod directly calculates ROG in place of VOC.

2.6 Local Air Quality

Criteria pollutants are measured continuously throughout the San Diego Air Basin. This data is used to track ambient air quality patterns throughout the County. As mentioned earlier, this data is also used to determine attainment status when compared to the NAAQS and CAAQS. The SDAPCD is responsible for monitoring and reporting monitoring data. The District operates 10 monitoring sites, which collect data on criteria pollutants. The proposed development project is closest to the Escondido Monitoring station which is located

approximately 8.83 miles from the Project site however some pollutant emissions from Escondido aren't monitored or reported. For these pollutants, emissions from the next closest monitoring location is Camp Pendleton about 13 miles away. Table 2.4 on the following page identifies the criteria pollutants monitored at the aforementioned station.

Four additional sites collect meteorological data which is used by the District to assist with pollutant forecasting, data analysis and characterization of pollutant transport. SDAPCD published the five-year air quality summary for all of the monitoring stations (SDAPCD, 2016).

Table 2.4: Three-Year Ambient Air Quality Summary near the Project Site

Pollutant	Closest Recorded Ambient Monitoring Site	Averaging Time	CAAQS	NAAQS	2015	2016	2017
O ³ (ppm)	Camp Pendleton or Escondido Monitoring Station (Escondido Location Identified with *)	1 Hour	0.09 ppm	-	0.09	0.08	0.09
		8 Hour	0.070 ppm	0.070 ppm	0.08	0.07	0.08
* PM ₁₀ (µg/m ³)		24 Hour	50 µg/m ³	150 µg/m ³	30	-	-
		Annual Arithmetic Mean	20 µg/m ³	-	19.4	-	-
* PM _{2.5} (µg/m ³)		24 Hour	-	35 µg/m ³	29.4	-	-
		Annual Arithmetic Mean	12 µg/m ³	15 µg/m ³	8.6	-	-
NO ₂ (ppm)		Annual Arithmetic Mean	0.030 ppm	0.053 ppm	0.006	0.006	0.006
		1 Hour	0.18 ppm	-	0.060	0.072	0.063
CO (ppm)		1 Hour	20 ppm	35 ppm	3.1	-	-
		8 Hour	9 ppm	9 ppm	2.0	-	-

3.0 METHODOLOGY

3.1 Construction Emissions Calculations

Air Quality impacts related to construction and daily operations were calculated using the latest CalEEMod air quality model, which was developed by ENVIRON International Corporation for South Coast Air Quality Management District (SCAQMD). The construction module in CalEEMod is used to calculate the emissions associated with the construction of the project and uses methodologies presented in the US EPA AP-42 document with emphasis on Chapter 11.9. The CalEEMod input/output model is shown in **Attachment A** to this report.

The SCREEN3 dispersion model is used to determine the concentration for air pollutants at any location near the pollutant generator. Additionally, the model will predict the maximum exposure distance and concentrations. The SCREEN3 input/output file for the proposed project is shown in **Attachment B** at the end of this report. The worst case exhaust emissions generated from the Project from construction equipment was utilized and calculated within the CalEEMod model.

Once the dispersed concentrations of diesel particulates are estimated in the surrounding air, they are used to evaluate estimated exposure to people. Exposure is evaluated by calculating the dose in milligrams per kilogram body weight per day (mg/kg/d). For residential exposure, the breathing rates are determined for specific age groups, so inhalation dose (Dose-air) is calculated for each of these age groups, 3rd trimester, 0<2, 2<9, 2<16, 16<30 and 16-70 years. The following algorithms calculate this dose for exposure through the inhalation pathways. The worst case cancer risk dose calculation is defined in Equation 1 (OEHHA, 2015):

Equation 1

$$Dose_{air} = C_{air} * (BR/BW) * A * EF * (1 \times 10^{-6})$$

Dose _{air}	=	Dose through inhalation (mg/kg/d)
C _{air}	=	Concentration in air (µg/m ³) Annual average DPM concentration in µg/m ³ -SCREEN3 predicts a 1-hr concentration and is corrected to an annual average by multiplying the 1-hr average by 0.08 (US EPA, 1992)
BR/BW	=	Daily breathing rate normalized to body weight (L/kg BW-day). See Table I.2 for the daily breathing rate for each age range.
A	=	Inhalation absorption factor (assumed to be 1)
EF	=	Exposure frequency (unitless, days/365 days)
1x10 ⁻⁶	=	Milligrams to micrograms conversion (10 ⁻³ mg/ µg), cubic meters to liters conversion (10 ⁻³ m ³ /l)

Once the dose is determined then you must calculate the cancer risk. The average daily inhalation dose (mg/kg-day) multiplied by the cancer potency factor (mg/kg-day)⁻¹ will give the inhalation cancer risk (unitless), which is an expression of the chemical's cancer risk during

a 70-year lifespan of exposure. For example, an inhalation cancer risk of 5×10^{-6} is the same as stating that an individual has an estimated probability of developing cancer from their exposure of 5 chances per million people exposed.

Cancer risk is calculated by multiplying the daily inhalation or oral dose, by a cancer potency factor, the age sensitivity factor, the frequency of time spent at home and the exposure duration divided by averaging time, to yield the excess cancer risk. As described below, the excess cancer risk is calculated separately for each age grouping and then summed to yield cancer risk for any given location. Specific factors as modeled are shown within the project models attached to this report. The worst case cancer risk calculation is defined in Equation 2 below (OEHHA, 2015):

Equation 2 $RISK_{inh-res} = DOSE_{air} \times CPF \times ASF \times ED/AT \times FAH$

$RISK_{inh-res}$	=	Residential inhalation cancer risk
$DOSE_{air}$	=	Daily inhalation dose (mg/kg-day)
CPF	=	Inhalation cancer potency factor (mg/kg-day ⁻¹)
ASF	=	Age sensitivity factor for a specified age group (unitless)
ED	=	Exposure duration (in years) for a specified age group
AT	=	Averaging time for lifetime cancer risk (years)
FAH	=	Fraction of time spent at home (unitless)

OEHHA recommends that an exposure duration (residency time) of 30 years be used to estimate individual cancer risk for the Maximally Exposed Individual Resident (MEIR). OEHHA also recommends that the 30-year exposure duration be used as the basis for public notification and risk reduction audits and plans.

Exposure durations of 9-years and 70-years are also recommended to be evaluated for the MEIR to show the range of cancer risk based on residency periods. If a facility is notifying the public regarding cancer risk, the 9-and 70-year cancer risk estimates are useful for people who have resided in their current residence for periods shorter and longer than 30 years.

Non-Cancer risks or risks defined as chronic or acute are also known with respect to DPM and are determined by the hazard index. To calculate hazard index, DPM concentration is divided by its Reference Exposure Levels (REL). Where the total equals or exceeds one, a health hazard is presumed to exist. RELs are published by the Office of Environmental Health Hazard Assessment (OEHHA, 2014). Diesel Exhaust has a REL of $5 \mu\text{g}/\text{m}^3$ and targets the respiratory system.

3.2 Construction Assumptions

The site is currently vacant. The project would start grading early 2020 with utility infrastructure and construction to start shortly thereafter. Earthwork activities for the project include 250 cubic yard (cy) of cut and 24,443 cy of fill material. Construction of all the assisted living facility would be expected in just over one year. As a design feature, the project's construction contractor will utilize Tier IV rated diesel construction equipment to minimize diesel particulates from construction equipment. Table 3.1 below describes the construction equipment and durations. All material haulage was modeled using defaults within CalEEMod.

Table 3.1: Expected Construction Equipment

Equipment Identification	Proposed Start	Proposed Completion	Quantity	Work Days
Site Preparation	01/01/2020	01/07/2020		5
Graders			1	
Rubber Tired Dozers			1	
Grading	01/08/2020	01/21/2020		10
Excavators			1	
Graders			1	
Rubber Tired Dozers			1	
Paving	01/21/2020	01/29/2020		7
Pavers			1	
Paving Equipment			1	
Rollers			2	
Building Construction	01/30/2020	01/13/2021		250
Cranes			1	
Forklifts			2	
Generator Sets			1	
Welders			3	
Architectural Coating	06/01/2020	01/13/2021		163
Air Compressors			1	
This equipment list is based upon equipment inventory within CALEEMOD 2016.3.2.				

3.3 Operational Emissions

Once construction is completed the proposed project would generate emissions from daily operations which would include sources such as Area, Energy, Mobile, Waste and Water uses, which are also calculated within CalEEMod. Area Sources include consumer products, landscaping and architectural coatings as part of regular maintenance. Energy sources would be from uses such as onsite natural gas use. The Operational model results are also shown in **Attachment A** at the end of this report.

Using SANDAG traffic generations rates for the Nursing/Convalescent there will be 192 daily trips or an average of 3 per unit (64 X 3) (SANDAG 2002). However, it should be noted that the due to the nature of the facility proposed (a memory-care facility) it is not anticipated that residents will be driving, so the actual trip generation is likely to be less. There will be 23 employees at the peak shift with limited visitors and deliveries. However, because SANDAG does not provide trip generation for memory care facilities, the rate for Nursing/Convalescent use is used in the analysis and would be considered very conservative. These traffic numbers were utilized within the CalEEMod analysis.

The model also estimates emission predictions for ROG, NO_x, CO, SO₂, PM₁₀ and PM_{2.5} for area source assumptions. Additionally, it was assumed that an average of 10% of the structural surface area will be re-painted each year, the project would not install hearth options (fireplaces) within the development and will install solar to offset electrical usage.

Finally, CalEEMod includes landscaping and consumer product assumptions which would apply to this project. Consumer product emissions are generated by a wide range of product categories, including air fresheners, automotive products, household cleaners, and personal care products. Emissions associated with these products primarily depend on the increased population associated with residential development.

3.4 Odor Impacts

Potential onsite odor generators would include short-term construction odors from activities such as paving and possibly painting. Given this, short-term construction odors would not be considered an impact. Also, since the project is a residential development, no operational odor sources are expected.

4.0 FINDINGS

4.1 Construction Findings

The project would start grading early 2020 with utility infrastructure and construction to start shortly thereafter. Construction of all the assisted living facility would be expected in just over one year. The following design features were assumed within the CalEEMod analysis:

- *Construction Design Feature 1: all heavy diesel construction equipment will be classified as Tier IV.*
- *Construction Design Feature 2: In accordance with Rule 67 of the California Air Resource Board, only Low VOC paints shall be utilized onsite.*
- *Best Management Practice 1: Comply with SDAPCD's fugitive dust rules and fugitive dust control measures which will be provided by the City of San Marcos.*

Table 4.1 shows the expected construction emissions. Based on the cumulative totals, Air Quality impacts would not be expected.

Table 4.1: Expected Construction Emissions Summary

Year	ROG	NO _x	CO	SO ₂	PM ₁₀ (Dust)	PM ₁₀ (Exhaust)	PM ₁₀ (Total)	PM _{2.5} (Dust)	PM _{2.5} (Exhaust)	PM _{2.5} (Total)
2020	5.47	46.37	31.97	0.16	9.35	0.15	9.51	4.16	0.15	4.30
2021	5.46	4.71	16.65	0.03	0.50	0.01	0.51	0.13	0.01	0.14
Significance Threshold (lb/day)	75	250	550	250	-	-	100	-	-	55
SDAPCD Impact?	No	No	No	No	-	-	No	-	-	No

4.2 Health Risk

Based upon the air quality modeling, worst-case onsite PM₁₀ from onsite construction exhaust would cumulatively produce 0.00068 tons over the construction duration (378-calendar days) or an average of 1.89×10^{-5} grams/second. The average emission rate over the grading area is 2.14×10^{-9} g/m²/s, which was calculated as follows:

$$\frac{1.89 \times 10^{-5} \frac{\text{grams}}{\text{second}}}{2.18 \text{ acres} * 4,046 \frac{\text{meters}^2}{\text{acre}}} = 2.14 \times 10^{-9} \frac{\text{grams}}{\text{meters}^2 \text{ second}}$$

Utilizing the SCREEN3 dispersion model, we find that the peak maximum 1-hr concentration is 0.032 µg/m³ during the worst-case construction period. Therefore, utilizing the risk equation identified above in Section 3.1, the inhalation cancer risk is 7.11 at the point of maximum exposure 75 meters away which is less than 10 in one million people exposed. The calculations for a TIER IV equipped construction equipment scenario is shown in **Attachment C** to this report.

4.3 Odor Impact Findings

Potential onsite odor generators would include short-term construction odors from activities such as paving and possibly painting. Given this, short-term construction odors would not be considered an impact. Also, the proposed project would not be expected to generate operational impacts since the project is residential in nature.

