1430 Decision Street Redevelopment Project – Planning Case No. P21-0339

Technical Reports PART 1

1. Air Quality Technical Report - January 2023
2. Health Risk Assessment – January 2023
3. Greenhouse Gas Emissions Technical Report – January 2022
4. Noise Technical Report – January 2022
5. Cultural Resources Study – November 2022

1430 Decision Street Project, City of Vista
Air Quality Technical Report

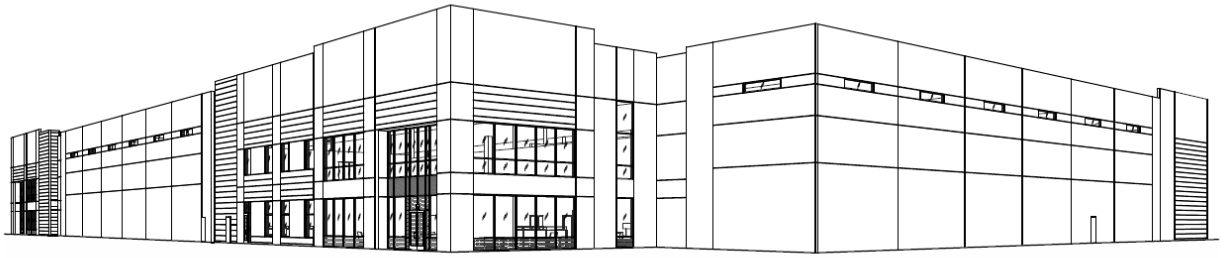

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TABLE OF CONTENTS

1430 DECISION STREET PROJECT, CITY OF VISTA AIR QUALITY TECHNICAL REPORT

AIR QUALITY TECHNICAL REPORT

1430 DECISION STREET PROJECT, CITY OF VISTA

1.1 INTRODUCTION

This report presents an analysis of potential air quality impacts associated with the 1430 Decision Street Project (the "Project") in the City of Vista, CA. The Project consists of the demolition of an existing two-story office (research and development) building (approximately 98,000 square feet) and the construction of an approximately 123,000 square foot industrial building on the 7.81-acre property (APN# 219-011-88). The Project would not change the General Plan Land Use Designation (Research Light Industrial [RLI]) or the Zoning Designation (Vista Business Park Specific Plan, Specific Plan Area B) for the property.

The nearest residences are approximately 2,000 feet to the east and the nearest school is approximately 3,000 feet to the north. The adjacent land uses to the property are of the same General Plan Land Use and Zoning designation, except for the parcel to the south, which has the General Plan Land Use Designation of General Commercial (GC).

Project construction would commence in June 2022 and would be completed in July 2023 (approximately 13 months). Demolition would be required to remove the existing structure onsite. Site preparation and grading activities would follow but would not require haul trucks for soil import/export (cut/fill would be balanced). Building construction would follow and would comprise most of the construction period. Paving and architectural coating phases would be the final construction phases.

This report presents an overview of the existing air quality conditions at the Project site, an overview of regulations applicable to the Project, and an analysis of potential air quality impacts that would result from implementation of the Project. All air quality impacts were found to be **less than significant**.

1.2 EXISTING CONDITIONS

1.2.1 CLIMATE AND METEOROLOGY

The Project site is within the San Diego Air Basin (SDAB). The climate of the SDAB is dominated by a semi-permanent high-pressure cell located over the Pacific Ocean. This cell influences the direction of prevailing winds (westerly to northwesterly) and maintains clear skies for much of the year. The high-pressure cell also creates two types of temperature inversions that may act to degrade local air quality.

The climate of the Vista area is characterized by a repetitive pattern of frequent early morning cloudiness, hazy afternoon sunshine, clean daytime onshore breezes and little temperature change throughout the year. Most of the annual rainfall occurs in the winter while summers are often completely dry. An average of 13.09 inches of rain falls each year, mainly occurring from mid-November to early April. The average maximum temperature is 74 degrees F, while the average minimum temperature is 51.9 degrees F.

Unfortunately, the same atmospheric conditions that create a desirable living climate combine to limit the ability of the atmosphere to disperse the air pollution generated by the large population attracted by the climate. The onshore winds across the coastline diminish quickly when they reach the foothill communities east of San Diego, and the sinking air within the offshore high-pressure system forms a massive temperature inversion that traps all air pollutants near the ground. The resulting horizontal and vertical stagnation, in conjunction with ample sunshine, cause several reactive pollutants to undergo photochemical reactions and form smog that degrades visibility and irritates tear ducts and nasal membranes. High smog levels in coastal communities occasionally occur when polluted air from the South Coast Air Basin drifts seaward and southward at night, and then blows onshore the next day. Such weather patterns are particularly frustrating because no matter what San Diego County does to achieve clean air, interbasin transport will cause occasionally unhealthy air over much of the County despite its best air pollution control efforts.

1.2.2 REGULATORY SETTING

Ambient Air Quality Standards

Pollutants of concern include criteria pollutants[1] and precursors such as carbon monoxide (CO)[2], nitrogen oxides (NOx)[3], sulfur dioxide (SO_2)[4], volatile organic compounds (VOC)[5], particulate matter less than 10 micrometers (PM10), and particulate matter less than 2.5 micrometers (PM2.5).[6]

Regulation of air pollutants is achieved through both national ambient air quality standards (NAAQS) and California ambient air quality standards (CAAQS) and emissions limits for

1 Criteria air pollutants refer to those air pollutants for which the USEPA and CARB has established National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) under the Federal Clean Air Act (CAA).

2 CO is a non–reactive pollutant that is a product of incomplete combustion of organic material, and is mostly associated with motor vehicle traffic, and in wintertime, with wood–burning stoves and fireplaces.

3 When combustion temperatures are extremely high, as in aircraft, truck and automobile engines, atmospheric nitrogen combines with oxygen to form various oxides of nitrogen (NOx). Nitric oxide (NO) and NO_2 are the most significant air pollutants generally referred to as NOx. Nitric oxide is a colorless and odorless gas that is relatively harmless to humans, quickly converts to NO_2 and can be measured. Nitrogen dioxide has been found to be a lung irritant capable of producing pulmonary edema.

4 SO_2 is a combustion product of sulfur or sulfur–containing fuels such as coal and diesel. SO_2 is also a precursor to the formation of atmospheric sulfate and particulate matter, and contributes to potential atmospheric sulfuric acid formation that could precipitate downwind as acid rain.

5 VOC means any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions and thus, a precursor of ozone formation. Reactive organic gases (ROG) is used interchangeably in this analysis.

6 PM10 and PM2.5 consists of airborne particles that measure 10 micrometers or less in diameter and 2.5 micrometers or less in diameter, respectively. PM10 and PM2.5 represent fractions of particulate matter that can be inhaled into the air passages and the lungs, causing adverse health effects.

individual sources. Regulations implementing the federal Clean Air Act (CAA) and its subsequent amendments established NAAQS for the six criteria pollutants. California has adopted more stringent CAAQS for most of the criteria air pollutants. In addition, California has established CAAQS for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. Because of the meteorological conditions in the state, there is considerable difference between state and federal standards in California.

The NAAQS and CAAQS are intended to protect the public health and welfare, and they incorporate an adequate margin of safety. They are designed to protect those segments of the public most susceptible to respiratory distress, known as sensitive receptors, including asthmatics, the very young, elderly, people weak from other illness or disease, or persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollution levels somewhat above the ambient air quality standards before adverse health effects are observed.

Under amendments to the federal CAA, United States Environmental Protection Agency (USEPA) has classified air basins or portions thereof, as either “attainment” or “non-attainment” for each criteria air pollutant, based on whether the NAAQS have been achieved. The California CAA, which is patterned after the federal CAA, also requires areas to be designated as “attainment” or “non-attainment” for the state standards. Thus, areas in California have two sets of attainment / non-attainment designations: one set with respect to the NAAQS and one set with respect to the CAAQS.

The California Air Resources Board (CARB) is the state regulatory agency with authority to enforce regulations to both achieve and maintain the NAAQS and CAAQS. The CARB is responsible for the development, adoption, and enforcement of the state’s motor vehicle emissions program, as well as the adoption of the CAAQS. The CARB also reviews operations and programs of the local air districts and requires each air district with jurisdiction over a nonattainment area to develop its own strategy for achieving the NAAQS and CAAQS. The local air district has the primary responsibility for the development and implementation of rules and regulations designed to attain the NAAQS and CAAQS, as well as the permitting of new or modified sources, development of air quality management plans, and adoption and enforcement of air pollution regulations. The San Diego Air Pollution Control District (SDAPCD) is the local agency responsible for the administration and enforcement of air quality regulations for San Diego County.

Regional Air Quality Strategy

The SDAPCD and the San Diego Association of Governments (SANDAG) are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the SDAB. The San Diego County Regional Air Quality Strategy (RAQS) was initially adopted in 1991 and is updated on a triennial basis. The RAQS was updated in 1995, 1998, 2001, 2004, 2009, and most recently in 2016 (SDAPCD, 2016). The SDAPCD is in the process of preparing an update to the RAQS. The RAQS outlines SDAPCD’s plans and control measures designed to attain the CAAQS for ozone. The RAQS does not address the CAAQS for PM10 or PM2.5.

State Implementation Plan

The SDAPCD has also developed the air basin's input to the State Implementation Plan (SIP), which is required under the Federal CAA for areas that are out of attainment of air quality standards. The SIP includes the SDAPCD's plans and control measures for attaining the ozone NAAQS. The SIP is also updated on a triennial basis. The Attainment Plan forms the basis for the SIP update, as it contains documentation on emission inventories and trends, the SDAPCD's emission control strategy, and an attainment demonstration that shows that the SDAB will meet the NAAQS for ozone. Emission inventories, projections, and trends in the Attainment Plan are based on the latest ozone SIP planning emission projections compiled and maintained by CARB. Supporting data were developed jointly by stakeholder agencies, including CARB, the SDAPCD, the South Coast Air Quality Management District (SCAQMD), the Southern California Association of Governments (SCAG), and SANDAG. Each agency plays a role in collecting and reviewing data as necessary to generate comprehensive emission inventories. The supporting data include socio-economic projections, industrial and travel activity levels, emission factors, and emission speciation profiles. These projections are based on data submitted by stakeholder agencies including projections in municipal General Plans.

City of Vista General Plan 2030

The City of Vista has adopted a Resource Conservation and Sustainability Element in its updated General Plan (City of Vista, 2011). The following policy from the Element applies to the Project:

RCS Policy 1.4 Amend the Grading Ordinance as needed to reduce fugitive dust generated as a result of construction projects. Require implementation of best management practices (BMPs) to stabilize disturbed land, including but not limited to short-term methods during construction (e.g., watering active construction areas, covering open stockpiles, and applying non-toxic soil stabilizers on unpaved access roads and temporary parking areas) and permanent methods post-construction (e.g., vegetation or revegetation, installation of landscape, etc.).

1.2.3 LOCAL AIR QUALITY

The SDAB is designated as a state standard nonattainment area for PM10, PM2.5, 1-hour and 8-hour ozone, and as a federal standard nonattainment area for 8-hour ozone. The SDAB is designated as attainment or unclassified for all other state and federal pollutant standards. The SDAPCD operates a regional monitoring network for ambient concentrations of air pollutants.

The closest air quality monitoring station to the Project that monitors 8-hour and 1-hour ozone, PM2.5, and NO_2 is the Camp Pendleton station at 21441 W. B Street (approximately 11 miles northwest of the Project). Measurements at the Camp Pendleton station show three exceedances of the federal standard and three exceedances of the state standard for 8-hour ozone in 2020. No other air quality standards were exceeded at the Camp Pendleton station between 2018 and 2020.

1.2.4 PROJECT SITE

The Project site is at 1430 Decision Street (APN# 219-011-88) in City of Vista, CA. The Project consists of the demolition of an existing two-story office (research and development) building

(approximately 98,000 square feet) and the construction of an approximately 123,000 square foot industrial building. The Project would not change the General Plan Land Use Designation (Research Light Industrial [RLI]) or the Zoning Designation (Vista Business Park Specific Plan, Specific Plan Area B) for the property.

The nearest residences are approximately 2,000 feet to the east and the nearest school is approximately 3,000 feet to the north. The adjacent land uses to the property are of the same General Plan Land Use and Zoning designation, except for the parcel to the south, which has the General Plan Land Use Designation of General Commercial (GC).

1.2.5 SENSITIVE RECEPTORS

Land uses such as schools, children's daycare centers, hospitals, and convalescent homes are more sensitive than the general public to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress. Persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality. The CARB has identified the following people as most likely to be affected by air pollution: children less than 14 years of age, the elderly over 65 years of age, athletes, and those with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive population groups.