4.4 Operational Findings

This analysis assumes 192 daily trips once the project is constructed based on SANDAG Trip Generation models (SANDAG, 2002), however, as discussed in Section 3.3., above, the likely trip generation numbers will be less, due to the fact future residents of the project will not be driving. The CALEEMOD 2016.3.2. The Project traffic trips distances are based on an average trip distance of 5.54 miles per the equivalent average trip distance within the County of San Diego which is based on a fleetwide average within EMFAC 2014 for the 2022 annual scenario. Based on this, the total daily VMT within the county would be 83,903,133 miles or over 15,155,468.09 trips and is shown in in **Attachment D** to this report.

The expected daily pollutant generation can be calculated utilizing the product of the average daily miles traveled and the expected emissions inventory calculated by CALEEMOD 2016.3.2 utilizing emissions from EMFAC2014 and can be seen in Table 4.2 on the following page. Based upon these calculations, the proposed project would not generate operational air quality impacts.

Table 4.2: Daily Pollutant Generation

	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Summer Scenario						
Area Source Emission Estimates Mitigated (Lb/Day)	1.749	0.061	5.292	0.000	0.029	0.029
Energy Emission Estimates Mitigated (Lb/Day)	0.014	0.120	0.051	0.001	0.010	0.010
Mobile Emission Estimates Mitigated (Lb/Day)	0.287	1.085	2.801	0.009	0.737	0.202
Total (Lb/Day)	2.051	1.267	8.144	0.010	0.775	0.241
Screening Level Thresholds	75	250	550	250	100	55
Significant?	No	No	No	No	No	No
Winter Scenario						
Area Source Emission Estimates (Lb/Day)	1.749	0.061	5.292	0.000	0.029	0.029
Energy Emission Estimates (Lb/Day)	0.014	0.120	0.051	0.001	0.010	0.010
Mobile Emission Estimates (Lb/Day)	0.279	1.107	2.832	0.008	0.737	0.202
Total (Lb/Day)	2.042	1.289	8.175	0.010	0.776	0.241
Screening Level Thresholds	75	250	550	250	100	55
Significant?	No	No	No	No	No	No
Daily pollutant generation assumes trip distances within CalEEMod						

4.5 Cumulative Impacts

The property is zoned light industrial in the University Commons Specific Plan Area. A specific plan amendment to senior residential in the SPA will be requested to allow for an assisted living facility to be allowed in this zone. Based on the same assumptions using SANDAG trip generations, an industrial/business park would generate 200 trips per acre (SANDAG, 2002). An industrial project at this site could generate over 400 trips which would exceed the 192 trips proposed within this project. Based on this, no cumulative impacts would be expected.

Based on this project description and the comparative analysis regarding trip generation, the project intensity and density would be less than the site's current General Plan designation allows. The project is therefore considered to be consistent with the County's Regional Air Quality Strategy (RAQS) and would comply with the State's air quality State Implementation Plan (SIP). Finally, since no direct construction air quality impacts are expected, no cumulative impacts are expected.

4.6 Conclusion of Findings

During construction of the proposed Project, fugitive dust emissions will be expected during grading and equipment usage however, these emissions would not exceed City thresholds and would not be considered an impact. The project has been designed and planned by incorporating design elements and best management practices which are a condition of approval to the project as shown below:

- *Construction Design Feature 1: all heavy diesel construction equipment will be classified as Tier IV.*
- *Construction Design Feature 2: In accordance with Rule 67 of the California Air Resource Board, only Low VOC paints shall be utilized onsite (100 g/l or less).*
- *Best Management Practice 1: Comply with SDAPCD's fugitive dust rules and fugitive dust control measures which will be provided by the City of San Marcos.*

Additionally, emissions will be generated from both area and operational sources by the proposed Project which are the result of Project generated traffic, landscaping maintenance equipment, consumer products, and annual maintenance and painting to name a few. Impacts are not expected during operations. This analysis assumes the project would not install hearth options within the development.

Finally, the proposed Project will modify zoning to allow senior residential. The proposed 64-unit assisted living use would generate fewer vehicular trips than the currently allowed uses under the City's General Plan for a light industrial use. Therefore, since the proposed project would have a decreased vehicular intensity, the project would be consistent with the Regional Air Quality Strategy (RAQS) and would comply with the states air quality State Implementation Plan (SIP). Given this, no cumulative impacts are expected.

5.0 REFERENCES

- California Air Resources Board. (05/04/2016). www.arb.ca.gov. Retrieved from Ambient Air Quality Standards: <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>
- City-Data. (2018). *San Marcos City Data*. Retrieved 2015, from <http://www.city-data.com/city/San-Marcos-California.html#b>
- Google. (2018). Retrieved 2018, from maps.google.com
- OEHHA. (2014). *Air Toxicology and Epidemiology*. Retrieved 2014, from All OEHHA Acute, 8-hour and Chronic Reference Exposure Levels (chRELs) as of June 2014: <http://www.oehha.ca.gov/air/allrels.html>
- OEHHA. (2015). *Air Toxics Hot Spots Program - Risk Assessment Guidelines - Guidance Manual for Preparation of Health Risk Assessments*. OEHHA.
- Pacific Coast Civil, Inc. (2018). *Conceptual Site Plan*.
- SANDAG. (2002). *(NOT SO) BRIEF GUIDE OF VEHICULAR TRAFFIC GENERATION RATES FOR THE SAN DIEGO REGION*. Retrieved from http://sandiegohealth.org/sandag/sandag_pubs_2009-7-25/publicationid_1140_5044.pdf
- SDAPCD. (2015). *5 Year Summary 2009-2013*. Retrieved 2015, from <http://www.sdapcd.org/info/reports/5-year-summary.pdf>
- SDAPCD. (2018). Retrieved 2018, from <https://www.sdapcd.org/content/sdc/apcd/en/air-quality-planning/attainment-status.html>
- US EPA. (1992). *Screening Procedures for Estimating the Air Quality Impact of Stationary Sources Revised*. US EPA. Retrieved from http://www.epa.gov/scram001/guidance/guide/EPA-454R-92-019_OCR.pdf

ATTACHMENT A

CalEEMod

64-Unit Senior Care Facility - San Marcos - San Diego County, Summer

64-Unit Senior Care Facility - San Marcos

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Congregate Care (Assisted Living)	64.00	Dwelling Unit	2.18	64,000.00	183

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2021
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	450.81	CH4 Intensity (lb/MWhr)	0.018	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

64-Unit Senior Care Facility - San Marcos - San Diego County, Summer

Project Characteristics - 2017 RPS Achieved

Land Use - 2.18 acres

Construction Phase - Construction Schedule

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Proposed Equipment

Off-road Equipment -

Off-road Equipment - ce

Trips and VMT -

Demolition -

Grading - 1.5 acre

Architectural Coating - rule 67 paint

Vehicle Trips - Trip Generation Length per Traffic EMFAC 2014

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - no hearths

Area Coating - Rule 67 Paint

Energy Use -

Construction Off-road Equipment Mitigation - Tier4

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Fleet Mix -

64-Unit Senior Care Facility - San Marcos - San Diego County, Summer

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	100.00
tblAreaCoating	Area_EF_Residential_Exterior	250	100
tblAreaCoating	Area_EF_Residential_Interior	250	100
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00

64-Unit Senior Care Facility - San Marcos - San Diego County, Summer

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	3.00	5.00
tblConstructionPhase	NumDays	6.00	10.00
tblConstructionPhase	NumDays	10.00	7.00
tblConstructionPhase	NumDays	220.00	250.00
tblConstructionPhase	NumDays	10.00	163.00
tblFireplaces	NumberGas	35.20	0.00
tblFireplaces	NumberNoFireplace	6.40	64.00
tblFireplaces	NumberWood	22.40	0.00
tblGrading	AcresOfGrading	5.00	3.75
tblGrading	MaterialImported	0.00	16,128.00
tblGrading	MaterialImported	0.00	8,064.00
tblLandUse	LotAcreage	4.00	2.18
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.018
tblProjectCharacteristics	CO2IntensityFactor	720.49	450.81
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblVehicleTrips	HO_TL	7.50	5.54

64-Unit Senior Care Facility - San Marcos - San Diego County, Summer

tblVehicleTrips	HO_TTP	39.60	40.00
tblVehicleTrips	HS_TL	7.30	5.54
tblVehicleTrips	HS_TTP	18.80	18.00
tblVehicleTrips	HW_TL	10.80	5.54
tblVehicleTrips	HW_TTP	41.60	42.00
tblVehicleTrips	ST_TR	2.20	3.00
tblVehicleTrips	SU_TR	2.44	3.00
tblVehicleTrips	WD_TR	2.74	3.00
tblWoodstoves	NumberCatalytic	3.20	0.00
tblWoodstoves	NumberNoncatalytic	3.20	0.00

2.0 Emissions Summary

64-Unit Senior Care Facility - San Marcos - San Diego County, Summer

2.1 Overall Construction (Maximum Daily Emission)**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	7.5146	73.7238	29.0460	0.1608	9.3547	1.5262	10.8808	4.1562	1.4093	5.5655	0.0000	17,138.21 74	17,138.21 74	2.2840	0.0000	17,195.31 80
2021	7.2486	16.9689	16.3258	0.0321	0.4992	0.8321	1.3313	0.1335	0.8044	0.9379	0.0000	2,996.597 4	2,996.597 4	0.4240	0.0000	3,007.197 5
Maximum	7.5146	73.7238	29.0460	0.1608	9.3547	1.5262	10.8808	4.1562	1.4093	5.5655	0.0000	17,138.21 74	17,138.21 74	2.2840	0.0000	17,195.31 80

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	5.4724	46.3665	31.9709	0.1608	9.3547	0.1514	9.5061	4.1562	0.1452	4.3014	0.0000	17,138.21 74	17,138.21 74	2.2840	0.0000	17,195.31 80
2021	5.4559	4.7122	16.6518	0.0321	0.4992	9.9200e-003	0.5091	0.1335	9.6100e-003	0.1431	0.0000	2,996.597 4	2,996.597 4	0.4240	0.0000	3,007.197 5
Maximum	5.4724	46.3665	31.9709	0.1608	9.3547	0.1514	9.5061	4.1562	0.1452	4.3014	0.0000	17,138.21 74	17,138.21 74	2.2840	0.0000	17,195.31 80

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	25.98	43.68	-7.17	0.00	0.00	93.16	17.99	0.00	93.01	31.66	0.00	0.00	0.00	0.00	0.00	0.00

64-Unit Senior Care Facility - San Marcos - San Diego County, Summer

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.7494	0.0611	5.2916	2.8000e-004		0.0292	0.0292		0.0292	0.0292	0.0000	9.5074	9.5074	9.2100e-003	0.0000	9.7377
Energy	0.0141	0.1200	0.0511	7.7000e-004		9.7100e-003	9.7100e-003		9.7100e-003	9.7100e-003		153.2440	153.2440	2.9400e-003	2.8100e-003	154.1546
Mobile	0.2873	1.0854	2.8012	8.9600e-003	0.7291	7.4800e-003	0.7366	0.1949	6.9900e-003	0.2019		910.6224	910.6224	0.0499		911.8706
Total	2.0507	1.2666	8.1439	0.0100	0.7291	0.0464	0.7754	0.1949	0.0459	0.2407	0.0000	1,073.3737	1,073.3737	0.0621	2.8100e-003	1,075.7629

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.7494	0.0611	5.2916	2.8000e-004		0.0292	0.0292		0.0292	0.0292	0.0000	9.5074	9.5074	9.2100e-003	0.0000	9.7377
Energy	0.0141	0.1200	0.0511	7.7000e-004		9.7100e-003	9.7100e-003		9.7100e-003	9.7100e-003		153.2440	153.2440	2.9400e-003	2.8100e-003	154.1546
Mobile	0.2873	1.0854	2.8012	8.9600e-003	0.7291	7.4800e-003	0.7366	0.1949	6.9900e-003	0.2019		910.6224	910.6224	0.0499		911.8706
Total	2.0507	1.2666	8.1439	0.0100	0.7291	0.0464	0.7754	0.1949	0.0459	0.2407	0.0000	1,073.3737	1,073.3737	0.0621	2.8100e-003	1,075.7629

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2020	1/7/2020	5	5	
2	Grading	Grading	1/8/2020	1/21/2020	5	10	
3	Paving	Paving	1/21/2020	1/29/2020	5	7	
4	Building Construction	Building Construction	1/30/2020	1/13/2021	5	250	
5	Architectural Coating	Architectural Coating	6/1/2020	1/13/2021	5	163	

Acres of Grading (Site Preparation Phase): 2.5

Acres of Grading (Grading Phase): 3.75

Acres of Paving: 0

Residential Indoor: 129,600; Residential Outdoor: 43,200; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

64-Unit Senior Care Facility - San Marcos - San Diego County, Summer

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

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	797.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	1,595.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	46.00	7.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

64-Unit Senior Care Facility - San Marcos - San Diego County, Summer

3.2 Site Preparation - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	1.4204	16.2413	5.4296	0.0141		0.6878	0.6878		0.6328	0.6328		1,366.643 4	1,366.643 4	0.4420		1,377.693 4
Total	1.4204	16.2413	5.4296	0.0141	5.7996	0.6878	6.4874	2.9537	0.6328	3.5865		1,366.643 4	1,366.643 4	0.4420		1,377.693 4

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.2599	44.4671	10.0962	0.1248	2.7853	0.1419	2.9272	0.7633	0.1357	0.8991		13,649.84 69	13,649.84 69	1.2024		13,679.90 59
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0184	0.0124	0.1417	4.2000e-004	0.0411	2.9000e-004	0.0414	0.0109	2.7000e-004	0.0112		42.1374	42.1374	1.2600e-003		42.1688
Total	1.2783	44.4794	10.2379	0.1252	2.8264	0.1422	2.9686	0.7742	0.1360	0.9102		13,691.98 43	13,691.98 43	1.2036		13,722.07 47

64-Unit Senior Care Facility - San Marcos - San Diego County, Summer

3.2 Site Preparation - 2020**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	0.1726	0.7480	6.3293	0.0141		3.4500e-003	3.4500e-003		3.4500e-003	3.4500e-003	0.0000	1,366.6434	1,366.6434	0.4420		1,377.6934
Total	0.1726	0.7480	6.3293	0.0141	5.7996	3.4500e-003	5.8030	2.9537	3.4500e-003	2.9572	0.0000	1,366.6434	1,366.6434	0.4420		1,377.6934

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.2599	44.4671	10.0962	0.1248	2.7853	0.1419	2.9272	0.7633	0.1357	0.8991		13,649.8469	13,649.8469	1.2024		13,679.9059
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0184	0.0124	0.1417	4.2000e-004	0.0411	2.9000e-004	0.0414	0.0109	2.7000e-004	0.0112		42.1374	42.1374	1.2600e-003		42.1688
Total	1.2783	44.4794	10.2379	0.1252	2.8264	0.1422	2.9686	0.7742	0.1360	0.9102		13,691.9843	13,691.9843	1.2036		13,722.0747

64-Unit Senior Care Facility - San Marcos - San Diego County, Summer

3.3 Grading - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.4198	0.0000	6.4198	3.3532	0.0000	3.3532			0.0000			0.0000
Off-Road	1.8003	20.0704	9.2139	0.0203		0.8741	0.8741		0.8041	0.8041		1,970.1796	1,970.1796	0.6372		1,986.1095
Total	1.8003	20.0704	9.2139	0.0203	6.4198	0.8741	7.2938	3.3532	0.8041	4.1573		1,970.1796	1,970.1796	0.6372		1,986.1095

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.2607	44.4950	10.1025	0.1249	2.7871	0.1420	2.9290	0.7638	0.1358	0.8996		13,658.4102	13,658.4102	1.2031		13,688.4880
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0294	0.0198	0.2268	6.8000e-004	0.0657	4.6000e-004	0.0662	0.0174	4.2000e-004	0.0179		67.4198	67.4198	2.0100e-003		67.4701
Total	1.2901	44.5147	10.3293	0.1256	2.8528	0.1424	2.9952	0.7812	0.1363	0.9175		13,725.8299	13,725.8299	1.2051		13,755.9581

64-Unit Senior Care Facility - San Marcos - San Diego County, Summer

3.3 Grading - 2020**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.4198	0.0000	6.4198	3.3532	0.0000	3.3532			0.0000			0.0000
Off-Road	0.2492	1.0800	10.7265	0.0203		4.9800e-003	4.9800e-003		4.9800e-003	4.9800e-003	0.0000	1,970.1796	1,970.1796	0.6372		1,986.1095
Total	0.2492	1.0800	10.7265	0.0203	6.4198	4.9800e-003	6.4248	3.3532	4.9800e-003	3.3582	0.0000	1,970.1796	1,970.1796	0.6372		1,986.1095

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.2607	44.4950	10.1025	0.1249	2.7871	0.1420	2.9290	0.7638	0.1358	0.8996		13,658.4102	13,658.4102	1.2031		13,688.4880
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0294	0.0198	0.2268	6.8000e-004	0.0657	4.6000e-004	0.0662	0.0174	4.2000e-004	0.0179		67.4198	67.4198	2.0100e-003		67.4701
Total	1.2901	44.5147	10.3293	0.1256	2.8528	0.1424	2.9952	0.7812	0.1363	0.9175		13,725.8299	13,725.8299	1.2051		13,755.9581

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3.4 Paving - 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	lb/day										lb/day					
Off-Road	0.8864	9.1139	9.2194	0.0140		0.5091	0.5091		0.4684	0.4684		1,357.933 2	1,357.933 2	0.4392		1,368.912 7
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8864	9.1139	9.2194	0.0140		0.5091	0.5091		0.4684	0.4684		1,357.933 2	1,357.933 2	0.4392		1,368.912 7

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0367	0.0247	0.2835	8.5000e-004	0.0822	5.8000e-004	0.0827	0.0218	5.3000e-004	0.0223		84.2747	84.2747	2.5200e-003		84.3376
Total	0.0367	0.0247	0.2835	8.5000e-004	0.0822	5.8000e-004	0.0827	0.0218	5.3000e-004	0.0223		84.2747	84.2747	2.5200e-003		84.3376

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3.4 Paving - 2020**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1724	0.7471	10.6316	0.0140		3.4500e-003	3.4500e-003		3.4500e-003	3.4500e-003	0.0000	1,357.9332	1,357.9332	0.4392		1,368.9127
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.1724	0.7471	10.6316	0.0140		3.4500e-003	3.4500e-003		3.4500e-003	3.4500e-003	0.0000	1,357.9332	1,357.9332	0.4392		1,368.9127

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0367	0.0247	0.2835	8.5000e-004	0.0822	5.8000e-004	0.0827	0.0218	5.3000e-004	0.0223		84.2747	84.2747	2.5200e-003		84.3376
Total	0.0367	0.0247	0.2835	8.5000e-004	0.0822	5.8000e-004	0.0827	0.0218	5.3000e-004	0.0223		84.2747	84.2747	2.5200e-003		84.3376

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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	lb/day										lb/day					
Off-Road	2.1307	15.8548	13.1874	0.0227		0.8483	0.8483		0.8170	0.8170		2,063.3113	2,063.3113	0.3916		2,073.1011
Total	2.1307	15.8548	13.1874	0.0227		0.8483	0.8483		0.8170	0.8170		2,063.3113	2,063.3113	0.3916		2,073.1011

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0262	0.7893	0.2011	1.9200e-003	0.0474	3.8600e-003	0.0513	0.0136	3.6900e-003	0.0173		205.8281	205.8281	0.0152		206.2077
Worker	0.1688	0.1137	1.3039	3.8900e-003	0.3779	2.6500e-003	0.3805	0.1002	2.4400e-003	0.1027		387.6637	387.6637	0.0116		387.9530
Total	0.1950	0.9030	1.5050	5.8100e-003	0.4253	6.5100e-003	0.4318	0.1139	6.1300e-003	0.1200		593.4917	593.4917	0.0268		594.1607

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3.5 Building Construction - 2020**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3011	3.7470	13.1790	0.0227		4.7100e-003	4.7100e-003		4.7100e-003	4.7100e-003	0.0000	2,063.3113	2,063.3113	0.3916		2,073.1011
Total	0.3011	3.7470	13.1790	0.0227		4.7100e-003	4.7100e-003		4.7100e-003	4.7100e-003	0.0000	2,063.3113	2,063.3113	0.3916		2,073.1011

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0262	0.7893	0.2011	1.9200e-003	0.0474	3.8600e-003	0.0513	0.0136	3.6900e-003	0.0173		205.8281	205.8281	0.0152		206.2077
Worker	0.1688	0.1137	1.3039	3.8900e-003	0.3779	2.6500e-003	0.3805	0.1002	2.4400e-003	0.1027		387.6637	387.6637	0.0116		387.9530
Total	0.1950	0.9030	1.5050	5.8100e-003	0.4253	6.5100e-003	0.4318	0.1139	6.1300e-003	0.1200		593.4917	593.4917	0.0268		594.1607

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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	lb/day										lb/day					
Off-Road	1.9046	14.6057	12.8678	0.0227		0.7334	0.7334		0.7060	0.7060		2,063.2605	2,063.2605	0.3773		2,072.6938
Total	1.9046	14.6057	12.8678	0.0227		0.7334	0.7334		0.7060	0.7060		2,063.2605	2,063.2605	0.3773		2,072.6938

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0212	0.7128	0.1817	1.9000e-003	0.0474	1.5000e-003	0.0489	0.0136	1.4300e-003	0.0151		203.9464	203.9464	0.0146		204.3107
Worker	0.1591	0.1034	1.2201	3.7600e-003	0.3779	2.6100e-003	0.3805	0.1002	2.4000e-003	0.1026		374.6428	374.6428	0.0107		374.9101
Total	0.1803	0.8162	1.4018	5.6600e-003	0.4253	4.1100e-003	0.4294	0.1139	3.8300e-003	0.1177		578.5892	578.5892	0.0253		579.2208

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3.5 Building Construction - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3011	3.7470	13.1790	0.0227		4.7100e-003	4.7100e-003		4.7100e-003	4.7100e-003	0.0000	2,063.2605	2,063.2605	0.3773		2,072.6938
Total	0.3011	3.7470	13.1790	0.0227		4.7100e-003	4.7100e-003		4.7100e-003	4.7100e-003	0.0000	2,063.2605	2,063.2605	0.3773		2,072.6938

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0212	0.7128	0.1817	1.9000e-003	0.0474	1.5000e-003	0.0489	0.0136	1.4300e-003	0.0151		203.9464	203.9464	0.0146		204.3107
Worker	0.1591	0.1034	1.2201	3.7600e-003	0.3779	2.6100e-003	0.3805	0.1002	2.4000e-003	0.1026		374.6428	374.6428	0.0107		374.9101
Total	0.1803	0.8162	1.4018	5.6600e-003	0.4253	4.1100e-003	0.4294	0.1139	3.8300e-003	0.1177		578.5892	578.5892	0.0253		579.2208

64-Unit Senior Care Facility - San Marcos - San Diego County, Summer

3.6 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	lb/day										lb/day					
Archit. Coating	4.9137					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	5.1559	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0330	0.0223	0.2551	7.6000e-004	0.0739	5.2000e-004	0.0745	0.0196	4.8000e-004	0.0201		75.8472	75.8472	2.2600e-003		75.9039
Total	0.0330	0.0223	0.2551	7.6000e-004	0.0739	5.2000e-004	0.0745	0.0196	4.8000e-004	0.0201		75.8472	75.8472	2.2600e-003		75.9039

64-Unit Senior Care Facility - San Marcos - San Diego County, Summer

3.6 Architectural Coating - 2020**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.9137					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	281.4481	281.4481	0.0218		281.9928
Total	4.9434	0.1288	1.8324	2.9700e-003		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	281.4481	281.4481	0.0218		281.9928

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0330	0.0223	0.2551	7.6000e-004	0.0739	5.2000e-004	0.0745	0.0196	4.8000e-004	0.0201		75.8472	75.8472	2.2600e-003		75.9039
Total	0.0330	0.0223	0.2551	7.6000e-004	0.0739	5.2000e-004	0.0745	0.0196	4.8000e-004	0.0201		75.8472	75.8472	2.2600e-003		75.9039

64-Unit Senior Care Facility - San Marcos - San Diego County, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.9137					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	5.1326	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0311	0.0202	0.2387	7.4000e-004	0.0739	5.1000e-004	0.0744	0.0196	4.7000e-004	0.0201		73.2997	73.2997	2.0900e-003		73.3520
Total	0.0311	0.0202	0.2387	7.4000e-004	0.0739	5.1000e-004	0.0744	0.0196	4.7000e-004	0.0201		73.2997	73.2997	2.0900e-003		73.3520

64-Unit Senior Care Facility - San Marcos - San Diego County, Summer

3.6 Architectural Coating - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.9137					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	281.4481	281.4481	0.0193		281.9309
Total	4.9434	0.1288	1.8324	2.9700e-003		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	281.4481	281.4481	0.0193		281.9309

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0311	0.0202	0.2387	7.4000e-004	0.0739	5.1000e-004	0.0744	0.0196	4.7000e-004	0.0201		73.2997	73.2997	2.0900e-003		73.3520
Total	0.0311	0.0202	0.2387	7.4000e-004	0.0739	5.1000e-004	0.0744	0.0196	4.7000e-004	0.0201		73.2997	73.2997	2.0900e-003		73.3520

4.0 Operational Detail - Mobile

64-Unit Senior Care Facility - San Marcos - San Diego County, Summer

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2873	1.0854	2.8012	8.9600e-003	0.7291	7.4800e-003	0.7366	0.1949	6.9900e-003	0.2019		910.6224	910.6224	0.0499		911.8706
Unmitigated	0.2873	1.0854	2.8012	8.9600e-003	0.7291	7.4800e-003	0.7366	0.1949	6.9900e-003	0.2019		910.6224	910.6224	0.0499		911.8706