Residential areas are considered more sensitive to air quality conditions than commercial and industrial areas because people generally spend longer periods of time at their residences, resulting in greater exposure to ambient air quality conditions. Recreational uses are also considered sensitive, due to the greater exposure to ambient air quality conditions and because the presence of pollution detracts from the recreational experience. Workers are not considered sensitive receptors because all employers must follow regulations set forth by the Occupation Safety and Health Administration to ensure the health and well-being of their employees. The nearest sensitive receptors are residences approximately 2,000 feet to the east and the nearest school is approximately 3,000 feet to the north.

1.3 THRESHOLDS OF SIGNIFICANCE

The significance of potential impacts was determined based on State CEQA Guidelines, Appendix G. Using Appendix G evaluation thresholds, the Project would be considered to have significant air quality impacts if it were to:

A. Conflict with or obstruct implementation of the applicable air quality plan;

B. 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;

C. Expose sensitive receptors to substantial pollutant concentrations; or

D. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

The SDAPCD has not adopted any CEQA guidelines for projects in the SDAB. The SDAPCD has established screening-level criteria for non-major stationary sources under SDAPCD Rule 20.2. For CEQA purposes, these screening-level criteria can be used as thresholds to demonstrate if a project's total emissions would result in a significant air quality impact. Therefore, screening-level criteria under Rule 20.2 are used to determine the significance of emissions from the Project. Because the SDAPCD has not established screening-level criteria under Rule 20.2 for ROG or PM2.5 emissions, the SCAQMD significance threshold for PM2.5 emissions and the City of San Diego's Significance Determination Thresholds for VOC emissions are used in this analysis. The screening criteria are presented in **Table AQ-1** below.

TABLE AQ-1 SCREENING-LEVEL CRITERIA FOR AIR QUALITY IMPACTS

Pollutant	Total Emissions		
Construction Emissions			
	Pounds Per Day (lbs/day)		
Coarse Particulate Matter (PM10)	100		
Fine Particulate Matter (PM2.5)[1]	55		
Oxides of Nitrogen (NOx)	250		
Oxides of Sulfur (SOx)	250		
Carbon Monoxide (CO)	550		
Volatile Organic Compounds (VOC)[2]	137		
Operational Emissions			
	lbs/hour	lbs/day	tons/year
Coarse Particulate Matter (PM_{10})	---	100	15
Fine Particulate Matter ($PM_{2.5}$)[1]	---	55	10
Oxides of Nitrogen (NOx)	25	250	40
Oxides of Sulfur (SOx)	25		
Carbon Monoxide (CO)	100	550	100
Lead and Lead Compounds	---	3.2	0.6
Volatile Organic Compounds (VOC)[2]	---	137	15

Source: SDAPCD Rule 20.2

1 PM2.5 is not currently regulated under SDAPCD Rule 20.2. PM2.5 thresholds are based on SCAQMD significance thresholds of 55 lbs./day for construction and operation and 10 tons/year for operation.

2 VOC's are not regulated under SDAPCD Rule 20.2. VOC thresholds are based on City of San Diego's Significance Determination Thresholds.

SDAPCD Rule 51 (Public Nuisance) also prohibits emission of any material which causes nuisance to a considerable number of persons or endangers the comfort, health, or safety of any person. A project that proposes a use which would produce objectionable odors would be deemed to have a significant odor impact if it would affect a considerable number of offsite receptors.

1.4 IMPACT ANALYSIS

1.4.1 CONFLICT WITH APPLICABLE AIR QUALITY PLANS

Projects that are consistent with existing General Plan documents, which are used to develop air emissions budgets for the purpose of air quality planning and attainment demonstrations, would be consistent with the SDAB's air quality plans, including the Regional Air Quality Strategy (RAQS) and the State Implementation Plan (SIP). Both air quality plans contain strategies for the region to attain and maintain the ambient air quality standards. Provided a project proposes the same or less development as accounted for in the General Plan document, and provided the project is in compliance with applicable Rules and Regulations adopted by the SDAPCD through their air quality planning process, the project would not conflict with or obstruct implementation of the RAQS or SIP.

The Project proposes to replace the existing two-story office (research and development) building with an industrial building. As noted in Impact 1.4.2, the Project would result in a reduction in vehicle trips because the existing operation generates more vehicle trips than the proposed Project. The Project is consistent with the General Plan land use designation and the zoning designation. Therefore, the Project would be consistent with the land use planning assumptions within the RAQS and SIP. The Project would be required to comply with applicable SDAPCD Rules and Regulations. Therefore, the Project would result in a **less-than-significant impact**.

1.4.2 COMPLIANCE WITH AIR QUALITY STANDARDS

Construction Impacts

Construction-related activities are temporary, finite sources of air emissions. Typical sources of construction-related air emissions include:

- Exhaust from construction equipment and worker automobiles, delivery trucks, and material-hauling trucks.
- Fugitive dust from earthmoving activities and equipment travel on unpaved surfaces.
- Fugitive VOC (or ROG) emissions from architectural coating.

Fugitive dust emissions vary greatly during construction and are dependent on the amount and type of activity, silt content of the soil, and the weather. Vehicles moving over unpaved surfaces, excavation, earth movement, grading, and wind erosion from exposed surfaces are all sources of fugitive dust.

Heavy-duty construction equipment is usually diesel powered. In general, emissions from diesel-powered equipment contain more NOx, SOx, and PM than gasoline-powered engines. However, diesel-powered engines generally produce less CO and less VOC than gasoline-powered engines. Standard construction equipment includes dozers, graders, excavators, cranes, rollers, scrapers, backhoes, loaders, forklifts, generator sets, concrete/industrial saws, pavers/paving equipment, welders, and heavy trucks.

Project construction would commence in June 2022 and would be completed in July 2023 (approximately 13 months). Demolition would be required to remove the existing structure onsite.

Site preparation and grading activities would follow but would not require haul trucks for soil import/export (cut/fill would be balanced). Building construction would follow and would comprise most of the construction period. Paving and architectural coating phases would be the final construction phases. Emissions from construction of the Project were estimated using the California Emissions Estimator Model (CalEEMod) Version 2020.4.0. Default construction phase lengths provided in CalEEMod were modified according to the Project Applicant (See **Appendix A** for details)

The Project applicant has included the use of low VOC architectural coatings for the building exterior and interior as a Project design measure (100 grams per liter (g/L) of VOC or less), which shall be a condition of Project approval. This condition of Project approval would be implemented prior to issuance of the building permit for the Project, as the Applicant would submit the proposed building coating specifications to the City to ensure coating materials contain 100 g/L or less.

Table AQ-2 provides a summary of the unmitigated emission estimates for construction of the Project, as calculated with the CalEEMod (refer to **Appendix A** for detailed emissions outputs). As shown in **Table AQ-2**, construction emissions would be below the significance thresholds for all construction phases and pollutants. Therefore, the Project would result in a **less-than-significant impact**.

TABLE AQ-2 ESTIMATED DAILY UNMITIGATED CONSTRUCTION EMISSIONS

Emission Source	ROG[1]	NO_X	CO	SO_X	PM10	PM2.5
lbs/day						
Demolition						
Fugitive Dust	-	-	-	-	3.26	0.49
Off-road Diesel	2.64	25.72	20.59	0.04	1.24	1.16
Haul Trucks	0.07	2.41	0.59	0.01	0.28	0.09
Worker Travel	0.04	0.03	0.39	0.00	0.12	0.03
TOTAL	**2.75**	**28.16**	**21.57**	**0.05**	**4.91**	**1.78**
Significance Criteria	137	250	550	250	100	55
Significant?	No	No	No	No	No	No
Site Preparation						
Fugitive Dust	-	-	-	-	19.66	10.10
Off-road Diesel	3.17	33.08	19.70	0.04	1.61	1.48
Worker Travel	0.05	0.03	0.47	0.00	0.15	0.04
TOTAL	**3.22**	**33.12**	**20.16**	**0.04**	**21.42**	**11.63**

Emission Source	ROG[1]	NO_X	CO	SO_X	PM10	PM2.5
lbs/day						
Significance Criteria	137	250	550	250	100	55
Significant?	No	No	No	No	No	No
Grading						
Fugitive Dust	-	-	-	-	7.08	3.42
Off-road Diesel	1.95	20.86	15.27	0.03	0.94	0.87
Worker Travel	0.04	0.03	0.39	0.00	0.12	0.03
TOTAL	**1.99**	**20.88**	**15.66**	**0.03**	**8.15**	**4.32**
Significance Criteria	137	250	550	250	100	55
Significant?	No	No	No	No	No	No
Building Construction						
Off-road Diesel	1.71	15.62	16.36	0.03	0.81	0.76
Vendor Trucks	0.07	1.70	0.57	0.01	0.24	0.08
Worker Travel	0.24	0.15	2.10	0.01	0.67	0.18
TOTAL	**2.01**	**17.47**	**19.03**	**0.04**	**1.71**	**1.02**
Significance Criteria	137	250	550	250	100	55
Significant?	No	No	No	No	No	No
Paving						
Fugitive ROG	0.41	-	-	-	-	-
Off-road Diesel	1.03	10.19	14.58	0.02	0.51	0.47
Worker Trips	0.04	0.03	0.36	0.00	0.12	0.03
TOTAL	**1.49**	**10.22**	**14.95**	**0.02**	**0.63**	**0.50**
Significance Criteria	137	250	550	250	100	55
Significant?	No	No	No	No	No	No
Architectural Coating[2]						
Fugitive ROG	121.05	-	-	-	-	-
Off-road Diesel	0.19	1.30	1.81	0.00	0.07	0.07
Worker Trips	0.04	0.03	0.39	0.00	0.13	0.04
TOTAL	**121.29**	**1.33**	**2.20**	**0.00**	**0.20**	**0.11**
Significance Criteria	137	250	550	250	100	55
Significant?	No	No	No	No	No	No
Maximum Daily Emissions[3]	**121.29**	**33.12**	**20.16**	**0.05**	**21.42**	**11.63**
Significance Criteria	137	250	550	250	100	55

Emission Source	ROG[1]	NO_X	CO	SO_X	PM10	PM2.5
lbs/day						
Significant?	No	No	No	No	No	No

Source: SCAQMD, 2021.

1 CARB uses the term "reactive organic gases" (ROG) to measure organic gases, which is also contained in the CalEEMod results. The City of San Diego uses the term VOC ('volatile organic compounds") to describe organic gases in its Significance Determination Thresholds.

2 The Project applicant has included the use of low VOC architectural coatings for the building exterior and interior as a Project design measure (100 grams per liter (g/L) of VOC or less), which shall be a condition of Project approval.

3 Values may differ slightly from estimates shown in **Appendix A** due to rounding. Values are from summer daily emissions. Winter daily emissions are approximately the same for all pollutants (**See Appendix A**).

Operational Impacts

Operation air quality emissions associated with the Project were estimated for three categories of emissions: (1) Area sources, (2) energy sources, and (3) mobile sources. The Project site currently generates air quality emissions associated with the existing two-story office (research and development) building. Therefore, this analysis assumes the existing baseline generates the air quality emissions stated below for the existing operation onsite.

Existing Baseline Operational Emissions

Existing baseline air quality emissions were estimated using CalEEMod. The main source of existing baseline operational emissions are vehicle trips. According to the Project's traffic study, the existing operation generates 784 average daily trips (ADT). **Table AQ-3** provides a summary of the emission estimates for operation of the existing baseline, as calculated with the CalEEMod (refer to **Appendix A** for detailed emissions outputs).

TABLE AQ-3 ESTIMATED EXISTING BASELINE OPERATIONAL EMISSIONS

Emission Source	ROG[1]	NO_X	CO	SO_X	PM10	PM2.5
Summer (lbs/day)						
Area Sources	2.79	0.00	0.04	0.00	0.00	0.00
Energy Use	0.03	0.30	0.25	0.00	0.02	0.02
Mobile Sources	2.12	2.07	18.27	0.04	4.17	1.13
Total	**4.95**	**2.37**	**18.57**	**0.04**	**4.19**	**1.15**
Winter (lbs/day)						
Area Sources	2.79	0.00	0.04	0.00	0.00	0.00
Energy Use	0.03	0.30	0.25	0.00	0.02	0.02
Mobile Sources	2.07	2.24	18.83	0.04	4.17	1.13
Total	**4.90**	**2.55**	**19.13**	**0.04**	**4.19**	**1.15**
Annual (tons/year)						
Area Sources	0.51	0.00	0.00	0.00	0.00	0.00

Energy Use	0.01	0.06	0.05	0.00	0.00	0.00
Mobile Sources	0.37	0.40	3.35	0.01	0.74	0.21
Total	**0.89**	**0.46**	**3.41**	**0.01**	**0.75**	**0.21**

Source: SCAQMD, 2021.
1 CARB uses the term ROG to measure organic gases, which is also contained in the CalEEMod results. The City of San Diego uses the term VOC to describe organic gases in its Significance Determination Thresholds.
2 Values may differ slightly from estimates shown in **Appendix A** due to rounding.