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Congregate Care (Assisted Living)	192.00	192.00	192.00	343,831	343,831
Total	192.00	192.00	192.00	343,831	343,831

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Congregate Care (Assisted Living)	5.54	5.54	5.54	42.00	18.00	40.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Congregate Care (Assisted Living)	0.593936	0.041843	0.182569	0.108325	0.016436	0.005513	0.015940	0.023523	0.001912	0.001972	0.006090	0.000748	0.001193

64-Unit Senior Care Facility - San Marcos - San Diego County, Summer

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0141	0.1200	0.0511	7.7000e-004		9.7100e-003	9.7100e-003		9.7100e-003	9.7100e-003		153.2440	153.2440	2.9400e-003	2.8100e-003	154.1546
NaturalGas Unmitigated	0.0141	0.1200	0.0511	7.7000e-004		9.7100e-003	9.7100e-003		9.7100e-003	9.7100e-003		153.2440	153.2440	2.9400e-003	2.8100e-003	154.1546

64-Unit Senior Care Facility - San Marcos - San Diego County, Summer

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

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Congregate Care (Assisted Living)	1302.57	0.0141	0.1200	0.0511	7.7000e-004		9.7100e-003	9.7100e-003		9.7100e-003	9.7100e-003		153.2440	153.2440	2.9400e-003	2.8100e-003	154.1546
Total		0.0141	0.1200	0.0511	7.7000e-004		9.7100e-003	9.7100e-003		9.7100e-003	9.7100e-003		153.2440	153.2440	2.9400e-003	2.8100e-003	154.1546

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Congregate Care (Assisted Living)	1.30257	0.0141	0.1200	0.0511	7.7000e-004		9.7100e-003	9.7100e-003		9.7100e-003	9.7100e-003		153.2440	153.2440	2.9400e-003	2.8100e-003	154.1546
Total		0.0141	0.1200	0.0511	7.7000e-004		9.7100e-003	9.7100e-003		9.7100e-003	9.7100e-003		153.2440	153.2440	2.9400e-003	2.8100e-003	154.1546

6.0 Area Detail**6.1 Mitigation Measures Area**

64-Unit Senior Care Facility - San Marcos - San Diego County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.7494	0.0611	5.2916	2.8000e-004		0.0292	0.0292		0.0292	0.0292	0.0000	9.5074	9.5074	9.2100e-003	0.0000	9.7377
Unmitigated	1.7494	0.0611	5.2916	2.8000e-004		0.0292	0.0292		0.0292	0.0292	0.0000	9.5074	9.5074	9.2100e-003	0.0000	9.7377

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2194					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3696					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1603	0.0611	5.2916	2.8000e-004		0.0292	0.0292		0.0292	0.0292		9.5074	9.5074	9.2100e-003		9.7377
Total	1.7494	0.0611	5.2916	2.8000e-004		0.0292	0.0292		0.0292	0.0292	0.0000	9.5074	9.5074	9.2100e-003	0.0000	9.7377

64-Unit Senior Care Facility - San Marcos - San Diego County, Summer

6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2194					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3696					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1603	0.0611	5.2916	2.8000e-004		0.0292	0.0292		0.0292	0.0292		9.5074	9.5074	9.2100e-003		9.7377
Total	1.7494	0.0611	5.2916	2.8000e-004		0.0292	0.0292		0.0292	0.0292	0.0000	9.5074	9.5074	9.2100e-003	0.0000	9.7377

7.0 Water Detail**7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

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

64-Unit Senior Care Facility - San Marcos - San Diego County, Summer

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

64-Unit Senior Care Facility - San Marcos - San Diego County, Winter

64-Unit Senior Care Facility - San Marcos

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Congregate Care (Assisted Living)	64.00	Dwelling Unit	2.18	64,000.00	183

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2021
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	450.81	CH4 Intensity (lb/MWhr)	0.018	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

64-Unit Senior Care Facility - San Marcos - San Diego County, Winter

Project Characteristics - 2017 RPS Achieved

Land Use - 2.18 acres

Construction Phase - Construction Schedule

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Proposed Equipment

Off-road Equipment -

Off-road Equipment - ce

Trips and VMT -

Demolition -

Grading - 1.5 acre

Architectural Coating - rule 67 paint

Vehicle Trips - Trip Generation Length per Traffic EMFAC 2014

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - no hearths

Area Coating - Rule 67 Paint

Energy Use -

Construction Off-road Equipment Mitigation - Tier4

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Fleet Mix -

64-Unit Senior Care Facility - San Marcos - San Diego County, Winter

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	100.00
tblAreaCoating	Area_EF_Residential_Exterior	250	100
tblAreaCoating	Area_EF_Residential_Interior	250	100
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00

64-Unit Senior Care Facility - San Marcos - San Diego County, Winter

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	3.00	5.00
tblConstructionPhase	NumDays	6.00	10.00
tblConstructionPhase	NumDays	10.00	7.00
tblConstructionPhase	NumDays	220.00	250.00
tblConstructionPhase	NumDays	10.00	163.00
tblFireplaces	NumberGas	35.20	0.00
tblFireplaces	NumberNoFireplace	6.40	64.00
tblFireplaces	NumberWood	22.40	0.00
tblGrading	AcresOfGrading	5.00	3.75
tblGrading	MaterialImported	0.00	16,128.00
tblGrading	MaterialImported	0.00	8,064.00
tblLandUse	LotAcreage	4.00	2.18
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.018
tblProjectCharacteristics	CO2IntensityFactor	720.49	450.81
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblVehicleTrips	HO_TL	7.50	5.54

64-Unit Senior Care Facility - San Marcos - San Diego County, Winter

tblVehicleTrips	HO_TTP	39.60	40.00
tblVehicleTrips	HS_TL	7.30	5.54
tblVehicleTrips	HS_TTP	18.80	18.00
tblVehicleTrips	HW_TL	10.80	5.54
tblVehicleTrips	HW_TTP	41.60	42.00
tblVehicleTrips	ST_TR	2.20	3.00
tblVehicleTrips	SU_TR	2.44	3.00
tblVehicleTrips	WD_TR	2.74	3.00
tblWoodstoves	NumberCatalytic	3.20	0.00
tblWoodstoves	NumberNoncatalytic	3.20	0.00

2.0 Emissions Summary

64-Unit Senior Care Facility - San Marcos - San Diego County, Winter

2.1 Overall Construction (Maximum Daily Emission)**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	7.5426	74.1571	29.6843	0.1585	9.3547	1.5291	10.8838	4.1562	1.4121	5.5683	0.0000	16,894.60 15	16,894.60 15	2.3250	0.0000	16,952.72 61
2021	7.2752	16.9821	16.2589	0.0317	0.4992	0.8322	1.3314	0.1335	0.8044	0.9379	0.0000	2,963.883 2	2,963.883 2	0.4242	0.0000	2,974.488 3
Maximum	7.5426	74.1571	29.6843	0.1585	9.3547	1.5291	10.8838	4.1562	1.4121	5.5683	0.0000	16,894.60 15	16,894.60 15	2.3250	0.0000	16,952.72 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	lb/day										lb/day					
2020	5.5004	46.7998	32.6091	0.1585	9.3547	0.1544	9.5091	4.1562	0.1480	4.3042	0.0000	16,894.60 15	16,894.60 15	2.3250	0.0000	16,952.72 61
2021	5.4825	4.7254	16.5849	0.0317	0.4992	9.9800e-003	0.5092	0.1335	9.6700e-003	0.1432	0.0000	2,963.883 2	2,963.883 2	0.4242	0.0000	2,974.488 3
Maximum	5.5004	46.7998	32.6091	0.1585	9.3547	0.1544	9.5091	4.1562	0.1480	4.3042	0.0000	16,894.60 15	16,894.60 15	2.3250	0.0000	16,952.72 61

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	25.88	43.47	-7.08	0.00	0.00	93.04	17.99	0.00	92.89	31.64	0.00	0.00	0.00	0.00	0.00	0.00

64-Unit Senior Care Facility - San Marcos - San Diego County, Winter

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.7494	0.0611	5.2916	2.8000e-004		0.0292	0.0292		0.0292	0.0292	0.0000	9.5074	9.5074	9.2100e-003	0.0000	9.7377
Energy	0.0141	0.1200	0.0511	7.7000e-004		9.7100e-003	9.7100e-003		9.7100e-003	9.7100e-003		153.2440	153.2440	2.9400e-003	2.8100e-003	154.1546
Mobile	0.2785	1.1074	2.8324	8.4900e-003	0.7291	7.5600e-003	0.7366	0.1949	7.0600e-003	0.2019		862.6665	862.6665	0.0508		863.9364
Total	2.0419	1.2886	8.1750	9.5400e-003	0.7291	0.0464	0.7755	0.1949	0.0459	0.2408	0.0000	1,025.4178	1,025.4178	0.0630	2.8100e-003	1,027.8287

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.7494	0.0611	5.2916	2.8000e-004		0.0292	0.0292		0.0292	0.0292	0.0000	9.5074	9.5074	9.2100e-003	0.0000	9.7377
Energy	0.0141	0.1200	0.0511	7.7000e-004		9.7100e-003	9.7100e-003		9.7100e-003	9.7100e-003		153.2440	153.2440	2.9400e-003	2.8100e-003	154.1546
Mobile	0.2785	1.1074	2.8324	8.4900e-003	0.7291	7.5600e-003	0.7366	0.1949	7.0600e-003	0.2019		862.6665	862.6665	0.0508		863.9364
Total	2.0419	1.2886	8.1750	9.5400e-003	0.7291	0.0464	0.7755	0.1949	0.0459	0.2408	0.0000	1,025.4178	1,025.4178	0.0630	2.8100e-003	1,027.8287

64-Unit Senior Care Facility - San Marcos - San Diego County, Winter

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2020	1/7/2020	5	5	
2	Grading	Grading	1/8/2020	1/21/2020	5	10	
3	Paving	Paving	1/21/2020	1/29/2020	5	7	
4	Building Construction	Building Construction	1/30/2020	1/13/2021	5	250	
5	Architectural Coating	Architectural Coating	6/1/2020	1/13/2021	5	163	

Acres of Grading (Site Preparation Phase): 2.5

Acres of Grading (Grading Phase): 3.75

Acres of Paving: 0

Residential Indoor: 129,600; Residential Outdoor: 43,200; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

64-Unit Senior Care Facility - San Marcos - San Diego County, Winter

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

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	797.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	1,595.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	46.00	7.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

64-Unit Senior Care Facility - San Marcos - San Diego County, Winter

3.2 Site Preparation - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	1.4204	16.2413	5.4296	0.0141		0.6878	0.6878		0.6328	0.6328		1,366.643 4	1,366.643 4	0.4420		1,377.693 4
Total	1.4204	16.2413	5.4296	0.0141	5.7996	0.6878	6.4874	2.9537	0.6328	3.5865		1,366.643 4	1,366.643 4	0.4420		1,377.693 4

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.2948	44.8946	10.7632	0.1227	2.7853	0.1448	2.9301	0.7633	0.1386	0.9019		13,415.66 87	13,415.66 87	1.2435		13,446.75 71
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0208	0.0139	0.1336	4.0000e-004	0.0411	2.9000e-004	0.0414	0.0109	2.7000e-004	0.0112		39.5566	39.5566	1.1900e-003		39.5864
Total	1.3156	44.9085	10.8968	0.1231	2.8264	0.1451	2.9715	0.7742	0.1388	0.9131		13,455.22 53	13,455.22 53	1.2447		13,486.34 35

64-Unit Senior Care Facility - San Marcos - San Diego County, Winter

3.2 Site Preparation - 2020**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	0.1726	0.7480	6.3293	0.0141		3.4500e-003	3.4500e-003		3.4500e-003	3.4500e-003	0.0000	1,366.6434	1,366.6434	0.4420		1,377.6934
Total	0.1726	0.7480	6.3293	0.0141	5.7996	3.4500e-003	5.8030	2.9537	3.4500e-003	2.9572	0.0000	1,366.6434	1,366.6434	0.4420		1,377.6934

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.2948	44.8946	10.7632	0.1227	2.7853	0.1448	2.9301	0.7633	0.1386	0.9019		13,415.6687	13,415.6687	1.2435		13,446.7571
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0208	0.0139	0.1336	4.0000e-004	0.0411	2.9000e-004	0.0414	0.0109	2.7000e-004	0.0112		39.5566	39.5566	1.1900e-003		39.5864
Total	1.3156	44.9085	10.8968	0.1231	2.8264	0.1451	2.9715	0.7742	0.1388	0.9131		13,455.2253	13,455.2253	1.2447		13,486.3435

64-Unit Senior Care Facility - San Marcos - San Diego County, Winter

3.3 Grading - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.4198	0.0000	6.4198	3.3532	0.0000	3.3532			0.0000			0.0000
Off-Road	1.8003	20.0704	9.2139	0.0203		0.8741	0.8741		0.8041	0.8041		1,970.1796	1,970.1796	0.6372		1,986.1095
Total	1.8003	20.0704	9.2139	0.0203	6.4198	0.8741	7.2938	3.3532	0.8041	4.1573		1,970.1796	1,970.1796	0.6372		1,986.1095

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.2957	44.9228	10.7699	0.1227	2.7871	0.1449	2.9320	0.7638	0.1386	0.9025		13,424.0850	13,424.0850	1.2443		13,455.1929
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0333	0.0222	0.2138	6.4000e-004	0.0657	4.6000e-004	0.0662	0.0174	4.2000e-004	0.0179		63.2906	63.2906	1.9100e-003		63.3382
Total	1.3289	44.9450	10.9837	0.1234	2.8528	0.1454	2.9982	0.7812	0.1391	0.9203		13,487.3756	13,487.3756	1.2462		13,518.5311

64-Unit Senior Care Facility - San Marcos - San Diego County, Winter

3.3 Grading - 2020**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.4198	0.0000	6.4198	3.3532	0.0000	3.3532			0.0000			0.0000
Off-Road	0.2492	1.0800	10.7265	0.0203		4.9800e-003	4.9800e-003		4.9800e-003	4.9800e-003	0.0000	1,970.1796	1,970.1796	0.6372		1,986.1095
Total	0.2492	1.0800	10.7265	0.0203	6.4198	4.9800e-003	6.4248	3.3532	4.9800e-003	3.3582	0.0000	1,970.1796	1,970.1796	0.6372		1,986.1095

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.2957	44.9228	10.7699	0.1227	2.7871	0.1449	2.9320	0.7638	0.1386	0.9025		13,424.0850	13,424.0850	1.2443		13,455.1929
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0333	0.0222	0.2138	6.4000e-004	0.0657	4.6000e-004	0.0662	0.0174	4.2000e-004	0.0179		63.2906	63.2906	1.9100e-003		63.3382
Total	1.3289	44.9450	10.9837	0.1234	2.8528	0.1454	2.9982	0.7812	0.1391	0.9203		13,487.3756	13,487.3756	1.2462		13,518.5311

64-Unit Senior Care Facility - San Marcos - San Diego County, Winter

3.4 Paving - 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	lb/day										lb/day					
Off-Road	0.8864	9.1139	9.2194	0.0140		0.5091	0.5091		0.4684	0.4684		1,357.933 2	1,357.933 2	0.4392		1,368.912 7
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8864	9.1139	9.2194	0.0140		0.5091	0.5091		0.4684	0.4684		1,357.933 2	1,357.933 2	0.4392		1,368.912 7

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0416	0.0278	0.2673	7.9000e-004	0.0822	5.8000e-004	0.0827	0.0218	5.3000e-004	0.0223		79.1132	79.1132	2.3800e-003		79.1727
Total	0.0416	0.0278	0.2673	7.9000e-004	0.0822	5.8000e-004	0.0827	0.0218	5.3000e-004	0.0223		79.1132	79.1132	2.3800e-003		79.1727

64-Unit Senior Care Facility - San Marcos - San Diego County, Winter

3.4 Paving - 2020**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1724	0.7471	10.6316	0.0140		3.4500e-003	3.4500e-003		3.4500e-003	3.4500e-003	0.0000	1,357.9332	1,357.9332	0.4392		1,368.9127
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.1724	0.7471	10.6316	0.0140		3.4500e-003	3.4500e-003		3.4500e-003	3.4500e-003	0.0000	1,357.9332	1,357.9332	0.4392		1,368.9127

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0416	0.0278	0.2673	7.9000e-004	0.0822	5.8000e-004	0.0827	0.0218	5.3000e-004	0.0223		79.1132	79.1132	2.3800e-003		79.1727
Total	0.0416	0.0278	0.2673	7.9000e-004	0.0822	5.8000e-004	0.0827	0.0218	5.3000e-004	0.0223		79.1132	79.1132	2.3800e-003		79.1727

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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	lb/day										lb/day					
Off-Road	2.1307	15.8548	13.1874	0.0227		0.8483	0.8483		0.8170	0.8170		2,063.3113	2,063.3113	0.3916		2,073.1011
Total	2.1307	15.8548	13.1874	0.0227		0.8483	0.8483		0.8170	0.8170		2,063.3113	2,063.3113	0.3916		2,073.1011

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0274	0.7887	0.2232	1.8700e-003	0.0474	3.9300e-003	0.0513	0.0136	3.7600e-003	0.0174		200.5236	200.5236	0.0161		200.9269
Worker	0.1912	0.1277	1.2293	3.6500e-003	0.3779	2.6500e-003	0.3805	0.1002	2.4400e-003	0.1027		363.9207	363.9207	0.0110		364.1946
Total	0.2186	0.9164	1.4525	5.5200e-003	0.4253	6.5800e-003	0.4319	0.1139	6.2000e-003	0.1201		564.4443	564.4443	0.0271		565.1216

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3.5 Building Construction - 2020**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3011	3.7470	13.1790	0.0227		4.7100e-003	4.7100e-003		4.7100e-003	4.7100e-003	0.0000	2,063.3113	2,063.3113	0.3916		2,073.1011
Total	0.3011	3.7470	13.1790	0.0227		4.7100e-003	4.7100e-003		4.7100e-003	4.7100e-003	0.0000	2,063.3113	2,063.3113	0.3916		2,073.1011

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0274	0.7887	0.2232	1.8700e-003	0.0474	3.9300e-003	0.0513	0.0136	3.7600e-003	0.0174		200.5236	200.5236	0.0161		200.9269
Worker	0.1912	0.1277	1.2293	3.6500e-003	0.3779	2.6500e-003	0.3805	0.1002	2.4400e-003	0.1027		363.9207	363.9207	0.0110		364.1946
Total	0.2186	0.9164	1.4525	5.5200e-003	0.4253	6.5800e-003	0.4319	0.1139	6.2000e-003	0.1201		564.4443	564.4443	0.0271		565.1216

64-Unit Senior Care Facility - San Marcos - San Diego County, Winter

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	lb/day										lb/day					
Off-Road	1.9046	14.6057	12.8678	0.0227		0.7334	0.7334		0.7060	0.7060		2,063.2605	2,063.2605	0.3773		2,072.6938
Total	1.9046	14.6057	12.8678	0.0227		0.7334	0.7334		0.7060	0.7060		2,063.2605	2,063.2605	0.3773		2,072.6938

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0223	0.7109	0.2023	1.8500e-003	0.0474	1.5600e-003	0.0489	0.0136	1.4900e-003	0.0151		198.6735	198.6735	0.0155		199.0604
Worker	0.1804	0.1160	1.1469	3.5300e-003	0.3779	2.6100e-003	0.3805	0.1002	2.4000e-003	0.1026		351.6919	351.6919	0.0101		351.9445
Total	0.2027	0.8269	1.3492	5.3800e-003	0.4253	4.1700e-003	0.4294	0.1139	3.8900e-003	0.1178		550.3654	550.3654	0.0256		551.0049

64-Unit Senior Care Facility - San Marcos - San Diego County, Winter

3.5 Building Construction - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3011	3.7470	13.1790	0.0227		4.7100e-003	4.7100e-003		4.7100e-003	4.7100e-003	0.0000	2,063.2605	2,063.2605	0.3773		2,072.6938
Total	0.3011	3.7470	13.1790	0.0227		4.7100e-003	4.7100e-003		4.7100e-003	4.7100e-003	0.0000	2,063.2605	2,063.2605	0.3773		2,072.6938

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0223	0.7109	0.2023	1.8500e-003	0.0474	1.5600e-003	0.0489	0.0136	1.4900e-003	0.0151		198.6735	198.6735	0.0155		199.0604
Worker	0.1804	0.1160	1.1469	3.5300e-003	0.3779	2.6100e-003	0.3805	0.1002	2.4000e-003	0.1026		351.6919	351.6919	0.0101		351.9445
Total	0.2027	0.8269	1.3492	5.3800e-003	0.4253	4.1700e-003	0.4294	0.1139	3.8900e-003	0.1178		550.3654	550.3654	0.0256		551.0049

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3.6 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	lb/day										lb/day					
Archit. Coating	4.9137					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	5.1559	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0374	0.0250	0.2405	7.1000e-004	0.0739	5.2000e-004	0.0745	0.0196	4.8000e-004	0.0201		71.2019	71.2019	2.1400e-003		71.2555
Total	0.0374	0.0250	0.2405	7.1000e-004	0.0739	5.2000e-004	0.0745	0.0196	4.8000e-004	0.0201		71.2019	71.2019	2.1400e-003		71.2555

64-Unit Senior Care Facility - San Marcos - San Diego County, Winter

3.6 Architectural Coating - 2020**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.9137					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	281.4481	281.4481	0.0218		281.9928
Total	4.9434	0.1288	1.8324	2.9700e-003		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	281.4481	281.4481	0.0218		281.9928

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0374	0.0250	0.2405	7.1000e-004	0.0739	5.2000e-004	0.0745	0.0196	4.8000e-004	0.0201		71.2019	71.2019	2.1400e-003		71.2555
Total	0.0374	0.0250	0.2405	7.1000e-004	0.0739	5.2000e-004	0.0745	0.0196	4.8000e-004	0.0201		71.2019	71.2019	2.1400e-003		71.2555

64-Unit Senior Care Facility - San Marcos - San Diego County, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.9137					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	5.1326	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0353	0.0227	0.2244	6.9000e-004	0.0739	5.1000e-004	0.0744	0.0196	4.7000e-004	0.0201		68.8093	68.8093	1.9800e-003		68.8587
Total	0.0353	0.0227	0.2244	6.9000e-004	0.0739	5.1000e-004	0.0744	0.0196	4.7000e-004	0.0201		68.8093	68.8093	1.9800e-003		68.8587

64-Unit Senior Care Facility - San Marcos - San Diego County, Winter

3.6 Architectural Coating - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.9137					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	281.4481	281.4481	0.0193		281.9309
Total	4.9434	0.1288	1.8324	2.9700e-003		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	281.4481	281.4481	0.0193		281.9309

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0353	0.0227	0.2244	6.9000e-004	0.0739	5.1000e-004	0.0744	0.0196	4.7000e-004	0.0201		68.8093	68.8093	1.9800e-003		68.8587
Total	0.0353	0.0227	0.2244	6.9000e-004	0.0739	5.1000e-004	0.0744	0.0196	4.7000e-004	0.0201		68.8093	68.8093	1.9800e-003		68.8587

4.0 Operational Detail - Mobile

64-Unit Senior Care Facility - San Marcos - San Diego County, Winter

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2785	1.1074	2.8324	8.4900e-003	0.7291	7.5600e-003	0.7366	0.1949	7.0600e-003	0.2019		862.6665	862.6665	0.0508		863.9364
Unmitigated	0.2785	1.1074	2.8324	8.4900e-003	0.7291	7.5600e-003	0.7366	0.1949	7.0600e-003	0.2019		862.6665	862.6665	0.0508		863.9364

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Congregate Care (Assisted Living)	192.00	192.00	192.00	343,831	343,831
Total	192.00	192.00	192.00	343,831	343,831

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Congregate Care (Assisted Living)	5.54	5.54	5.54	42.00	18.00	40.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Congregate Care (Assisted Living)	0.593936	0.041843	0.182569	0.108325	0.016436	0.005513	0.015940	0.023523	0.001912	0.001972	0.006090	0.000748	0.001193

64-Unit Senior Care Facility - San Marcos - San Diego County, Winter

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0141	0.1200	0.0511	7.7000e-004		9.7100e-003	9.7100e-003		9.7100e-003	9.7100e-003		153.2440	153.2440	2.9400e-003	2.8100e-003	154.1546
NaturalGas Unmitigated	0.0141	0.1200	0.0511	7.7000e-004		9.7100e-003	9.7100e-003		9.7100e-003	9.7100e-003		153.2440	153.2440	2.9400e-003	2.8100e-003	154.1546

64-Unit Senior Care Facility - San Marcos - San Diego County, Winter

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

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Congregate Care (Assisted Living)	1302.57	0.0141	0.1200	0.0511	7.7000e-004		9.7100e-003	9.7100e-003		9.7100e-003	9.7100e-003		153.2440	153.2440	2.9400e-003	2.8100e-003	154.1546
Total		0.0141	0.1200	0.0511	7.7000e-004		9.7100e-003	9.7100e-003		9.7100e-003	9.7100e-003		153.2440	153.2440	2.9400e-003	2.8100e-003	154.1546

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Congregate Care (Assisted Living)	1.30257	0.0141	0.1200	0.0511	7.7000e-004		9.7100e-003	9.7100e-003		9.7100e-003	9.7100e-003		153.2440	153.2440	2.9400e-003	2.8100e-003	154.1546
Total		0.0141	0.1200	0.0511	7.7000e-004		9.7100e-003	9.7100e-003		9.7100e-003	9.7100e-003		153.2440	153.2440	2.9400e-003	2.8100e-003	154.1546