Project Operational Emissions

Project operational air quality emissions were estimated using CalEEMod. The main source of Project operational emissions are vehicle trips. According to the Project's traffic study, the Project would generate 781 ADT. The proposed warehouse building would not include refrigerated or cold storage space, which is why the land use classification of "Unrefrigerated Warehouse" was selected within CalEEMod to estimate emissions. **Table AQ-4** provides a summary of the emission estimates for operation of the Project, as calculated with the CalEEMod (refer to **Appendix A** for detailed emissions outputs).

TABLE AQ-4 ESTIMATED PROJECT OPERATIONAL EMISSIONS

Emission Source	ROG[1]	NO_X	CO	SO_X	PM10	PM2.5
Summer (lbs/day)						
Area Sources	3.47	0.00	0.03	0.00	0.00	0.00
Energy Use	0.01	0.05	0.05	0.00	0.00	0.00
Mobile Sources	2.28	2.33	20.63	0.05	4.83	1.31
Total	**5.76**	**2.38**	**20.71**	**0.05**	**4.84**	**1.31**
Winter (lbs/day)						
Area Sources	3.47	0.00	0.03	0.00	0.00	0.00
Energy Use	0.01	0.05	0.05	0.00	0.00	0.00
Mobile Sources	2.23	2.52	21.12	0.04	4.83	1.31
Total	**5.71**	**2.58**	**21.20**	**0.04**	**4.84**	**1.31**
Annual (tons/year)						
Area Sources	0.63	0.00	0.00	0.00	0.00	0.00
Energy Use	0.00	0.01	0.01	0.00	0.00	0.00
Mobile Sources	0.40	0.45	3.77	0.01	0.86	0.23
Total	**1.03**	**0.46**	**3.78**	**0.01**	**0.86**	**0.23**

Source: SCAQMD, 2021.
1 CARB uses the term ROG to measure organic gases, which is also contained in the CalEEMod results. The City of San Diego uses the term VOC to describe organic gases in its Significance Determination Thresholds.
2 Values may differ slightly from estimates shown in **Appendix A** due to rounding.

Net Project Operational Emissions

Net project operational emissions are provided in **Table AQ-5**. Net project operational emissions are calculated by subtracting the existing baseline operational emissions from the Project operational emissions to account for the air quality emissions that the Project is replacing. After considering the existing baseline (784 ADT), the Project (781 ADT) would result in a decrease of 3 ADT. As shown in **Table AQ-5**, net Project operational emissions would be below the significance thresholds for daily and annual emissions. Therefore, the Project would result in a **less-than-significant impact**.

TABLE AQ-5 ESTIMATED NET PROJECT OPERATIONAL EMISSIONS

Emission Source	ROG[1]	NO_X	CO	SO_X	PM10	PM2.5
Summer (lbs/day)						
Area Sources	0.68	0.00	-0.01	0.00	0.00	0.00
Energy Use	-0.03	-0.25	-0.21	0.00	-0.02	-0.02
Mobile Sources	0.15	0.26	2.36	0.01	0.67	0.18
Total	**0.80**	**0.01**	**2.14**	**0.01**	**0.65**	**0.16**
Significance Criteria	137	250	550	250	100	55
Significant?	No	No	No	No	No	No
Winter (lbs/day)						
Area Sources	0.68	0.00	-0.01	0.00	0.00	0.00
Energy Use	-0.03	-0.25	-0.21	0.00	-0.02	-0.02
Mobile Sources	0.16	0.28	2.29	0.01	0.67	0.18
Total	**0.81**	**0.03**	**2.07**	**0.00**	**0.65**	**0.16**
Significance Criteria	137	250	550	250	100	55
Significant	No	No	No	No	No	No
Annual (tons/year)						
Area Sources	0.12	0.00	0.00	0.00	0.00	0.00
Energy Use	-0.01	-0.05	-0.04	0.00	0.00	0.00
Mobile Sources	0.03	0.05	0.41	0.00	0.11	0.03
Total	**0.15**	**0.01**	**0.37**	**0.00**	**0.11**	**0.02**
Significance Criteria	15	40	100	--	15	10
Significant?	No	No	No	No	No	No

Source: SCAQMD, 2021.

1 CARB uses the term ROG to measure organic gases, which is also contained in the CalEEMod results. The City of San Diego uses the term VOC to describe organic gases in its Significance Determination Thresholds.

1.4.3 IMPACTS TO SENSITIVE RECEPTORS

Construction of the Project would result in temporary and minor emissions of TACs from construction equipment and heavy trucks. Operation of the Project would utilize heavy trucks typical of industrial warehouse project. Off-road construction equipment would be regulated per the State's In-Use Off-Road Diesel Vehicle Regulation and heavy trucks would be regulated per the State's Truck and Bus Regulation. Furthermore, CARB's *Air Quality and Land Use Handbook* recommends a 1,000-foot separation between sensitive receptors and distribution centers (the most applicable source category to the Project) with more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week (CARB, 2005). The Project is in an industrial area of the City and the nearest sensitive receptors are approximately 2,000 feet away. The Project would not include the use of TRUs and is greater than 1,000 feet away from the nearest receptor.

A health risk assessment (HRA) was completed analyzing both construction and operation of the Project. The construction and operational HRA was prepared in accordance with the requirements and recommendations of the Office of Environmental Health Hazard Assessment (OEHHA), CARB, California Air Pollution Control Officers Association (CAPCOA), and the SDAPCD to determine if significant health risks are likely to occur to existing residents and workers in the vicinity of the Project site. The HRA found that construction and operation of the Project would result in cancer risk and non-carcinogenic hazard risk well below SDAPCD health risk significance thresholds (see **Appendix B**). Therefore, the Project would result in a **less-than-significant impact**.

1.4.4 ODOR IMPACTS

During construction, diesel equipment operating at the site may generate some minor odors; however, due to the distance of sensitive receptors to the Project site and the temporary nature of construction, odors associated with Project construction would not be significant.

According to the SCAQMD CEQA Air Quality Handbook (SCAQMD, 1999), land uses associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting activities, refineries, landfills, dairies, and fiberglass molding operations. The Project does not propose sources of objectionable odors that would affect a substantial number of persons. Therefore, the Project would result in a **less-than-significant impact**.

1.5 CONCLUSIONS

This air quality analysis for the 1430 Decision Street Project evaluated emissions associated with both the construction and operation of the Project. The Project would not conflict with the air quality plans for the SDAB. Emissions associated with construction and operation were compared to SDAPCD significance thresholds, which provide a conservative means of evaluating whether Project emissions would cause a significant impact on the ambient air quality or whether further

evaluation is warranted. The Project applicant has included the use of low VOC architectural coatings for the building exterior and interior as a Project design measure (100 grams per liter (g/l) of VOC or less), which shall be a condition of Project approval. Emissions associated with construction would be well below the significance thresholds for all phases and pollutants. Emissions associated with operation would be well below the significance thresholds for all phases and pollutants. Furthermore, impacts to sensitive receptors from TACs and odors would be less than significant.

1.6 REFERENCES

California Air Resources Board (CARB). 2005. *Air Quality and Land Use Handbook: A Community Health Perspective.* April 2005.

City of Vista. 2011. Vista General Plan 2030. December 2011.

City of San Diego. 2016. Significance Determination Thresholds. July 2016.

San Diego Air Pollution Control District (SDAPCD). 2007. Eight-Hour Ozone Attainment Plan for San Diego County.

San Diego Air Pollution Control District (SDAPCD). 2016. 2016 Regional Air Quality Strategy Revision.

South Coast Air Quality Management District (SCAQMD). 1999. CEQA Air Quality Handbook.

South Coast Air Quality Management District (SCAQMD). 2021. CalEEMod Model, Version 2020.4.0. http://www.caleemod.com/

Appendix A

1. CalEEMod Version 2020.4.0 Inputs

2. CalEEMod Version 2020.4.0 Outputs

I. CalEEMod Project Annual Emissions Output

II. CalEEMod Project Summer Daily Emissions Output

III. CalEEMod Project Winter Daily Emissions Output

IV. CalEEMod Existing Baseline Annual Emissions Output

V. CalEEMod Existing Baseline Summer Daily Emissions Output

VI. CalEEMod Existing Baseline Winter Daily Emissions Output

City of Vista 1430 Decision Street - CalEEMod Version 2020.4.0 Inputs

Project Characteristics

Start of Construction: June 30, 2022

Operational Year: 2024

CEC Forecasting Climate Zone: 13

Land Use Setting: Urban

Utility Company: SDG&E

Land Use

Industrial – Unrefrigerated Warehouse – No Rail – 123,705 Square Feet

Parking – Parking Lot – 175 spaces

Source: Project Description. On December 13, 2022, Glen Allen, President of Newport Real Estate Services, Inc. confirmed that no refrigerated space would be included in the project.

Construction

1. Increased Demolition days from 20 to 30.
2. Increased Site Preparation days from 10 to 25.
3. Decreased Grading days from 20 to 10.
4. Decreased Building Construction days from 230 to 200.
5. Decreased Paving days from 20 to 10.
6. Decreased Architectural Coating days from 20 to 5.
7. Balanced site – no import/export.
8. Non Residential Interior Area (sqft) decreased from 185,558 sqft to 61,840 sqft
9. Non Residential Exterior Area (sqft) decreased from 61,853 sqft to 58,240 sqft
10. Non Residential Interior Area VOC (g/L) decreased from 250 to 100 (Low VOC coatings Project Design Measure)
11. Non Residential Exterior Area VOC (g/L) decreased from 250 to 100 (Low VOC coatings Project Design Measure)

Source: Project Description. Applicant Data Request Response, January 2, 2022. On December 13, 2022, Glen Allen, President of Newport Real Estate Services, Inc. confirmed these details since they were almost one year old.

Operational - Mobile

1. Unrefrigerated Warehouse- Weekday/Saturday/Sunday Trip Rate (/size/day) – increased from 1.74 to 6.31 per Project Trip Generation.

Source: City of Vista, Project Information Form, January 20, 2022.

All Other Categories

Model Default

Vista 1430 Decision Street Project - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Vista 1430 Decision Street Project

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	123.70	1000sqft	6.24	123,705.00	0
Parking Lot	175.00	Space	1.57	70,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2024
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 7.81 acre project site. "No Refrigerated Space" - Glen Allen, President, Newport Real Estate Services, Inc., December 13, 2022.

Construction Phase - Approximately 13 months of construction. Phase lengths updated per Applicant. Glen Allen, President, Newport Real Estate Services, Inc., December 13, 2022.

Demolition - existing office building is 98,000 sf

Grading - balanced site, no import/export

Vehicle Trips - From Applicant's trip generation

Architectural Coating - Exterior Painintg Area is 58,240 SF and Interior Painting Area is 61,840 SF. Project will use low VOC paints less than 100 g/L VOC content. Glen Allen, President, Newport Real Estate Services, Inc., December 13, 2022.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	61,853.00	58,240.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblArchitecturalCoating	ConstArea_Nonresidential_Interior	185,558.00	61,840.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	NumDays	230.00	200.00
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	10.00	25.00
tblLandUse	LandUseSquareFeet	123,700.00	123,705.00
tblLandUse	LotAcreage	2.84	6.24
tblVehicleTrips	ST_TR	1.74	6.31
tblVehicleTrips	SU_TR	1.74	6.31
tblVehicleTrips	WD_TR	1.74	6.31

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2022	0.1588	1.5301	1.2875	2.7100e-003	0.3669	0.0717	0.4386	0.1608	0.0668	0.2276	0.0000	241.1311	241.1311	0.0527	6.0800e-003	244.2611
2023	0.4323	1.1156	1.3167	2.7300e-003	0.0583	0.0501	0.1083	0.0158	0.0471	0.0629	0.0000	242.8477	242.8477	0.0423	7.1600e-003	246.0385
Maximum	**0.4323**	**1.5301**	**1.3167**	**2.7300e-003**	**0.3669**	**0.0717**	**0.4386**	**0.1608**	**0.0668**	**0.2276**	**0.0000**	**242.8477**	**242.8477**	**0.0527**	**7.1600e-003**	**246.0385**

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					
2022	0.1588	1.5301	1.2875	2.7100e-003	0.3669	0.0717	0.4386	0.1608	0.0668	0.2276	0.0000	241.1309	241.1309	0.0527	6.0800e-003	244.2608
2023	0.4323	1.1156	1.3167	2.7300e-003	0.0583	0.0501	0.1083	0.0158	0.0471	0.0629	0.0000	242.8475	242.8475	0.0423	7.1600e-003	246.0383
Maximum	**0.4323**	**1.5301**	**1.3167**	**2.7300e-003**	**0.3669**	**0.0717**	**0.4386**	**0.1608**	**0.0668**	**0.2276**	**0.0000**	**242.8475**	**242.8475**	**0.0527**	**7.1600e-003**	**246.0383**