6.0 Area Detail**6.1 Mitigation Measures Area**

64-Unit Senior Care Facility - San Marcos - San Diego County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.7494	0.0611	5.2916	2.8000e-004		0.0292	0.0292		0.0292	0.0292	0.0000	9.5074	9.5074	9.2100e-003	0.0000	9.7377
Unmitigated	1.7494	0.0611	5.2916	2.8000e-004		0.0292	0.0292		0.0292	0.0292	0.0000	9.5074	9.5074	9.2100e-003	0.0000	9.7377

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2194					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3696					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1603	0.0611	5.2916	2.8000e-004		0.0292	0.0292		0.0292	0.0292		9.5074	9.5074	9.2100e-003		9.7377
Total	1.7494	0.0611	5.2916	2.8000e-004		0.0292	0.0292		0.0292	0.0292	0.0000	9.5074	9.5074	9.2100e-003	0.0000	9.7377

64-Unit Senior Care Facility - San Marcos - San Diego County, Winter

6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2194					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3696					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1603	0.0611	5.2916	2.8000e-004		0.0292	0.0292		0.0292	0.0292		9.5074	9.5074	9.2100e-003		9.7377
Total	1.7494	0.0611	5.2916	2.8000e-004		0.0292	0.0292		0.0292	0.0292	0.0000	9.5074	9.5074	9.2100e-003	0.0000	9.7377

7.0 Water Detail**7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

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

64-Unit Senior Care Facility - San Marcos - San Diego County, Winter

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

64-Unit Senior Care Facility - San Marcos - San Diego County, Annual

64-Unit Senior Care Facility - San Marcos

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Congregate Care (Assisted Living)	64.00	Dwelling Unit	2.18	64,000.00	183

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2021
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	450.81	CH4 Intensity (lb/MWhr)	0.018	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

64-Unit Senior Care Facility - San Marcos - San Diego County, Annual

Project Characteristics - 2017 RPS Achieved

Land Use - 2.18 acres

Construction Phase - Construction Schedule

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Proposed Equipment

Off-road Equipment -

Off-road Equipment - ce

Trips and VMT -

Demolition -

Grading - 1.5 acre

Architectural Coating - rule 67 paint

Vehicle Trips - Trip Generation Length per Traffic EMFAC 2014

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - no hearths

Area Coating - Rule 67 Paint

Energy Use -

Construction Off-road Equipment Mitigation - Tier4

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Fleet Mix -

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Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	100.00
tblAreaCoating	Area_EF_Residential_Exterior	250	100
tblAreaCoating	Area_EF_Residential_Interior	250	100
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00

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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	3.00	5.00
tblConstructionPhase	NumDays	6.00	10.00
tblConstructionPhase	NumDays	10.00	7.00
tblConstructionPhase	NumDays	220.00	250.00
tblConstructionPhase	NumDays	10.00	163.00
tblFireplaces	NumberGas	35.20	0.00
tblFireplaces	NumberNoFireplace	6.40	64.00
tblFireplaces	NumberWood	22.40	0.00
tblGrading	AcresOfGrading	5.00	3.75
tblGrading	MaterialImported	0.00	16,128.00
tblGrading	MaterialImported	0.00	8,064.00
tblLandUse	LotAcreage	4.00	2.18
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.018
tblProjectCharacteristics	CO2IntensityFactor	720.49	450.81
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblVehicleTrips	HO_TL	7.50	5.54

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tblVehicleTrips	HO_TTP	39.60	40.00
tblVehicleTrips	HS_TL	7.30	5.54
tblVehicleTrips	HS_TTP	18.80	18.00
tblVehicleTrips	HW_TL	10.80	5.54
tblVehicleTrips	HW_TTP	41.60	42.00
tblVehicleTrips	ST_TR	2.20	3.00
tblVehicleTrips	SU_TR	2.44	3.00
tblVehicleTrips	WD_TR	2.74	3.00
tblWoodstoves	NumberCatalytic	3.20	0.00
tblWoodstoves	NumberNoncatalytic	3.20	0.00

2.0 Emissions Summary

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2.1 Overall Construction**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.7055	2.6666	2.0947	4.8100e-003	0.1234	0.1206	0.2439	0.0449	0.1161	0.1609	0.0000	421.8958	421.8958	0.0610	0.0000	423.4209
2021	0.0326	0.0765	0.0731	1.4000e-004	2.1900e-003	3.7400e-003	5.9400e-003	5.9000e-004	3.6200e-003	4.2100e-003	0.0000	12.1292	12.1292	1.7300e-003	0.0000	12.1725
Maximum	0.7055	2.6666	2.0947	4.8100e-003	0.1234	0.1206	0.2439	0.0449	0.1161	0.1609	0.0000	421.8958	421.8958	0.0610	0.0000	423.4209

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.4553	0.9249	2.1085	4.8100e-003	0.1234	2.5700e-003	0.1259	0.0449	2.4700e-003	0.0473	0.0000	421.8955	421.8955	0.0610	0.0000	423.4206
2021	0.0246	0.0213	0.0746	1.4000e-004	2.1900e-003	4.0000e-005	2.2400e-003	5.9000e-004	4.0000e-005	6.3000e-004	0.0000	12.1292	12.1292	1.7300e-003	0.0000	12.1725
Maximum	0.4553	0.9249	2.1085	4.8100e-003	0.1234	2.5700e-003	0.1259	0.0449	2.4700e-003	0.0473	0.0000	421.8955	421.8955	0.0610	0.0000	423.4206

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	34.99	65.51	-0.70	0.00	0.00	97.90	48.70	0.00	97.90	70.95	0.00	0.00	0.00	0.00	0.00	0.00

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2020	3-31-2020	0.9562	0.4738
2	4-1-2020	6-30-2020	0.6941	0.2222
3	7-1-2020	9-30-2020	0.8536	0.3376
4	10-1-2020	12-31-2020	0.8550	0.3390
5	1-1-2021	3-31-2021	0.1126	0.0474
		Highest	0.9562	0.4738

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3044	5.5000e-003	0.4762	3.0000e-005		2.6300e-003	2.6300e-003		2.6300e-003	2.6300e-003	0.0000	0.7762	0.7762	7.5000e-004	0.0000	0.7951
Energy	2.5600e-003	0.0219	9.3200e-003	1.4000e-004		1.7700e-003	1.7700e-003		1.7700e-003	1.7700e-003	0.0000	77.7837	77.7837	2.5800e-003	9.3000e-004	78.1253
Mobile	0.0492	0.2025	0.5060	1.5600e-003	0.1296	1.3700e-003	0.1309	0.0347	1.2800e-003	0.0360	0.0000	143.9536	143.9536	8.2600e-003	0.0000	144.1600
Waste						0.0000	0.0000		0.0000	0.0000	11.8547	0.0000	11.8547	0.7006	0.0000	29.3695
Water						0.0000	0.0000		0.0000	0.0000	1.3229	17.0748	18.3977	0.1366	3.3600e-003	22.8129
Total	0.3562	0.2299	0.9916	1.7300e-003	0.1296	5.7700e-003	0.1353	0.0347	5.6800e-003	0.0404	13.1776	239.5883	252.7659	0.8487	4.2900e-003	275.2627

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2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3044	5.5000e-003	0.4762	3.0000e-005		2.6300e-003	2.6300e-003		2.6300e-003	2.6300e-003	0.0000	0.7762	0.7762	7.5000e-004	0.0000	0.7951
Energy	2.5600e-003	0.0219	9.3200e-003	1.4000e-004		1.7700e-003	1.7700e-003		1.7700e-003	1.7700e-003	0.0000	77.7837	77.7837	2.5800e-003	9.3000e-004	78.1253
Mobile	0.0492	0.2025	0.5060	1.5600e-003	0.1296	1.3700e-003	0.1309	0.0347	1.2800e-003	0.0360	0.0000	143.9536	143.9536	8.2600e-003	0.0000	144.1600
Waste						0.0000	0.0000		0.0000	0.0000	11.8547	0.0000	11.8547	0.7006	0.0000	29.3695
Water						0.0000	0.0000		0.0000	0.0000	1.3229	17.0748	18.3977	0.1366	3.3600e-003	22.8129
Total	0.3562	0.2299	0.9916	1.7300e-003	0.1296	5.7700e-003	0.1353	0.0347	5.6800e-003	0.0404	13.1776	239.5883	252.7659	0.8487	4.2900e-003	275.2627

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

3.0 Construction Detail**Construction Phase**

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2020	1/7/2020	5	5	
2	Grading	Grading	1/8/2020	1/21/2020	5	10	
3	Paving	Paving	1/21/2020	1/29/2020	5	7	
4	Building Construction	Building Construction	1/30/2020	1/13/2021	5	250	
5	Architectural Coating	Architectural Coating	6/1/2020	1/13/2021	5	163	

Acres of Grading (Site Preparation Phase): 2.5

Acres of Grading (Grading Phase): 3.75

Acres of Paving: 0

Residential Indoor: 129,600; Residential Outdoor: 43,200; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

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

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	797.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	1,595.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	46.00	7.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

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3.2 Site Preparation - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0145	0.0000	0.0145	7.3800e-003	0.0000	7.3800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.5500e-003	0.0406	0.0136	4.0000e-005		1.7200e-003	1.7200e-003		1.5800e-003	1.5800e-003	0.0000	3.0995	3.0995	1.0000e-003	0.0000	3.1246
Total	3.5500e-003	0.0406	0.0136	4.0000e-005	0.0145	1.7200e-003	0.0162	7.3800e-003	1.5800e-003	8.9600e-003	0.0000	3.0995	3.0995	1.0000e-003	0.0000	3.1246

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	3.1900e-003	0.1134	0.0260	3.1000e-004	6.8200e-003	3.6000e-004	7.1800e-003	1.8700e-003	3.4000e-004	2.2200e-003	0.0000	30.7343	30.7343	2.7700e-003	0.0000	30.8035
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	3.0000e-005	3.3000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0906	0.0906	0.0000	0.0000	0.0907
Total	3.2400e-003	0.1134	0.0263	3.1000e-004	6.9200e-003	3.6000e-004	7.2800e-003	1.9000e-003	3.4000e-004	2.2500e-003	0.0000	30.8249	30.8249	2.7700e-003	0.0000	30.8941

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3.2 Site Preparation - 2020**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					0.0145	0.0000	0.0145	7.3800e-003	0.0000	7.3800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.3000e-004	1.8700e-003	0.0158	4.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.0995	3.0995	1.0000e-003	0.0000	3.1246
Total	4.3000e-004	1.8700e-003	0.0158	4.0000e-005	0.0145	1.0000e-005	0.0145	7.3800e-003	1.0000e-005	7.3900e-003	0.0000	3.0995	3.0995	1.0000e-003	0.0000	3.1246

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	3.1900e-003	0.1134	0.0260	3.1000e-004	6.8200e-003	3.6000e-004	7.1800e-003	1.8700e-003	3.4000e-004	2.2200e-003	0.0000	30.7343	30.7343	2.7700e-003	0.0000	30.8035
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	3.0000e-005	3.3000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0906	0.0906	0.0000	0.0000	0.0907
Total	3.2400e-003	0.1134	0.0263	3.1000e-004	6.9200e-003	3.6000e-004	7.2800e-003	1.9000e-003	3.4000e-004	2.2500e-003	0.0000	30.8249	30.8249	2.7700e-003	0.0000	30.8941

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3.3 Grading - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0321	0.0000	0.0321	0.0168	0.0000	0.0168	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.0000e-003	0.1004	0.0461	1.0000e-004		4.3700e-003	4.3700e-003		4.0200e-003	4.0200e-003	0.0000	8.9366	8.9366	2.8900e-003	0.0000	9.0088
Total	9.0000e-003	0.1004	0.0461	1.0000e-004	0.0321	4.3700e-003	0.0365	0.0168	4.0200e-003	0.0208	0.0000	8.9366	8.9366	2.8900e-003	0.0000	9.0088

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	6.3800e-003	0.2269	0.0520	6.2000e-004	0.0137	7.2000e-004	0.0144	3.7500e-003	6.9000e-004	4.4300e-003	0.0000	61.5071	61.5071	5.5400e-003	0.0000	61.6456
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	1.1000e-004	1.0700e-003	0.0000	3.2000e-004	0.0000	3.2000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2900	0.2900	1.0000e-005	0.0000	0.2902
Total	6.5300e-003	0.2270	0.0530	6.2000e-004	0.0140	7.2000e-004	0.0147	3.8400e-003	6.9000e-004	4.5200e-003	0.0000	61.7971	61.7971	5.5500e-003	0.0000	61.9357