Vista 1430 Decision Street Project - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**7-1-2022**	**9-30-2022**	1.0352	1.0352
2	**10-1-2022**	**12-31-2022**	0.6436	0.6436
3	**1-1-2023**	**3-31-2023**	0.5728	0.5728
4	**4-1-2023**	**6-30-2023**	0.5761	0.5761
5	**7-1-2023**	**9-30-2023**	0.3967	0.3967
		Highest	1.0352	1.0352

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	0.6337	2.0000e-005	2.7400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3400e-003	5.3400e-003	1.0000e-005	0.0000	5.6900e-003
Energy	1.1000e-003	0.0100	8.4000e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004	0.0000	124.4551	124.4551	7.1500e-003	1.0400e-003	124.9440
Mobile	0.3975	0.4538	3.7668	7.9800e-003	0.8525	6.2300e-003	0.8587	0.2275	5.8100e-003	0.2333	0.0000	749.8963	749.8963	0.0525	0.0335	761.1744
Waste						0.0000	0.0000		0.0000	0.0000	23.6038	0.0000	23.6038	1.3949	0.0000	58.4774
Water						0.0000	0.0000		0.0000	0.0000	9.0753	91.2303	100.3056	0.9377	0.0227	130.5080
Total	**1.0323**	**0.4639**	**3.7779**	**8.0400e-003**	**0.8525**	**7.0000e-003**	**0.8595**	**0.2275**	**6.5800e-003**	**0.2341**	**32.6790**	**965.5870**	**998.2661**	**2.3922**	**0.0572**	**1,075.1095**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.6337	2.0000e-005	2.7400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3400e-003	5.3400e-003	1.0000e-005	0.0000	5.6900e-003
Energy	1.1000e-003	0.0100	8.4000e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004	0.0000	124.4551	124.4551	7.1500e-003	1.0400e-003	124.9440
Mobile	0.3975	0.4538	3.7668	7.9800e-003	0.8525	6.2300e-003	0.8587	0.2275	5.8100e-003	0.2333	0.0000	749.8963	749.8963	0.0525	0.0335	761.1744
Waste						0.0000	0.0000		0.0000	0.0000	23.6038	0.0000	23.6038	1.3949	0.0000	58.4774
Water						0.0000	0.0000		0.0000	0.0000	9.0753	91.2303	100.3056	0.9377	0.0227	130.5080
Total	**1.0323**	**0.4639**	**3.7779**	**8.0400e-003**	**0.8525**	**7.0000e-003**	**0.8595**	**0.2275**	**6.5800e-003**	**0.2341**	**32.6790**	**965.5870**	**998.2661**	**2.3922**	**0.0572**	**1,075.1095**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**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	Demolition	Demolition	6/30/2022	8/10/2022	5	30	
2	Site Preparation	Site Preparation	8/11/2022	9/14/2022	5	25	
3	Grading	Grading	9/15/2022	9/28/2022	5	10	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Building Construction	Building Construction	9/29/2022	7/5/2023	5	200	
5	Paving	Paving	7/6/2023	7/19/2023	5	10	
6	Architectural Coating	Architectural Coating	7/20/2023	7/26/2023	5	5	

Acres of Grading (Site Preparation Phase): 37.5

Acres of Grading (Grading Phase): 10

Acres of Paving: 1.57

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 61,840; Non-Residential Outdoor: 58,240; Striped Parking Area: 4,200 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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
Demolition	6	15.00	0.00	446.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	81.00	32.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	16.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0488	0.0000	0.0488	7.4000e-003	0.0000	7.4000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0396	0.3858	0.3089	5.8000e-004		0.0186	0.0186		0.0173	0.0173	0.0000	50.9853	50.9853	0.0143	0.0000	51.3434
Total	**0.0396**	**0.3858**	**0.3089**	**5.8000e-004**	**0.0488**	**0.0186**	**0.0675**	**7.4000e-003**	**0.0173**	**0.0247**	**0.0000**	**50.9853**	**50.9853**	**0.0143**	**0.0000**	**51.3434**

Vista 1430 Decision Street Project - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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	9.9000e-004	0.0376	8.8600e-003	1.4000e-004	3.8200e-003	3.5000e-004	4.1700e-003	1.0500e-003	3.3000e-004	1.3800e-003	0.0000	13.9779	13.9779	6.7000e-004	2.2200e-003	14.6564
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	6.5000e-004	4.7000e-004	5.5300e-003	2.0000e-005	1.8000e-003	1.0000e-005	1.8100e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4839	1.4839	5.0000e-005	4.0000e-005	1.4978
Total	**1.6400e-003**	**0.0380**	**0.0144**	**1.6000e-004**	**5.6200e-003**	**3.6000e-004**	**5.9800e-003**	**1.5300e-003**	**3.4000e-004**	**1.8700e-003**	**0.0000**	**15.4618**	**15.4618**	**7.2000e-004**	**2.2600e-003**	**16.1542**

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					0.0488	0.0000	0.0488	7.4000e-003	0.0000	7.4000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0396	0.3858	0.3089	5.8000e-004		0.0186	0.0186		0.0173	0.0173	0.0000	50.9853	50.9853	0.0143	0.0000	51.3433
Total	**0.0396**	**0.3858**	**0.3089**	**5.8000e-004**	**0.0488**	**0.0186**	**0.0675**	**7.4000e-003**	**0.0173**	**0.0247**	**0.0000**	**50.9853**	**50.9853**	**0.0143**	**0.0000**	**51.3433**

Vista 1430 Decision Street Project - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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	9.9000e-004	0.0376	8.8600e-003	1.4000e-004	3.8200e-003	3.5000e-004	4.1700e-003	1.0500e-003	3.3000e-004	1.3800e-003	0.0000	13.9779	13.9779	6.7000e-004	2.2200e-003	14.6564
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	6.5000e-004	4.7000e-004	5.5300e-003	2.0000e-005	1.8000e-003	1.0000e-005	1.8100e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4839	1.4839	5.0000e-005	4.0000e-005	1.4978
Total	**1.6400e-003**	**0.0380**	**0.0144**	**1.6000e-004**	**5.6200e-003**	**3.6000e-004**	**5.9800e-003**	**1.5300e-003**	**3.4000e-004**	**1.8700e-003**	**0.0000**	**15.4618**	**15.4618**	**7.2000e-004**	**2.2600e-003**	**16.1542**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2457	0.0000	0.2457	0.1263	0.0000	0.1263	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0396	0.4135	0.2462	4.8000e-004		0.0202	0.0202		0.0185	0.0185	0.0000	41.7992	41.7992	0.0135	0.0000	42.1372
Total	**0.0396**	**0.4135**	**0.2462**	**4.8000e-004**	**0.2457**	**0.0202**	**0.2659**	**0.1263**	**0.0185**	**0.1448**	**0.0000**	**41.7992**	**41.7992**	**0.0135**	**0.0000**	**42.1372**

Vista 1430 Decision Street Project - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

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	6.5000e-004	4.7000e-004	5.5300e-003	2.0000e-005	1.8000e-003	1.0000e-005	1.8100e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4839	1.4839	5.0000e-005	4.0000e-005	1.4978
Total	**6.5000e-004**	**4.7000e-004**	**5.5300e-003**	**2.0000e-005**	**1.8000e-003**	**1.0000e-005**	**1.8100e-003**	**4.8000e-004**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**1.4839**	**1.4839**	**5.0000e-005**	**4.0000e-005**	**1.4978**

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					0.2457	0.0000	0.2457	0.1263	0.0000	0.1263	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0396	0.4135	0.2462	4.8000e-004		0.0202	0.0202		0.0185	0.0185	0.0000	41.7992	41.7992	0.0135	0.0000	42.1372
Total	**0.0396**	**0.4135**	**0.2462**	**4.8000e-004**	**0.2457**	**0.0202**	**0.2659**	**0.1263**	**0.0185**	**0.1448**	**0.0000**	**41.7992**	**41.7992**	**0.0135**	**0.0000**	**42.1372**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

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	6.5000e-004	4.7000e-004	5.5300e-003	2.0000e-005	1.8000e-003	1.0000e-005	1.8100e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4839	1.4839	5.0000e-005	4.0000e-005	1.4978
Total	**6.5000e-004**	**4.7000e-004**	**5.5300e-003**	**2.0000e-005**	**1.8000e-003**	**1.0000e-005**	**1.8100e-003**	**4.8000e-004**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**1.4839**	**1.4839**	**5.0000e-005**	**4.0000e-005**	**1.4978**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0354	0.0000	0.0354	0.0171	0.0000	0.0171	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.7400e-003	0.1043	0.0764	1.5000e-004		4.7000e-003	4.7000e-003		4.3300e-003	4.3300e-003	0.0000	13.0274	13.0274	4.2100e-003	0.0000	13.1327
Total	**9.7400e-003**	**0.1043**	**0.0764**	**1.5000e-004**	**0.0354**	**4.7000e-003**	**0.0401**	**0.0171**	**4.3300e-003**	**0.0215**	**0.0000**	**13.0274**	**13.0274**	**4.2100e-003**	**0.0000**	**13.1327**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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	2.2000e-004	1.6000e-004	1.8400e-003	1.0000e-005	6.0000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4946	0.4946	2.0000e-005	1.0000e-005	0.4993
Total	**2.2000e-004**	**1.6000e-004**	**1.8400e-003**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**6.0000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4946**	**0.4946**	**2.0000e-005**	**1.0000e-005**	**0.4993**

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					0.0354	0.0000	0.0354	0.0171	0.0000	0.0171	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.7400e-003	0.1043	0.0764	1.5000e-004		4.7000e-003	4.7000e-003		4.3300e-003	4.3300e-003	0.0000	13.0274	13.0274	4.2100e-003	0.0000	13.1327
Total	**9.7400e-003**	**0.1043**	**0.0764**	**1.5000e-004**	**0.0354**	**4.7000e-003**	**0.0401**	**0.0171**	**4.3300e-003**	**0.0215**	**0.0000**	**13.0274**	**13.0274**	**4.2100e-003**	**0.0000**	**13.1327**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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	2.2000e-004	1.6000e-004	1.8400e-003	1.0000e-005	6.0000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4946	0.4946	2.0000e-005	1.0000e-005	0.4993
Total	**2.2000e-004**	**1.6000e-004**	**1.8400e-003**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**6.0000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4946**	**0.4946**	**2.0000e-005**	**1.0000e-005**	**0.4993**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0572	0.5231	0.5482	9.0000e-004		0.0271	0.0271		0.0255	0.0255	0.0000	77.6280	77.6280	0.0186	0.0000	78.0929
Total	**0.0572**	**0.5231**	**0.5482**	**9.0000e-004**		**0.0271**	**0.0271**		**0.0255**	**0.0255**	**0.0000**	**77.6280**	**77.6280**	**0.0186**	**0.0000**	**78.0929**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.3700e-003	0.0590	0.0193	2.3000e-004	7.1200e-003	6.2000e-004	7.7400e-003	2.0600e-003	5.9000e-004	2.6500e-003	0.0000	22.3554	22.3554	6.8000e-004	3.2500e-003	23.3401
Worker	7.8300e-003	5.6900e-003	0.0667	1.9000e-004	0.0218	1.3000e-004	0.0219	5.7800e-003	1.2000e-004	5.9000e-003	0.0000	17.8955	17.8955	5.6000e-004	5.2000e-004	18.0635
Total	**0.0102**	**0.0647**	**0.0860**	**4.2000e-004**	**0.0289**	**7.5000e-004**	**0.0296**	**7.8400e-003**	**7.1000e-004**	**8.5500e-003**	**0.0000**	**40.2509**	**40.2509**	**1.2400e-003**	**3.7700e-003**	**41.4036**