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3.3 Grading - 2020**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					0.0321	0.0000	0.0321	0.0168	0.0000	0.0168	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2500e-003	5.4000e-003	0.0536	1.0000e-004		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.9366	8.9366	2.8900e-003	0.0000	9.0088
Total	1.2500e-003	5.4000e-003	0.0536	1.0000e-004	0.0321	2.0000e-005	0.0321	0.0168	2.0000e-005	0.0168	0.0000	8.9366	8.9366	2.8900e-003	0.0000	9.0088

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	6.3800e-003	0.2269	0.0520	6.2000e-004	0.0137	7.2000e-004	0.0144	3.7500e-003	6.9000e-004	4.4300e-003	0.0000	61.5071	61.5071	5.5400e-003	0.0000	61.6456
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	1.1000e-004	1.0700e-003	0.0000	3.2000e-004	0.0000	3.2000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2900	0.2900	1.0000e-005	0.0000	0.2902
Total	6.5300e-003	0.2270	0.0530	6.2000e-004	0.0140	7.2000e-004	0.0147	3.8400e-003	6.9000e-004	4.5200e-003	0.0000	61.7971	61.7971	5.5500e-003	0.0000	61.9357

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3.4 Paving - 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	3.1000e-003	0.0319	0.0323	5.0000e-005		1.7800e-003	1.7800e-003		1.6400e-003	1.6400e-003	0.0000	4.3116	4.3116	1.3900e-003	0.0000	4.3465
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.1000e-003	0.0319	0.0323	5.0000e-005		1.7800e-003	1.7800e-003		1.6400e-003	1.6400e-003	0.0000	4.3116	4.3116	1.3900e-003	0.0000	4.3465

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	1.0000e-004	9.4000e-004	0.0000	2.8000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2537	0.2537	1.0000e-005	0.0000	0.2539
Total	1.3000e-004	1.0000e-004	9.4000e-004	0.0000	2.8000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2537	0.2537	1.0000e-005	0.0000	0.2539

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3.4 Paving - 2020**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	6.0000e-004	2.6100e-003	0.0372	5.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.3116	4.3116	1.3900e-003	0.0000	4.3465
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	6.0000e-004	2.6100e-003	0.0372	5.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.3116	4.3116	1.3900e-003	0.0000	4.3465

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	1.0000e-004	9.4000e-004	0.0000	2.8000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2537	0.2537	1.0000e-005	0.0000	0.2539
Total	1.3000e-004	1.0000e-004	9.4000e-004	0.0000	2.8000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2537	0.2537	1.0000e-005	0.0000	0.2539

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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	0.2568	1.9105	1.5891	2.7300e-003		0.1022	0.1022		0.0985	0.0985	0.0000	225.5525	225.5525	0.0428	0.0000	226.6226
Total	0.2568	1.9105	1.5891	2.7300e-003		0.1022	0.1022		0.0985	0.0985	0.0000	225.5525	225.5525	0.0428	0.0000	226.6226

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.2100e-003	0.0962	0.0255	2.3000e-004	5.6000e-003	4.7000e-004	6.0700e-003	1.6200e-003	4.5000e-004	2.0700e-003	0.0000	22.2567	22.2567	1.7100e-003	0.0000	22.2994
Worker	0.0204	0.0151	0.1483	4.4000e-004	0.0445	3.2000e-004	0.0448	0.0118	2.9000e-004	0.0121	0.0000	40.1799	40.1799	1.2100e-003	0.0000	40.2100
Total	0.0236	0.1113	0.1739	6.7000e-004	0.0501	7.9000e-004	0.0508	0.0134	7.4000e-004	0.0142	0.0000	62.4366	62.4366	2.9200e-003	0.0000	62.5094

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3.5 Building Construction - 2020**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	0.0363	0.4515	1.5881	2.7300e-003		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	225.5522	225.5522	0.0428	0.0000	226.6224
Total	0.0363	0.4515	1.5881	2.7300e-003		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	225.5522	225.5522	0.0428	0.0000	226.6224

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.2100e-003	0.0962	0.0255	2.3000e-004	5.6000e-003	4.7000e-004	6.0700e-003	1.6200e-003	4.5000e-004	2.0700e-003	0.0000	22.2567	22.2567	1.7100e-003	0.0000	22.2994
Worker	0.0204	0.0151	0.1483	4.4000e-004	0.0445	3.2000e-004	0.0448	0.0118	2.9000e-004	0.0121	0.0000	40.1799	40.1799	1.2100e-003	0.0000	40.2100
Total	0.0236	0.1113	0.1739	6.7000e-004	0.0501	7.9000e-004	0.0508	0.0134	7.4000e-004	0.0142	0.0000	62.4366	62.4366	2.9200e-003	0.0000	62.5094

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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	8.5700e-003	0.0657	0.0579	1.0000e-004		3.3000e-003	3.3000e-003		3.1800e-003	3.1800e-003	0.0000	8.4229	8.4229	1.5400e-003	0.0000	8.4614
Total	8.5700e-003	0.0657	0.0579	1.0000e-004		3.3000e-003	3.3000e-003		3.1800e-003	3.1800e-003	0.0000	8.4229	8.4229	1.5400e-003	0.0000	8.4614

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-004	3.2400e-003	8.6000e-004	1.0000e-005	2.1000e-004	1.0000e-005	2.2000e-004	6.0000e-005	1.0000e-005	7.0000e-005	0.0000	0.8235	0.8235	6.0000e-005	0.0000	0.8251
Worker	7.2000e-004	5.1000e-004	5.1700e-003	2.0000e-005	1.6600e-003	1.0000e-005	1.6700e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4501	1.4501	4.0000e-005	0.0000	1.4511
Total	8.2000e-004	3.7500e-003	6.0300e-003	3.0000e-005	1.8700e-003	2.0000e-005	1.8900e-003	5.0000e-004	2.0000e-005	5.2000e-004	0.0000	2.2736	2.2736	1.0000e-004	0.0000	2.2762

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3.5 Building Construction - 2021**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	1.3500e-003	0.0169	0.0593	1.0000e-004		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.4229	8.4229	1.5400e-003	0.0000	8.4614
Total	1.3500e-003	0.0169	0.0593	1.0000e-004		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.4229	8.4229	1.5400e-003	0.0000	8.4614

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-004	3.2400e-003	8.6000e-004	1.0000e-005	2.1000e-004	1.0000e-005	2.2000e-004	6.0000e-005	1.0000e-005	7.0000e-005	0.0000	0.8235	0.8235	6.0000e-005	0.0000	0.8251
Worker	7.2000e-004	5.1000e-004	5.1700e-003	2.0000e-005	1.6600e-003	1.0000e-005	1.6700e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4501	1.4501	4.0000e-005	0.0000	1.4511
Total	8.2000e-004	3.7500e-003	6.0300e-003	3.0000e-005	1.8700e-003	2.0000e-005	1.8900e-003	5.0000e-004	2.0000e-005	5.2000e-004	0.0000	2.2736	2.2736	1.0000e-004	0.0000	2.2762

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3.6 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	0.3784					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0187	0.1297	0.1410	2.3000e-004		8.5400e-003	8.5400e-003		8.5400e-003	8.5400e-003	0.0000	19.6601	19.6601	1.5200e-003	0.0000	19.6981
Total	0.3970	0.1297	0.1410	2.3000e-004		8.5400e-003	8.5400e-003		8.5400e-003	8.5400e-003	0.0000	19.6601	19.6601	1.5200e-003	0.0000	19.6981

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5500e-003	1.8900e-003	0.0185	6.0000e-005	5.5600e-003	4.0000e-005	5.6000e-003	1.4800e-003	4.0000e-005	1.5100e-003	0.0000	5.0234	5.0234	1.5000e-004	0.0000	5.0272
Total	2.5500e-003	1.8900e-003	0.0185	6.0000e-005	5.5600e-003	4.0000e-005	5.6000e-003	1.4800e-003	4.0000e-005	1.5100e-003	0.0000	5.0234	5.0234	1.5000e-004	0.0000	5.0272

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3.6 Architectural Coating - 2020**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	0.3784					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2900e-003	9.9100e-003	0.1411	2.3000e-004		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	19.6600	19.6600	1.5200e-003	0.0000	19.6981
Total	0.3806	9.9100e-003	0.1411	2.3000e-004		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	19.6600	19.6600	1.5200e-003	0.0000	19.6981

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5500e-003	1.8900e-003	0.0185	6.0000e-005	5.5600e-003	4.0000e-005	5.6000e-003	1.4800e-003	4.0000e-005	1.5100e-003	0.0000	5.0234	5.0234	1.5000e-004	0.0000	5.0272
Total	2.5500e-003	1.8900e-003	0.0185	6.0000e-005	5.5600e-003	4.0000e-005	5.6000e-003	1.4800e-003	4.0000e-005	1.5100e-003	0.0000	5.0234	5.0234	1.5000e-004	0.0000	5.0272

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0221					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.9000e-004	6.8700e-003	8.1800e-003	1.0000e-005		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004	0.0000	1.1490	1.1490	8.0000e-005	0.0000	1.1509
Total	0.0231	6.8700e-003	8.1800e-003	1.0000e-005		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004	0.0000	1.1490	1.1490	8.0000e-005	0.0000	1.1509

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	1.0000e-004	1.0100e-003	0.0000	3.2000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2837	0.2837	1.0000e-005	0.0000	0.2839
Total	1.4000e-004	1.0000e-004	1.0100e-003	0.0000	3.2000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2837	0.2837	1.0000e-005	0.0000	0.2839

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3.6 Architectural Coating - 2021**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	0.0221					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3000e-004	5.8000e-004	8.2500e-003	1.0000e-005		0.0000	0.0000		0.0000	0.0000	0.0000	1.1490	1.1490	8.0000e-005	0.0000	1.1509
Total	0.0222	5.8000e-004	8.2500e-003	1.0000e-005		0.0000	0.0000		0.0000	0.0000	0.0000	1.1490	1.1490	8.0000e-005	0.0000	1.1509

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	1.0000e-004	1.0100e-003	0.0000	3.2000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2837	0.2837	1.0000e-005	0.0000	0.2839
Total	1.4000e-004	1.0000e-004	1.0100e-003	0.0000	3.2000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2837	0.2837	1.0000e-005	0.0000	0.2839

4.0 Operational Detail - Mobile

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4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0492	0.2025	0.5060	1.5600e-003	0.1296	1.3700e-003	0.1309	0.0347	1.2800e-003	0.0360	0.0000	143.9536	143.9536	8.2600e-003	0.0000	144.1600
Unmitigated	0.0492	0.2025	0.5060	1.5600e-003	0.1296	1.3700e-003	0.1309	0.0347	1.2800e-003	0.0360	0.0000	143.9536	143.9536	8.2600e-003	0.0000	144.1600

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Congregate Care (Assisted Living)	192.00	192.00	192.00	343,831	343,831
Total	192.00	192.00	192.00	343,831	343,831

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Congregate Care (Assisted Living)	5.54	5.54	5.54	42.00	18.00	40.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Congregate Care (Assisted Living)	0.593936	0.041843	0.182569	0.108325	0.016436	0.005513	0.015940	0.023523	0.001912	0.001972	0.006090	0.000748	0.001193

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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	52.4124	52.4124	2.0900e-003	4.7000e-004	52.6033
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	52.4124	52.4124	2.0900e-003	4.7000e-004	52.6033
NaturalGas Mitigated	2.5600e-003	0.0219	9.3200e-003	1.4000e-004		1.7700e-003	1.7700e-003		1.7700e-003	1.7700e-003	0.0000	25.3713	25.3713	4.9000e-004	4.7000e-004	25.5220
NaturalGas Unmitigated	2.5600e-003	0.0219	9.3200e-003	1.4000e-004		1.7700e-003	1.7700e-003		1.7700e-003	1.7700e-003	0.0000	25.3713	25.3713	4.9000e-004	4.7000e-004	25.5220

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

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Congregate Care (Assisted Living)	475439	2.5600e-003	0.0219	9.3200e-003	1.4000e-004		1.7700e-003	1.7700e-003		1.7700e-003	1.7700e-003	0.0000	25.3713	25.3713	4.9000e-004	4.7000e-004	25.5220
Total		2.5600e-003	0.0219	9.3200e-003	1.4000e-004		1.7700e-003	1.7700e-003		1.7700e-003	1.7700e-003	0.0000	25.3713	25.3713	4.9000e-004	4.7000e-004	25.5220

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Congregate Care (Assisted Living)	475439	2.5600e-003	0.0219	9.3200e-003	1.4000e-004		1.7700e-003	1.7700e-003		1.7700e-003	1.7700e-003	0.0000	25.3713	25.3713	4.9000e-004	4.7000e-004	25.5220
Total		2.5600e-003	0.0219	9.3200e-003	1.4000e-004		1.7700e-003	1.7700e-003		1.7700e-003	1.7700e-003	0.0000	25.3713	25.3713	4.9000e-004	4.7000e-004	25.5220

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

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Congregate Care (Assisted Living)	256316	52.4124	2.0900e-003	4.7000e-004	52.6033
Total		52.4124	2.0900e-003	4.7000e-004	52.6033

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Congregate Care (Assisted Living)	256316	52.4124	2.0900e-003	4.7000e-004	52.6033
Total		52.4124	2.0900e-003	4.7000e-004	52.6033

6.0 Area Detail**6.1 Mitigation Measures Area**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3044	5.5000e-003	0.4762	3.0000e-005		2.6300e-003	2.6300e-003		2.6300e-003	2.6300e-003	0.0000	0.7762	0.7762	7.5000e-004	0.0000	0.7951
Unmitigated	0.3044	5.5000e-003	0.4762	3.0000e-005		2.6300e-003	2.6300e-003		2.6300e-003	2.6300e-003	0.0000	0.7762	0.7762	7.5000e-004	0.0000	0.7951

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	0.0401					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2500					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0144	5.5000e-003	0.4762	3.0000e-005		2.6300e-003	2.6300e-003		2.6300e-003	2.6300e-003	0.0000	0.7762	0.7762	7.5000e-004	0.0000	0.7951
Total	0.3044	5.5000e-003	0.4762	3.0000e-005		2.6300e-003	2.6300e-003		2.6300e-003	2.6300e-003	0.0000	0.7762	0.7762	7.5000e-004	0.0000	0.7951

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6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0401					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2500					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0144	5.5000e-003	0.4762	3.0000e-005		2.6300e-003	2.6300e-003		2.6300e-003	2.6300e-003	0.0000	0.7762	0.7762	7.5000e-004	0.0000	0.7951
Total	0.3044	5.5000e-003	0.4762	3.0000e-005		2.6300e-003	2.6300e-003		2.6300e-003	2.6300e-003	0.0000	0.7762	0.7762	7.5000e-004	0.0000	0.7951

7.0 Water Detail**7.1 Mitigation Measures Water**

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	18.3977	0.1366	3.3600e-003	22.8129
Unmitigated	18.3977	0.1366	3.3600e-003	22.8129

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Congregate Care (Assisted Living)	4.16986 / 2.62882	18.3977	0.1366	3.3600e-003	22.8129
Total		18.3977	0.1366	3.3600e-003	22.8129

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7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Congregate Care (Assisted Living)	4.16986 / 2.62882	18.3977	0.1366	3.3600e-003	22.8129
Total		18.3977	0.1366	3.3600e-003	22.8129

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	11.8547	0.7006	0.0000	29.3695
Unmitigated	11.8547	0.7006	0.0000	29.3695

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8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Congregate Care (Assisted Living)	58.4	11.8547	0.7006	0.0000	29.3695
Total		11.8547	0.7006	0.0000	29.3695

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Congregate Care (Assisted Living)	58.4	11.8547	0.7006	0.0000	29.3695
Total		11.8547	0.7006	0.0000	29.3695

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

ATTACHMENT B

SCREEN3 for PM₁₀ Exhaust

SCREEN ARTIS

12/22/18
07:57:39*** SCREEN3 MODEL RUN ***
*** VERSION DATED 13043 ***

ARTIS 64 Unit Assisted Living Tier IV

SIMPLE TERRAIN INPUTS:

SOURCE TYPE	=	AREA
EMISSION RATE (G/(S-M**2))	=	0.214000E-08
SOURCE HEIGHT (M)	=	3.0000
LENGTH OF LARGER SIDE (M)	=	93.9300
LENGTH OF SMALLER SIDE (M)	=	93.9300
RECEPTOR HEIGHT (M)	=	1.5000
URBAN/RURAL OPTION	=	URBAN

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

MODEL ESTIMATES DIRECTION TO MAX CONCENTRATION

BUOY. FLUX = 0.000 M**4/S**3; MOM. FLUX = 0.000 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	MAX DIR (DEG)
10.	0.1974E-01	5	1.0	1.0	10000.0	3.00	45.
100.	0.2654E-01	5	1.0	1.0	10000.0	3.00	45.
200.	0.1219E-01	5	1.0	1.0	10000.0	3.00	45.
300.	0.7210E-02	5	1.0	1.0	10000.0	3.00	45.
400.	0.4812E-02	5	1.0	1.0	10000.0	3.00	44.
500.	0.3468E-02	5	1.0	1.0	10000.0	3.00	44.
600.	0.2640E-02	5	1.0	1.0	10000.0	3.00	42.
700.	0.2092E-02	5	1.0	1.0	10000.0	3.00	44.
800.	0.1710E-02	5	1.0	1.0	10000.0	3.00	39.
900.	0.1433E-02	5	1.0	1.0	10000.0	3.00	45.
1000.	0.1225E-02	5	1.0	1.0	10000.0	3.00	36.
1100.	0.1063E-02	5	1.0	1.0	10000.0	3.00	44.
1200.	0.9352E-03	5	1.0	1.0	10000.0	3.00	32.
1300.	0.8324E-03	5	1.0	1.0	10000.0	3.00	1.
1400.	0.7474E-03	5	1.0	1.0	10000.0	3.00	2.
1500.	0.6768E-03	5	1.0	1.0	10000.0	3.00	27.
1600.	0.6173E-03	5	1.0	1.0	10000.0	3.00	43.
1700.	0.5666E-03	5	1.0	1.0	10000.0	3.00	40.
1800.	0.5228E-03	5	1.0	1.0	10000.0	3.00	37.
1900.	0.4849E-03	5	1.0	1.0	10000.0	3.00	1.
2000.	0.4514E-03	5	1.0	1.0	10000.0	3.00	2.
2100.	0.4221E-03	5	1.0	1.0	10000.0	3.00	31.
2200.	0.3961E-03	5	1.0	1.0	10000.0	3.00	16.
2300.	0.3729E-03	5	1.0	1.0	10000.0	3.00	15.
2400.	0.3520E-03	5	1.0	1.0	10000.0	3.00	14.
2500.	0.3332E-03	5	1.0	1.0	10000.0	3.00	39.
2600.	0.3162E-03	5	1.0	1.0	10000.0	3.00	11.
2700.	0.3007E-03	5	1.0	1.0	10000.0	3.00	9.
2800.	0.2866E-03	5	1.0	1.0	10000.0	3.00	8.

SCREEN ARTIS						
2900.	0.2737E-03	5	1.0	1.0	10000.0	3.00
3000.	0.2619E-03	5	1.0	1.0	10000.0	3.00
3500.	0.2146E-03	5	1.0	1.0	10000.0	3.00
4000.	0.1811E-03	5	1.0	1.0	10000.0	3.00
4500.	0.1563E-03	5	1.0	1.0	10000.0	3.00
5000.	0.1373E-03	5	1.0	1.0	10000.0	3.00
5500.	0.1223E-03	5	1.0	1.0	10000.0	3.00
6000.	0.1102E-03	5	1.0	1.0	10000.0	3.00
6500.	0.1002E-03	5	1.0	1.0	10000.0	3.00
7000.	0.9180E-04	5	1.0	1.0	10000.0	3.00
7500.	0.8470E-04	5	1.0	1.0	10000.0	3.00
8000.	0.7860E-04	5	1.0	1.0	10000.0	3.00
8500.	0.7331E-04	5	1.0	1.0	10000.0	3.00
9000.	0.6868E-04	5	1.0	1.0	10000.0	3.00
9500.	0.6458E-04	5	1.0	1.0	10000.0	3.00
10000.	0.6093E-04	5	1.0	1.0	10000.0	3.00

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 10. M:						
75.	0.3200E-01	5	1.0	1.0	10000.0	3.00

 *** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	0.3200E-01	75.	0.

 ** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **

ATTACHMENT C

Cancer Risk Calculations

Air Quality Health Risk Calculations (Worst-Case)
Artis 64 Unit Assisted Living - Tier 4

From CalEE Annual Output	Emission per day (Ton/Total Construction Duration)	0.00068
	Construction Start	1/1/2020
	Construction Complete	1/13/2021
	Days	378
	Construction Emission per day (lb/day)	0.003597884
	Annual Duration (Days)	365
	Annualized Emission Rate (Grams/Second)	1.88639E-05
	Project Site Size (Acres)	2.18
	Project Site Size (meters^2)	8822.147001
	Length of Smalles Side (meters)	93.92628493

Used as an input to SCREEN3	Emission Rate over Grading Area(g/s-m^2)	2.14E-09
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From AERMOD	Concentration Annual (Ug/M^3)	0.032
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	Days	Days to years				
Duration	458	1.254794521				
Age (Years)	3rd Trimester (0.25)	0-2	2-9	2-16	16-30	16-70
Cair (annual) - From F15	0.032	0.032	0.032	0.032	0.032	0.032
Breathing Rate per agegroup BR/BW (Page 5-25)	361	1090	861	745	335	290
A (Default is 1)	1	1	1	1	1	1
Exposure Frequency = EF (days/365days)	0.96	0.96	0.96	0.96	0.96	0.96
10^-6 Microgram to Milligram / liters to m3	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001
Dose-inh	0.00001109	0.00003348	0.00002645	0.00002289	0.00001029	0.00000891
Construction Days	458	1.254794521				
potency factor for Diesel	1.1	1.1	1.1	1.1	1.1	1.1
Age Sensitivity Factor	10	10	3	3	1	1
ED	0.25	1.254794521	1.254794521	1.254794521	1.254794521	1.254794521
AT	70	70	70	70	70	70
FAH	0.85	0.85	0.72	0.72	0.73	0.73
Risk for Each Age Group	3.70324E-07	5.61221E-06	1.12654E-06	9.74762E-07	1.48134E-07	1.28236E-07
Risk per million Exposed	0.370324114	5.612209747	1.126536773	0.974761784	0.148134473	0.128235813
Cancer Risk Per Million 9-years	7.11					
Cancer Risk Per Million 30-years	7.11					
Cancer Risk Per Million 70-years	7.09					

ATTACHMENT D

EMFAC 2014 Trip Distance Calculations

EMFAC2014 (v1.0.7) Emissions Inventory

Region Type: County

Region: San Diego

Calendar Year: 2022

Season: Annual

Vehicle Classification: EMFAC2007 Categories

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

Region	CalYr	VehClass	MdlYr	Speed	Fuel	Population	VMT
San Diego	2022	HHDT	Aggregated	Aggregated	GAS	144.6595242	19334.224
San Diego	2022	HHDT	Aggregated	Aggregated	DSL	14671.69867	1992367.34
San Diego	2022	LDA	Aggregated	Aggregated	GAS	1360303.239	47200227.72
San Diego	2022	LDA	Aggregated	Aggregated	DSL	16436.74621	573988.7279
San Diego	2022	LDA	Aggregated	Aggregated	ELEC	53031.766	2453981.955
San Diego	2022	LDT1	Aggregated	Aggregated	GAS	111279.0693	3429502.532
San Diego	2022	LDT1	Aggregated	Aggregated	DSL	158.1805408	3243.026298
San Diego	2022	LDT1	Aggregated	Aggregated	ELEC	41.01717021	1303.023624
San Diego	2022	LDT2	Aggregated	Aggregated	GAS	428827.6654	15161162.33
San Diego	2022	LDT2	Aggregated	Aggregated	DSL	838.0884277	31419.60641
San Diego	2022	LHDT1	Aggregated	Aggregated	GAS	20157.99378	562420.1125
San Diego	2022	LHDT1	Aggregated	Aggregated	DSL	23321.96226	753461.1195
San Diego	2022	LHDT2	Aggregated	Aggregated	GAS	4108.8208	143669.1591
San Diego	2022	LHDT2	Aggregated	Aggregated	DSL	8498.569967	316039.803
San Diego	2022	MCY	Aggregated	Aggregated	GAS	68595.68344	504731.8099
San Diego	2022	MDV	Aggregated	Aggregated	GAS	269044.1313	8719960.001
San Diego	2022	MDV	Aggregated	Aggregated	DSL	4824.321421	186245.0021
San Diego	2022	MH	Aggregated	Aggregated	GAS	9893.769026	74246.43795
San Diego	2022	MH	Aggregated	Aggregated	DSL	2520.948671	19917.76322
San Diego	2022	MHDT	Aggregated	Aggregated	GAS	2882.254746	151421.3838
San Diego	2022	MHDT	Aggregated	Aggregated	DSL	22886.72851	1217628.279
San Diego	2022	OBUS	Aggregated	Aggregated	GAS	1591.258236	88804.35481
San Diego	2022	OBUS	Aggregated	Aggregated	DSL	928.9920903	72765.05354
San Diego	2022	SBUS	Aggregated	Aggregated	GAS	373.7747945	17615.65559
San Diego	2022	SBUS	Aggregated	Aggregated	DSL	1197.474797	45553.93901
San Diego	2022	UBUS	Aggregated	Aggregated	GAS	433.8573727	60679.95352
San Diego	2022	UBUS	Aggregated	Aggregated	DSL	725.3107192	101443.0629
						Total VMT	83903133.38
						Total VMT per Trip	5.536162453