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	0.0572	0.5231	0.5482	9.0000e-004		0.0271	0.0271		0.0255	0.0255	0.0000	77.6279	77.6279	0.0186	0.0000	78.0928
Total	**0.0572**	**0.5231**	**0.5482**	**9.0000e-004**		**0.0271**	**0.0271**		**0.0255**	**0.0255**	**0.0000**	**77.6279**	**77.6279**	**0.0186**	**0.0000**	**78.0928**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.3700e-003	0.0590	0.0193	2.3000e-004	7.1200e-003	6.2000e-004	7.7400e-003	2.0600e-003	5.9000e-004	2.6500e-003	0.0000	22.3554	22.3554	6.8000e-004	3.2500e-003	23.3401
Worker	7.8300e-003	5.6900e-003	0.0667	1.9000e-004	0.0218	1.3000e-004	0.0219	5.7800e-003	1.2000e-004	5.9000e-003	0.0000	17.8955	17.8955	5.6000e-004	5.2000e-004	18.0635
Total	**0.0102**	**0.0647**	**0.0860**	**4.2000e-004**	**0.0289**	**7.5000e-004**	**0.0296**	**7.8400e-003**	**7.1000e-004**	**8.5500e-003**	**0.0000**	**40.2509**	**40.2509**	**1.2400e-003**	**3.7700e-003**	**41.4036**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1046	0.9566	1.0802	1.7900e-003		0.0465	0.0465		0.0438	0.0438	0.0000	154.1502	154.1502	0.0367	0.0000	155.0669
Total	**0.1046**	**0.9566**	**1.0802**	**1.7900e-003**		**0.0465**	**0.0465**		**0.0438**	**0.0438**	**0.0000**	**154.1502**	**154.1502**	**0.0367**	**0.0000**	**155.0669**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5000e-003	0.0945	0.0333	4.4000e-004	0.0141	5.6000e-004	0.0147	4.0800e-003	5.3000e-004	4.6100e-003	0.0000	42.6984	42.6984	1.2900e-003	6.1900e-003	44.5744
Worker	0.0146	0.0101	0.1231	3.7000e-004	0.0432	2.4000e-004	0.0434	0.0115	2.2000e-004	0.0117	0.0000	34.6085	34.6085	1.0100e-003	9.5000e-004	34.9180
Total	**0.0171**	**0.1046**	**0.1564**	**8.1000e-004**	**0.0573**	**8.0000e-004**	**0.0581**	**0.0156**	**7.5000e-004**	**0.0163**	**0.0000**	**77.3069**	**77.3069**	**2.3000e-003**	**7.1400e-003**	**79.4924**

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	0.1046	0.9566	1.0802	1.7900e-003		0.0465	0.0465		0.0438	0.0438	0.0000	154.1500	154.1500	0.0367	0.0000	155.0667
Total	**0.1046**	**0.9566**	**1.0802**	**1.7900e-003**		**0.0465**	**0.0465**		**0.0438**	**0.0438**	**0.0000**	**154.1500**	**154.1500**	**0.0367**	**0.0000**	**155.0667**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5000e-003	0.0945	0.0333	4.4000e-004	0.0141	5.6000e-004	0.0147	4.0800e-003	5.3000e-004	4.6100e-003	0.0000	42.6984	42.6984	1.2900e-003	6.1900e-003	44.5744
Worker	0.0146	0.0101	0.1231	3.7000e-004	0.0432	2.4000e-004	0.0434	0.0115	2.2000e-004	0.0117	0.0000	34.6085	34.6085	1.0100e-003	9.5000e-004	34.9180
Total	**0.0171**	**0.1046**	**0.1564**	**8.1000e-004**	**0.0573**	**8.0000e-004**	**0.0581**	**0.0156**	**7.5000e-004**	**0.0163**	**0.0000**	**77.3069**	**77.3069**	**2.3000e-003**	**7.1400e-003**	**79.4924**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.1600e-003	0.0510	0.0729	1.1000e-004		2.5500e-003	2.5500e-003		2.3500e-003	2.3500e-003	0.0000	10.0134	10.0134	3.2400e-003	0.0000	10.0944
Paving	2.0600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.2200e-003**	**0.0510**	**0.0729**	**1.1000e-004**		**2.5500e-003**	**2.5500e-003**		**2.3500e-003**	**2.3500e-003**	**0.0000**	**10.0134**	**10.0134**	**3.2400e-003**	**0.0000**	**10.0944**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

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	2.0000e-004	1.4000e-004	1.7100e-003	1.0000e-005	6.0000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4819	0.4819	1.0000e-005	1.0000e-005	0.4862
Total	**2.0000e-004**	**1.4000e-004**	**1.7100e-003**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**6.0000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4819**	**0.4819**	**1.0000e-005**	**1.0000e-005**	**0.4862**

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	5.1600e-003	0.0510	0.0729	1.1000e-004		2.5500e-003	2.5500e-003		2.3500e-003	2.3500e-003	0.0000	10.0134	10.0134	3.2400e-003	0.0000	10.0944
Paving	2.0600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.2200e-003**	**0.0510**	**0.0729**	**1.1000e-004**		**2.5500e-003**	**2.5500e-003**		**2.3500e-003**	**2.3500e-003**	**0.0000**	**10.0134**	**10.0134**	**3.2400e-003**	**0.0000**	**10.0944**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

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	2.0000e-004	1.4000e-004	1.7100e-003	1.0000e-005	6.0000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4819	0.4819	1.0000e-005	1.0000e-005	0.4862
Total	**2.0000e-004**	**1.4000e-004**	**1.7100e-003**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**6.0000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4819**	**0.4819**	**1.0000e-005**	**1.0000e-005**	**0.4862**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3026					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.8000e-004	3.2600e-003	4.5300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6393
Total	**0.3031**	**3.2600e-003**	**4.5300e-003**	**1.0000e-005**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6393**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

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	1.1000e-004	7.0000e-005	9.1000e-004	0.0000	3.2000e-004	0.0000	3.2000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2570	0.2570	1.0000e-005	1.0000e-005	0.2593
Total	**1.1000e-004**	**7.0000e-005**	**9.1000e-004**	**0.0000**	**3.2000e-004**	**0.0000**	**3.2000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2570**	**0.2570**	**1.0000e-005**	**1.0000e-005**	**0.2593**

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	0.3026					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.8000e-004	3.2600e-003	4.5300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6393
Total	**0.3031**	**3.2600e-003**	**4.5300e-003**	**1.0000e-005**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6393**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

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	1.1000e-004	7.0000e-005	9.1000e-004	0.0000	3.2000e-004	0.0000	3.2000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2570	0.2570	1.0000e-005	1.0000e-005	0.2593
Total	**1.1000e-004**	**7.0000e-005**	**9.1000e-004**	**0.0000**	**3.2000e-004**	**0.0000**	**3.2000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2570**	**0.2570**	**1.0000e-005**	**1.0000e-005**	**0.2593**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Vista 1430 Decision Street Project - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.3975	0.4538	3.7668	7.9800e-003	0.8525	6.2300e-003	0.8587	0.2275	5.8100e-003	0.2333	0.0000	749.8963	749.8963	0.0525	0.0335	761.1744
Unmitigated	0.3975	0.4538	3.7668	7.9800e-003	0.8525	6.2300e-003	0.8587	0.2275	5.8100e-003	0.2333	0.0000	749.8963	749.8963	0.0525	0.0335	761.1744

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	780.55	780.55	780.55	2,278,816	2,278,816
Total	780.55	780.55	780.55	2,278,816	2,278,816

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949
Unrefrigerated Warehouse-No Rail	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	113.5628	113.5628	6.9400e-003	8.4000e-004	113.9870
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	113.5628	113.5628	6.9400e-003	8.4000e-004	113.9870
NaturalGas Mitigated	1.1000e-003	0.0100	8.4000e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004	0.0000	10.8923	10.8923	2.1000e-004	2.0000e-004	10.9570
NaturalGas Unmitigated	1.1000e-003	0.0100	8.4000e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004	0.0000	10.8923	10.8923	2.1000e-004	2.0000e-004	10.9570

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	204113	1.1000e-003	0.0100	8.4000e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004	0.0000	10.8923	10.8923	2.1000e-004	2.0000e-004	10.9570
Total		**1.1000e-003**	**0.0100**	**8.4000e-003**	**6.0000e-005**		**7.6000e-004**	**7.6000e-004**		**7.6000e-004**	**7.6000e-004**	**0.0000**	**10.8923**	**10.8923**	**2.1000e-004**	**2.0000e-004**	**10.9570**

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	204113	1.1000e-003	0.0100	8.4000e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004	0.0000	10.8923	10.8923	2.1000e-004	2.0000e-004	10.9570
Total		**1.1000e-003**	**0.0100**	**8.4000e-003**	**6.0000e-005**		**7.6000e-004**	**7.6000e-004**		**7.6000e-004**	**7.6000e-004**	**0.0000**	**10.8923**	**10.8923**	**2.1000e-004**	**2.0000e-004**	**10.9570**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	24500	6.0008	3.7000e-004	4.0000e-005	6.0232
Unrefrigerated Warehouse-No Rail	439153	107.5620	6.5700e-003	8.0000e-004	107.9638
Total		**113.5628**	**6.9400e-003**	**8.4000e-004**	**113.9870**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	24500	6.0008	3.7000e-004	4.0000e-005	6.0232
Unrefrigerated Warehouse-No Rail	439153	107.5620	6.5700e-003	8.0000e-004	107.9638
Total		**113.5628**	**6.9400e-003**	**8.4000e-004**	**113.9870**

6.0 Area Detail

Vista 1430 Decision Street Project - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6337	2.0000e-005	2.7400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3400e-003	5.3400e-003	1.0000e-005	0.0000	5.6900e-003
Unmitigated	0.6337	2.0000e-005	2.7400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3400e-003	5.3400e-003	1.0000e-005	0.0000	5.6900e-003

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	0.1458					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4877					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.5000e-004	2.0000e-005	2.7400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3400e-003	5.3400e-003	1.0000e-005	0.0000	5.6900e-003
Total	**0.6337**	**2.0000e-005**	**2.7400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.3400e-003**	**5.3400e-003**	**1.0000e-005**	**0.0000**	**5.6900e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.1458					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4877					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.5000e-004	2.0000e-005	2.7400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3400e-003	5.3400e-003	1.0000e-005	0.0000	5.6900e-003
Total	**0.6337**	**2.0000e-005**	**2.7400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.3400e-003**	**5.3400e-003**	**1.0000e-005**	**0.0000**	**5.6900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	100.3056	0.9377	0.0227	130.5080
Unmitigated	100.3056	0.9377	0.0227	130.5080

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	28.6056 / 0	100.3056	0.9377	0.0227	130.5080
Total		**100.3056**	**0.9377**	**0.0227**	**130.5080**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	28.6056 / 0	100.3056	0.9377	0.0227	130.5080
Total		**100.3056**	**0.9377**	**0.0227**	**130.5080**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	23.6038	1.3949	0.0000	58.4774
Unmitigated	23.6038	1.3949	0.0000	58.4774

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	116.28	23.6038	1.3949	0.0000	58.4774
Total		**23.6038**	**1.3949**	**0.0000**	**58.4774**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	116.28	23.6038	1.3949	0.0000	58.4774
Total		**23.6038**	**1.3949**	**0.0000**	**58.4774**

9.0 Operational Offroad

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Vista 1430 Decision Street Project - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Vista 1430 Decision Street Project

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	123.70	1000sqft	6.24	123,705.00	0
Parking Lot	175.00	Space	1.57	70,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2024
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 7.81 acre project site. "No Refrigerated Space" - Glen Allen, President, Newport Real Estate Services, Inc., December 13, 2022.

Construction Phase - Approximately 13 months of construction. Phase lengths updated per Applicant. Glen Allen, President, Newport Real Estate Services, Inc., December 13, 2022.

Demolition - existing office building is 98,000 sf

Grading - balanced site, no import/export

Vehicle Trips - From Applicant's trip generation

Architectural Coating - Exterior Painintg Area is 58,240 SF and Interior Painting Area is 61,840 SF. Project will use low VOC paints less than 100 g/L VOC content. Glen Allen, President, Newport Real Estate Services, Inc., December 13, 2022.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	61,853.00	58,240.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblArchitecturalCoating	ConstArea_Nonresidential_Interior	185,558.00	61,840.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	NumDays	230.00	200.00
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	10.00	25.00
tblLandUse	LandUseSquareFeet	123,700.00	123,705.00
tblLandUse	LotAcreage	2.84	6.24
tblVehicleTrips	ST_TR	1.74	6.31
tblVehicleTrips	SU_TR	1.74	6.31
tblVehicleTrips	WD_TR	1.74	6.31

2.0 Emissions Summary

Vista 1430 Decision Street Project - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2022	3.2227	33.1177	21.5699	0.0493	19.8049	1.6134	21.4183	10.1417	1.4843	11.6260	0.0000	4,888.1903	4,888.1903	1.1961	0.1661	4,965.3141
2023	121.2831	15.8942	18.6875	0.0394	0.8821	0.7117	1.5938	0.2389	0.6697	0.9086	0.0000	3,864.2715	3,864.2715	0.7170	0.1172	3,915.3417
Maximum	**121.2831**	**33.1177**	**21.5699**	**0.0493**	**19.8049**	**1.6134**	**21.4183**	**10.1417**	**1.4843**	**11.6260**	**0.0000**	**4,888.1903**	**4,888.1903**	**1.1961**	**0.1661**	**4,965.3141**

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					
2022	3.2227	33.1177	21.5699	0.0493	19.8049	1.6134	21.4183	10.1417	1.4843	11.6260	0.0000	4,888.1903	4,888.1903	1.1961	0.1661	4,965.3141
2023	121.2831	15.8942	18.6875	0.0394	0.8821	0.7117	1.5938	0.2389	0.6697	0.9086	0.0000	3,864.2715	3,864.2715	0.7170	0.1172	3,915.3417
Maximum	**121.2831**	**33.1177**	**21.5699**	**0.0493**	**19.8049**	**1.6134**	**21.4183**	**10.1417**	**1.4843**	**11.6260**	**0.0000**	**4,888.1903**	**4,888.1903**	**1.1961**	**0.1661**	**4,965.3141**

Vista 1430 Decision Street Project - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

Vista 1430 Decision Street Project - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	3.4737	2.8000e-004	0.0305	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0654	0.0654	1.7000e-004		0.0696
Energy	6.0300e-003	0.0548	0.0461	3.3000e-004		4.1700e-003	4.1700e-003		4.1700e-003	4.1700e-003		65.7899	65.7899	1.2600e-003	1.2100e-003	66.1809
Mobile	2.2745	2.3269	20.6195	0.0456	4.7972	0.0343	4.8314	1.2779	0.0320	1.3099		4,722.2137	4,722.2137	0.3064	0.1943	4,787.7609
Total	**5.7542**	**2.3820**	**20.6960**	**0.0459**	**4.7972**	**0.0386**	**4.8357**	**1.2779**	**0.0363**	**1.3141**		**4,788.0690**	**4,788.0690**	**0.3078**	**0.1955**	**4,854.0114**

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	3.4737	2.8000e-004	0.0305	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0654	0.0654	1.7000e-004		0.0696
Energy	6.0300e-003	0.0548	0.0461	3.3000e-004		4.1700e-003	4.1700e-003		4.1700e-003	4.1700e-003		65.7899	65.7899	1.2600e-003	1.2100e-003	66.1809
Mobile	2.2745	2.3269	20.6195	0.0456	4.7972	0.0343	4.8314	1.2779	0.0320	1.3099		4,722.2137	4,722.2137	0.3064	0.1943	4,787.7609
Total	**5.7542**	**2.3820**	**20.6960**	**0.0459**	**4.7972**	**0.0386**	**4.8357**	**1.2779**	**0.0363**	**1.3141**		**4,788.0690**	**4,788.0690**	**0.3078**	**0.1955**	**4,854.0114**

Vista 1430 Decision Street Project - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	Demolition	Demolition	6/30/2022	8/10/2022	5	30	
2	Site Preparation	Site Preparation	8/11/2022	9/14/2022	5	25	
3	Grading	Grading	9/15/2022	9/28/2022	5	10	
4	Building Construction	Building Construction	9/29/2022	7/5/2023	5	200	
5	Paving	Paving	7/6/2023	7/19/2023	5	10	
6	Architectural Coating	Architectural Coating	7/20/2023	7/26/2023	5	5	

Acres of Grading (Site Preparation Phase): 37.5

Acres of Grading (Grading Phase): 10

Acres of Paving: 1.57

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 61,840; Non-Residential Outdoor: 58,240; Striped Parking Area: 4,200 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
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
Demolition	6	15.00	0.00	446.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	81.00	32.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	16.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.2557	0.0000	3.2557	0.4930	0.0000	0.4930			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553		3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**	**3.2557**	**1.2427**	**4.4983**	**0.4930**	**1.1553**	**1.6483**		**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

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	0.0666	2.4145	0.5869	9.3300e-003	0.2600	0.0233	0.2833	0.0713	0.0223	0.0935		1,027.0184	1,027.0184	0.0494	0.1632	1,076.8705
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
Worker	0.0438	0.0285	0.3889	1.1200e-003	0.1232	7.0000e-004	0.1239	0.0327	6.4000e-004	0.0333		114.3907	114.3907	3.2800e-003	2.9500e-003	115.3516
Total	**0.1104**	**2.4430**	**0.9759**	**0.0105**	**0.3832**	**0.0240**	**0.4072**	**0.1040**	**0.0229**	**0.1269**		**1,141.4091**	**1,141.4091**	**0.0527**	**0.1661**	**1,192.2221**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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					3.2557	0.0000	3.2557	0.4930	0.0000	0.4930			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553	0.0000	3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**	**3.2557**	**1.2427**	**4.4983**	**0.4930**	**1.1553**	**1.6483**	**0.0000**	**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

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	0.0666	2.4145	0.5869	9.3300e-003	0.2600	0.0233	0.2833	0.0713	0.0223	0.0935		1,027.0184	1,027.0184	0.0494	0.1632	1,076.8705
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
Worker	0.0438	0.0285	0.3889	1.1200e-003	0.1232	7.0000e-004	0.1239	0.0327	6.4000e-004	0.0333		114.3907	114.3907	3.2800e-003	2.9500e-003	115.3516
Total	**0.1104**	**2.4430**	**0.9759**	**0.0105**	**0.3832**	**0.0240**	**0.4072**	**0.1040**	**0.0229**	**0.1269**		**1,141.4091**	**1,141.4091**	**0.0527**	**0.1661**	**1,192.2221**

Vista 1430 Decision Street Project - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836		3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**19.6570**	**1.6126**	**21.2696**	**10.1025**	**1.4836**	**11.5860**		**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

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	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
Worker	0.0526	0.0342	0.4667	1.3500e-003	0.1479	8.4000e-004	0.1487	0.0392	7.7000e-004	0.0400		137.2688	137.2688	3.9400e-003	3.5400e-003	138.4219
Total	**0.0526**	**0.0342**	**0.4667**	**1.3500e-003**	**0.1479**	**8.4000e-004**	**0.1487**	**0.0392**	**7.7000e-004**	**0.0400**		**137.2688**	**137.2688**	**3.9400e-003**	**3.5400e-003**	**138.4219**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

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					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836	0.0000	3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**19.6570**	**1.6126**	**21.2696**	**10.1025**	**1.4836**	**11.5860**	**0.0000**	**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

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	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
Worker	0.0526	0.0342	0.4667	1.3500e-003	0.1479	8.4000e-004	0.1487	0.0392	7.7000e-004	0.0400		137.2688	137.2688	3.9400e-003	3.5400e-003	138.4219
Total	**0.0526**	**0.0342**	**0.4667**	**1.3500e-003**	**0.1479**	**8.4000e-004**	**0.1487**	**0.0392**	**7.7000e-004**	**0.0400**		**137.2688**	**137.2688**	**3.9400e-003**	**3.5400e-003**	**138.4219**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656		2,872.0464	2,872.0464	0.9289		2,895.2684
Total	**1.9486**	**20.8551**	**15.2727**	**0.0297**	**7.0826**	**0.9409**	**8.0234**	**3.4247**	**0.8656**	**4.2903**		**2,872.0464**	**2,872.0464**	**0.9289**		**2,895.2684**

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	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
Worker	0.0438	0.0285	0.3889	1.1200e-003	0.1232	7.0000e-004	0.1239	0.0327	6.4000e-004	0.0333		114.3907	114.3907	3.2800e-003	2.9500e-003	115.3516
Total	**0.0438**	**0.0285**	**0.3889**	**1.1200e-003**	**0.1232**	**7.0000e-004**	**0.1239**	**0.0327**	**6.4000e-004**	**0.0333**		**114.3907**	**114.3907**	**3.2800e-003**	**2.9500e-003**	**115.3516**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656	0.0000	2,872.0464	2,872.0464	0.9289		2,895.2684
Total	**1.9486**	**20.8551**	**15.2727**	**0.0297**	**7.0826**	**0.9409**	**8.0234**	**3.4247**	**0.8656**	**4.2903**	**0.0000**	**2,872.0464**	**2,872.0464**	**0.9289**		**2,895.2684**

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	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
Worker	0.0438	0.0285	0.3889	1.1200e-003	0.1232	7.0000e-004	0.1239	0.0327	6.4000e-004	0.0333		114.3907	114.3907	3.2800e-003	2.9500e-003	115.3516
Total	**0.0438**	**0.0285**	**0.3889**	**1.1200e-003**	**0.1232**	**7.0000e-004**	**0.1239**	**0.0327**	**6.4000e-004**	**0.0333**		**114.3907**	**114.3907**	**3.2800e-003**	**2.9500e-003**	**115.3516**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

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	0.0000
Vendor	0.0713	1.7018	0.5693	6.8300e-003	0.2167	0.0185	0.2352	0.0624	0.0177	0.0801		735.4420	735.4420	0.0224	0.1068	767.8125
Worker	0.2365	0.1539	2.1003	6.0700e-003	0.6654	3.7700e-003	0.6692	0.1765	3.4700e-003	0.1800		617.7097	617.7097	0.0177	0.0159	622.8987
Total	**0.3078**	**1.8557**	**2.6696**	**0.0129**	**0.8821**	**0.0223**	**0.9044**	**0.2389**	**0.0212**	**0.2601**		**1,353.1517**	**1,353.1517**	**0.0401**	**0.1227**	**1,390.7112**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

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	0.0000
Vendor	0.0713	1.7018	0.5693	6.8300e-003	0.2167	0.0185	0.2352	0.0624	0.0177	0.0801		735.4420	735.4420	0.0224	0.1068	767.8125
Worker	0.2365	0.1539	2.1003	6.0700e-003	0.6654	3.7700e-003	0.6692	0.1765	3.4700e-003	0.1800		617.7097	617.7097	0.0177	0.0159	622.8987
Total	**0.3078**	**1.8557**	**2.6696**	**0.0129**	**0.8821**	**0.0223**	**0.9044**	**0.2389**	**0.0212**	**0.2601**		**1,353.1517**	**1,353.1517**	**0.0401**	**0.1227**	**1,390.7112**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

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	0.0000
Vendor	0.0382	1.3718	0.4943	6.5500e-003	0.2167	8.3600e-003	0.2251	0.0624	7.9900e-003	0.0704		707.3503	707.3503	0.0214	0.1024	738.4070
Worker	0.2215	0.1376	1.9492	5.8800e-003	0.6654	3.5800e-003	0.6690	0.1765	3.2900e-003	0.1798		601.7114	601.7114	0.0161	0.0148	606.5286
Total	**0.2597**	**1.5093**	**2.4435**	**0.0124**	**0.8821**	**0.0119**	**0.8941**	**0.2389**	**0.0113**	**0.2502**		**1,309.0616**	**1,309.0616**	**0.0376**	**0.1172**	**1,344.9357**

Vista 1430 Decision Street Project - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

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	0.0000
Vendor	0.0382	1.3718	0.4943	6.5500e-003	0.2167	8.3600e-003	0.2251	0.0624	7.9900e-003	0.0704		707.3503	707.3503	0.0214	0.1024	738.4070
Worker	0.2215	0.1376	1.9492	5.8800e-003	0.6654	3.5800e-003	0.6690	0.1765	3.2900e-003	0.1798		601.7114	601.7114	0.0161	0.0148	606.5286
Total	**0.2597**	**1.5093**	**2.4435**	**0.0124**	**0.8821**	**0.0119**	**0.8941**	**0.2389**	**0.0113**	**0.2502**		**1,309.0616**	**1,309.0616**	**0.0376**	**0.1172**	**1,344.9357**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.4113					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4441**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

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	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
Worker	0.0410	0.0255	0.3610	1.0900e-003	0.1232	6.6000e-004	0.1239	0.0327	6.1000e-004	0.0333		111.4280	111.4280	2.9800e-003	2.7400e-003	112.3201
Total	**0.0410**	**0.0255**	**0.3610**	**1.0900e-003**	**0.1232**	**6.6000e-004**	**0.1239**	**0.0327**	**6.1000e-004**	**0.0333**		**111.4280**	**111.4280**	**2.9800e-003**	**2.7400e-003**	**112.3201**

Vista 1430 Decision Street Project - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

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	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.4113					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4441**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

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	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
Worker	0.0410	0.0255	0.3610	1.0900e-003	0.1232	6.6000e-004	0.1239	0.0327	6.1000e-004	0.0333		111.4280	111.4280	2.9800e-003	2.7400e-003	112.3201
Total	**0.0410**	**0.0255**	**0.3610**	**1.0900e-003**	**0.1232**	**6.6000e-004**	**0.1239**	**0.0327**	**6.1000e-004**	**0.0333**		**111.4280**	**111.4280**	**2.9800e-003**	**2.7400e-003**	**112.3201**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	121.0477					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**121.2393**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

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	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
Worker	0.0438	0.0272	0.3850	1.1600e-003	0.1314	7.1000e-004	0.1321	0.0349	6.5000e-004	0.0355		118.8566	118.8566	3.1800e-003	2.9300e-003	119.8081
Total	**0.0438**	**0.0272**	**0.3850**	**1.1600e-003**	**0.1314**	**7.1000e-004**	**0.1321**	**0.0349**	**6.5000e-004**	**0.0355**		**118.8566**	**118.8566**	**3.1800e-003**	**2.9300e-003**	**119.8081**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

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	121.0477					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**121.2393**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

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	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
Worker	0.0438	0.0272	0.3850	1.1600e-003	0.1314	7.1000e-004	0.1321	0.0349	6.5000e-004	0.0355		118.8566	118.8566	3.1800e-003	2.9300e-003	119.8081
Total	**0.0438**	**0.0272**	**0.3850**	**1.1600e-003**	**0.1314**	**7.1000e-004**	**0.1321**	**0.0349**	**6.5000e-004**	**0.0355**		**118.8566**	**118.8566**	**3.1800e-003**	**2.9300e-003**	**119.8081**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.2745	2.3269	20.6195	0.0456	4.7972	0.0343	4.8314	1.2779	0.0320	1.3099		4,722.2137	4,722.2137	0.3064	0.1943	4,787.7609
Unmitigated	2.2745	2.3269	20.6195	0.0456	4.7972	0.0343	4.8314	1.2779	0.0320	1.3099		4,722.2137	4,722.2137	0.3064	0.1943	4,787.7609

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	780.55	780.55	780.55	2,278,816	2,278,816
Total	780.55	780.55	780.55	2,278,816	2,278,816

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949
Unrefrigerated Warehouse-No Rail	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949

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	6.0300e-003	0.0548	0.0461	3.3000e-004		4.1700e-003	4.1700e-003		4.1700e-003	4.1700e-003		65.7899	65.7899	1.2600e-003	1.2100e-003	66.1809
NaturalGas Unmitigated	6.0300e-003	0.0548	0.0461	3.3000e-004		4.1700e-003	4.1700e-003		4.1700e-003	4.1700e-003		65.7899	65.7899	1.2600e-003	1.2100e-003	66.1809

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	559.214	6.0300e-003	0.0548	0.0461	3.3000e-004		4.1700e-003	4.1700e-003		4.1700e-003	4.1700e-003		65.7899	65.7899	1.2600e-003	1.2100e-003	66.1809
Total		**6.0300e-003**	**0.0548**	**0.0461**	**3.3000e-004**		**4.1700e-003**	**4.1700e-003**		**4.1700e-003**	**4.1700e-003**		**65.7899**	**65.7899**	**1.2600e-003**	**1.2100e-003**	**66.1809**

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.559214	6.0300e-003	0.0548	0.0461	3.3000e-004		4.1700e-003	4.1700e-003		4.1700e-003	4.1700e-003		65.7899	65.7899	1.2600e-003	1.2100e-003	66.1809
Total		**6.0300e-003**	**0.0548**	**0.0461**	**3.3000e-004**		**4.1700e-003**	**4.1700e-003**		**4.1700e-003**	**4.1700e-003**		**65.7899**	**65.7899**	**1.2600e-003**	**1.2100e-003**	**66.1809**

6.0 Area Detail

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.4737	2.8000e-004	0.0305	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0654	0.0654	1.7000e-004		0.0696
Unmitigated	3.4737	2.8000e-004	0.0305	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0654	0.0654	1.7000e-004		0.0696

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	0.7988					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6721					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.8100e-003	2.8000e-004	0.0305	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0654	0.0654	1.7000e-004		0.0696
Total	**3.4737**	**2.8000e-004**	**0.0305**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0654**	**0.0654**	**1.7000e-004**		**0.0696**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.7988					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6721					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.8100e-003	2.8000e-004	0.0305	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0654	0.0654	1.7000e-004		0.0696
Total	**3.4737**	**2.8000e-004**	**0.0305**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0654**	**0.0654**	**1.7000e-004**		**0.0696**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Vista 1430 Decision Street Project - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Vista 1430 Decision Street Project

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	123.70	1000sqft	6.24	123,705.00	0
Parking Lot	175.00	Space	1.57	70,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2024
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 7.81 acre project site. "No Refrigerated Space" - Glen Allen, President, Newport Real Estate Services, Inc., December 13, 2022.

Construction Phase - Approximately 13 months of construction. Phase lengths updated per Applicant. Glen Allen, President, Newport Real Estate Services, Inc., December 13, 2022.

Demolition - existing office building is 98,000 sf

Grading - balanced site, no import/export

Vehicle Trips - From Applicant's trip generation

Architectural Coating - Exterior Painintg Area is 58,240 SF and Interior Painting Area is 61,840 SF. Project will use low VOC paints less than 100 g/L VOC content. Glen Allen, President, Newport Real Estate Services, Inc., December 13, 2022.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	61,853.00	58,240.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblArchitecturalCoating	ConstArea_Nonresidential_Interior	185,558.00	61,840.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	NumDays	230.00	200.00
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	10.00	25.00
tblLandUse	LandUseSquareFeet	123,700.00	123,705.00
tblLandUse	LotAcreage	2.84	6.24
tblVehicleTrips	ST_TR	1.74	6.31
tblVehicleTrips	SU_TR	1.74	6.31
tblVehicleTrips	WD_TR	1.74	6.31

2.0 Emissions Summary

Vista 1430 Decision Street Project - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2022	3.2270	33.1220	21.5587	0.0492	19.8049	1.6134	21.4183	10.1417	1.4843	11.6260	0.0000	4,882.3202	4,882.3202	1.1963	0.1664	4,959.5415
2023	121.2868	15.9691	18.6054	0.0391	0.8821	0.7117	1.5938	0.2389	0.6698	0.9086	0.0000	3,832.2023	3,832.2023	0.7172	0.1187	3,883.7274
Maximum	**121.2868**	**33.1220**	**21.5587**	**0.0492**	**19.8049**	**1.6134**	**21.4183**	**10.1417**	**1.4843**	**11.6260**	**0.0000**	**4,882.3202**	**4,882.3202**	**1.1963**	**0.1664**	**4,959.5415**

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					
2022	3.2270	33.1220	21.5587	0.0492	19.8049	1.6134	21.4183	10.1417	1.4843	11.6260	0.0000	4,882.3202	4,882.3202	1.1963	0.1664	4,959.5415
2023	121.2868	15.9691	18.6054	0.0391	0.8821	0.7117	1.5938	0.2389	0.6698	0.9086	0.0000	3,832.2023	3,832.2023	0.7172	0.1187	3,883.7274
Maximum	**121.2868**	**33.1220**	**21.5587**	**0.0492**	**19.8049**	**1.6134**	**21.4183**	**10.1417**	**1.4843**	**11.6260**	**0.0000**	**4,882.3202**	**4,882.3202**	**1.1963**	**0.1664**	**4,959.5415**

Vista 1430 Decision Street Project - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	3.4737	2.8000e-004	0.0305	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0654	0.0654	1.7000e-004		0.0696
Energy	6.0300e-003	0.0548	0.0461	3.3000e-004		4.1700e-003	4.1700e-003		4.1700e-003	4.1700e-003		65.7899	65.7899	1.2600e-003	1.2100e-003	66.1809
Mobile	2.2255	2.5215	21.1076	0.0436	4.7972	0.0343	4.8315	1.2779	0.0320	1.3099		4,516.4198	4,516.4198	0.3237	0.2046	4,585.4894
Total	**5.7052**	**2.5766**	**21.1841**	**0.0439**	**4.7972**	**0.0386**	**4.8357**	**1.2779**	**0.0363**	**1.3142**		**4,582.2751**	**4,582.2751**	**0.3251**	**0.2058**	**4,651.7399**

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	3.4737	2.8000e-004	0.0305	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0654	0.0654	1.7000e-004		0.0696
Energy	6.0300e-003	0.0548	0.0461	3.3000e-004		4.1700e-003	4.1700e-003		4.1700e-003	4.1700e-003		65.7899	65.7899	1.2600e-003	1.2100e-003	66.1809
Mobile	2.2255	2.5215	21.1076	0.0436	4.7972	0.0343	4.8315	1.2779	0.0320	1.3099		4,516.4198	4,516.4198	0.3237	0.2046	4,585.4894
Total	**5.7052**	**2.5766**	**21.1841**	**0.0439**	**4.7972**	**0.0386**	**4.8357**	**1.2779**	**0.0363**	**1.3142**		**4,582.2751**	**4,582.2751**	**0.3251**	**0.2058**	**4,651.7399**

Vista 1430 Decision Street Project - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	Demolition	Demolition	6/30/2022	8/10/2022	5	30	
2	Site Preparation	Site Preparation	8/11/2022	9/14/2022	5	25	
3	Grading	Grading	9/15/2022	9/28/2022	5	10	
4	Building Construction	Building Construction	9/29/2022	7/5/2023	5	200	
5	Paving	Paving	7/6/2023	7/19/2023	5	10	
6	Architectural Coating	Architectural Coating	7/20/2023	7/26/2023	5	5	

Acres of Grading (Site Preparation Phase): 37.5

Acres of Grading (Grading Phase): 10

Acres of Paving: 1.57

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 61,840; Non-Residential Outdoor: 58,240; Striped Parking Area: 4,200 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
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
Demolition	6	15.00	0.00	446.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	81.00	32.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	16.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.2557	0.0000	3.2557	0.4930	0.0000	0.4930			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553		3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**	**3.2557**	**1.2427**	**4.4983**	**0.4930**	**1.1553**	**1.6483**		**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

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	0.0649	2.5052	0.5959	9.3300e-003	0.2600	0.0233	0.2833	0.0713	0.0223	0.0936		1,027.4533	1,027.4533	0.0493	0.1632	1,077.3258
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
Worker	0.0474	0.0321	0.3688	1.0600e-003	0.1232	7.0000e-004	0.1239	0.0327	6.4000e-004	0.0333		108.0858	108.0858	3.4900e-003	3.1900e-003	109.1237
Total	**0.1123**	**2.5372**	**0.9646**	**0.0104**	**0.3832**	**0.0240**	**0.4072**	**0.1040**	**0.0229**	**0.1269**		**1,135.5390**	**1,135.5390**	**0.0528**	**0.1664**	**1,186.4494**

Vista 1430 Decision Street Project - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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					3.2557	0.0000	3.2557	0.4930	0.0000	0.4930			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553	0.0000	3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**	**3.2557**	**1.2427**	**4.4983**	**0.4930**	**1.1553**	**1.6483**	**0.0000**	**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

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	0.0649	2.5052	0.5959	9.3300e-003	0.2600	0.0233	0.2833	0.0713	0.0223	0.0936		1,027.4533	1,027.4533	0.0493	0.1632	1,077.3258
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
Worker	0.0474	0.0321	0.3688	1.0600e-003	0.1232	7.0000e-004	0.1239	0.0327	6.4000e-004	0.0333		108.0858	108.0858	3.4900e-003	3.1900e-003	109.1237
Total	**0.1123**	**2.5372**	**0.9646**	**0.0104**	**0.3832**	**0.0240**	**0.4072**	**0.1040**	**0.0229**	**0.1269**		**1,135.5390**	**1,135.5390**	**0.0528**	**0.1664**	**1,186.4494**

Vista 1430 Decision Street Project - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836		3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**19.6570**	**1.6126**	**21.2696**	**10.1025**	**1.4836**	**11.5860**		**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

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	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
Worker	0.0568	0.0385	0.4425	1.2700e-003	0.1479	8.4000e-004	0.1487	0.0392	7.7000e-004	0.0400		129.7029	129.7029	4.1900e-003	3.8300e-003	130.9484
Total	**0.0568**	**0.0385**	**0.4425**	**1.2700e-003**	**0.1479**	**8.4000e-004**	**0.1487**	**0.0392**	**7.7000e-004**	**0.0400**		**129.7029**	**129.7029**	**4.1900e-003**	**3.8300e-003**	**130.9484**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

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					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836	0.0000	3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**19.6570**	**1.6126**	**21.2696**	**10.1025**	**1.4836**	**11.5860**	**0.0000**	**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

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	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
Worker	0.0568	0.0385	0.4425	1.2700e-003	0.1479	8.4000e-004	0.1487	0.0392	7.7000e-004	0.0400		129.7029	129.7029	4.1900e-003	3.8300e-003	130.9484
Total	**0.0568**	**0.0385**	**0.4425**	**1.2700e-003**	**0.1479**	**8.4000e-004**	**0.1487**	**0.0392**	**7.7000e-004**	**0.0400**		**129.7029**	**129.7029**	**4.1900e-003**	**3.8300e-003**	**130.9484**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656		2,872.0464	2,872.0464	0.9289		2,895.2684
Total	**1.9486**	**20.8551**	**15.2727**	**0.0297**	**7.0826**	**0.9409**	**8.0234**	**3.4247**	**0.8656**	**4.2903**		**2,872.0464**	**2,872.0464**	**0.9289**		**2,895.2684**

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	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
Worker	0.0474	0.0321	0.3688	1.0600e-003	0.1232	7.0000e-004	0.1239	0.0327	6.4000e-004	0.0333		108.0858	108.0858	3.4900e-003	3.1900e-003	109.1237
Total	**0.0474**	**0.0321**	**0.3688**	**1.0600e-003**	**0.1232**	**7.0000e-004**	**0.1239**	**0.0327**	**6.4000e-004**	**0.0333**		**108.0858**	**108.0858**	**3.4900e-003**	**3.1900e-003**	**109.1237**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656	0.0000	2,872.0464	2,872.0464	0.9289		2,895.2684
Total	**1.9486**	**20.8551**	**15.2727**	**0.0297**	**7.0826**	**0.9409**	**8.0234**	**3.4247**	**0.8656**	**4.2903**	**0.0000**	**2,872.0464**	**2,872.0464**	**0.9289**		**2,895.2684**

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	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
Worker	0.0474	0.0321	0.3688	1.0600e-003	0.1232	7.0000e-004	0.1239	0.0327	6.4000e-004	0.0333		108.0858	108.0858	3.4900e-003	3.1900e-003	109.1237
Total	**0.0474**	**0.0321**	**0.3688**	**1.0600e-003**	**0.1232**	**7.0000e-004**	**0.1239**	**0.0327**	**6.4000e-004**	**0.0333**		**108.0858**	**108.0858**	**3.4900e-003**	**3.1900e-003**	**109.1237**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

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	0.0000
Vendor	0.0707	1.7660	0.5869	6.8300e-003	0.2167	0.0186	0.2353	0.0624	0.0178	0.0801		735.8195	735.8195	0.0223	0.1069	768.2327
Worker	0.2558	0.1731	1.9913	5.7400e-003	0.6654	3.7700e-003	0.6692	0.1765	3.4700e-003	0.1800		583.6630	583.6630	0.0189	0.0172	589.2679
Total	**0.3264**	**1.9391**	**2.5781**	**0.0126**	**0.8821**	**0.0223**	**0.9044**	**0.2389**	**0.0212**	**0.2601**		**1,319.4826**	**1,319.4826**	**0.0411**	**0.1241**	**1,357.5006**

Vista 1430 Decision Street Project - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

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	0.0000
Vendor	0.0707	1.7660	0.5869	6.8300e-003	0.2167	0.0186	0.2353	0.0624	0.0178	0.0801		735.8195	735.8195	0.0223	0.1069	768.2327
Worker	0.2558	0.1731	1.9913	5.7400e-003	0.6654	3.7700e-003	0.6692	0.1765	3.4700e-003	0.1800		583.6630	583.6630	0.0189	0.0172	589.2679
Total	**0.3264**	**1.9391**	**2.5781**	**0.0126**	**0.8821**	**0.0223**	**0.9044**	**0.2389**	**0.0212**	**0.2601**		**1,319.4826**	**1,319.4826**	**0.0411**	**0.1241**	**1,357.5006**

Vista 1430 Decision Street Project - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

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	0.0000
Vendor	0.0372	1.4295	0.5093	6.5600e-003	0.2167	8.4000e-003	0.2251	0.0624	8.0300e-003	0.0704		708.3559	708.3559	0.0213	0.1027	739.4815
Worker	0.2402	0.1547	1.8522	5.5600e-003	0.6654	3.5800e-003	0.6690	0.1765	3.2900e-003	0.1798		568.6365	568.6365	0.0172	0.0160	573.8398
Total	**0.2773**	**1.5842**	**2.3614**	**0.0121**	**0.8821**	**0.0120**	**0.8941**	**0.2389**	**0.0113**	**0.2502**		**1,276.9923**	**1,276.9923**	**0.0385**	**0.1187**	**1,313.3213**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

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	0.0000
Vendor	0.0372	1.4295	0.5093	6.5600e-003	0.2167	8.4000e-003	0.2251	0.0624	8.0300e-003	0.0704		708.3559	708.3559	0.0213	0.1027	739.4815
Worker	0.2402	0.1547	1.8522	5.5600e-003	0.6654	3.5800e-003	0.6690	0.1765	3.2900e-003	0.1798		568.6365	568.6365	0.0172	0.0160	573.8398
Total	**0.2773**	**1.5842**	**2.3614**	**0.0121**	**0.8821**	**0.0120**	**0.8941**	**0.2389**	**0.0113**	**0.2502**		**1,276.9923**	**1,276.9923**	**0.0385**	**0.1187**	**1,313.3213**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.4113					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4441**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

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	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
Worker	0.0445	0.0287	0.3430	1.0300e-003	0.1232	6.6000e-004	0.1239	0.0327	6.1000e-004	0.0333		105.3031	105.3031	3.1800e-003	2.9700e-003	106.2666
Total	**0.0445**	**0.0287**	**0.3430**	**1.0300e-003**	**0.1232**	**6.6000e-004**	**0.1239**	**0.0327**	**6.1000e-004**	**0.0333**		**105.3031**	**105.3031**	**3.1800e-003**	**2.9700e-003**	**106.2666**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

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	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.4113					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4441**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

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	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
Worker	0.0445	0.0287	0.3430	1.0300e-003	0.1232	6.6000e-004	0.1239	0.0327	6.1000e-004	0.0333		105.3031	105.3031	3.1800e-003	2.9700e-003	106.2666
Total	**0.0445**	**0.0287**	**0.3430**	**1.0300e-003**	**0.1232**	**6.6000e-004**	**0.1239**	**0.0327**	**6.1000e-004**	**0.0333**		**105.3031**	**105.3031**	**3.1800e-003**	**2.9700e-003**	**106.2666**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	121.0477					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**121.2393**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

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	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
Worker	0.0474	0.0306	0.3659	1.1000e-003	0.1314	7.1000e-004	0.1321	0.0349	6.5000e-004	0.0355		112.3233	112.3233	3.3900e-003	3.1600e-003	113.3511
Total	**0.0474**	**0.0306**	**0.3659**	**1.1000e-003**	**0.1314**	**7.1000e-004**	**0.1321**	**0.0349**	**6.5000e-004**	**0.0355**		**112.3233**	**112.3233**	**3.3900e-003**	**3.1600e-003**	**113.3511**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

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	121.0477					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**121.2393**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

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	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
Worker	0.0474	0.0306	0.3659	1.1000e-003	0.1314	7.1000e-004	0.1321	0.0349	6.5000e-004	0.0355		112.3233	112.3233	3.3900e-003	3.1600e-003	113.3511
Total	**0.0474**	**0.0306**	**0.3659**	**1.1000e-003**	**0.1314**	**7.1000e-004**	**0.1321**	**0.0349**	**6.5000e-004**	**0.0355**		**112.3233**	**112.3233**	**3.3900e-003**	**3.1600e-003**	**113.3511**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.2255	2.5215	21.1076	0.0436	4.7972	0.0343	4.8315	1.2779	0.0320	1.3099		4,516.4198	4,516.4198	0.3237	0.2046	4,585.4894
Unmitigated	2.2255	2.5215	21.1076	0.0436	4.7972	0.0343	4.8315	1.2779	0.0320	1.3099		4,516.4198	4,516.4198	0.3237	0.2046	4,585.4894

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	780.55	780.55	780.55	2,278,816	2,278,816
Total	780.55	780.55	780.55	2,278,816	2,278,816

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949
Unrefrigerated Warehouse-No Rail	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949

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	6.0300e-003	0.0548	0.0461	3.3000e-004		4.1700e-003	4.1700e-003		4.1700e-003	4.1700e-003		65.7899	65.7899	1.2600e-003	1.2100e-003	66.1809
NaturalGas Unmitigated	6.0300e-003	0.0548	0.0461	3.3000e-004		4.1700e-003	4.1700e-003		4.1700e-003	4.1700e-003		65.7899	65.7899	1.2600e-003	1.2100e-003	66.1809

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	559.214	6.0300e-003	0.0548	0.0461	3.3000e-004		4.1700e-003	4.1700e-003		4.1700e-003	4.1700e-003		65.7899	65.7899	1.2600e-003	1.2100e-003	66.1809
Total		**6.0300e-003**	**0.0548**	**0.0461**	**3.3000e-004**		**4.1700e-003**	**4.1700e-003**		**4.1700e-003**	**4.1700e-003**		**65.7899**	**65.7899**	**1.2600e-003**	**1.2100e-003**	**66.1809**

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.559214	6.0300e-003	0.0548	0.0461	3.3000e-004		4.1700e-003	4.1700e-003		4.1700e-003	4.1700e-003		65.7899	65.7899	1.2600e-003	1.2100e-003	66.1809
Total		**6.0300e-003**	**0.0548**	**0.0461**	**3.3000e-004**		**4.1700e-003**	**4.1700e-003**		**4.1700e-003**	**4.1700e-003**		**65.7899**	**65.7899**	**1.2600e-003**	**1.2100e-003**	**66.1809**

6.0 Area Detail

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.4737	2.8000e-004	0.0305	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0654	0.0654	1.7000e-004		0.0696
Unmitigated	3.4737	2.8000e-004	0.0305	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0654	0.0654	1.7000e-004		0.0696

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	0.7988					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6721					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.8100e-003	2.8000e-004	0.0305	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0654	0.0654	1.7000e-004		0.0696
Total	**3.4737**	**2.8000e-004**	**0.0305**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0654**	**0.0654**	**1.7000e-004**		**0.0696**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.7988					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6721					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.8100e-003	2.8000e-004	0.0305	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0654	0.0654	1.7000e-004		0.0696
Total	**3.4737**	**2.8000e-004**	**0.0305**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0654**	**0.0654**	**1.7000e-004**		**0.0696**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Vista 1430 Decision Street Existing Baseline - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Vista 1430 Decision Street Existing Baseline

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	98.00	1000sqft	5.56	98,000.00	0
Parking Lot	327.00	Space	2.94	130,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2024
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - existing 98,000 SF R&D office building with approximately 327 parking spaces

Construction Phase - Operations only

Off-road Equipment -

Vehicle Trips - From Project Trip Generation

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	1.00
tblConstructionPhase	PhaseEndDate	2/21/2022	1/25/2022
tblLandUse	LotAcreage	2.25	5.56
tblVehicleTrips	ST_TR	1.90	8.00

Vista 1430 Decision Street Existing Baseline - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	SU_TR	1.11	8.00
tblVehicleTrips	WD_TR	11.26	8.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
2022					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Vista 1430 Decision Street Existing Baseline - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

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	0.5097	4.0000e-005	3.9000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.5900e-003	7.5900e-003	2.0000e-005	0.0000	8.0900e-003
Energy	6.0900e-003	0.0553	0.0465	3.3000e-004		4.2100e-003	4.2100e-003		4.2100e-003	4.2100e-003	0.0000	267.8049	267.8049	0.0138	2.6400e-003	268.9382
Mobile	0.3697	0.4037	3.3549	6.9100e-003	0.7350	5.4500e-003	0.7405	0.1962	5.0800e-003	0.2013	0.0000	649.1939	649.1939	0.0475	0.0299	659.2892
Waste						0.0000	0.0000		0.0000	0.0000	1.5123	0.0000	1.5123	0.0894	0.0000	3.7466
Water						0.0000	0.0000		0.0000	0.0000	15.2872	153.6769	168.9641	1.5795	0.0382	219.8399
Total	**0.8854**	**0.4590**	**3.4052**	**7.2400e-003**	**0.7350**	**9.6700e-003**	**0.7447**	**0.1962**	**9.3000e-003**	**0.2055**	**16.7995**	**1,070.6833**	**1,087.4828**	**1.7302**	**0.0708**	**1,151.8220**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.5097	4.0000e-005	3.9000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.5900e-003	7.5900e-003	2.0000e-005	0.0000	8.0900e-003
Energy	6.0900e-003	0.0553	0.0465	3.3000e-004		4.2100e-003	4.2100e-003		4.2100e-003	4.2100e-003	0.0000	267.8049	267.8049	0.0138	2.6400e-003	268.9382
Mobile	0.3697	0.4037	3.3549	6.9100e-003	0.7350	5.4500e-003	0.7405	0.1962	5.0800e-003	0.2013	0.0000	649.1939	649.1939	0.0475	0.0299	659.2892
Waste						0.0000	0.0000		0.0000	0.0000	1.5123	0.0000	1.5123	0.0894	0.0000	3.7466
Water						0.0000	0.0000		0.0000	0.0000	15.2872	153.6769	168.9641	1.5795	0.0382	219.8399
Total	**0.8854**	**0.4590**	**3.4052**	**7.2400e-003**	**0.7350**	**9.6700e-003**	**0.7447**	**0.1962**	**9.3000e-003**	**0.2055**	**16.7995**	**1,070.6833**	**1,087.4828**	**1.7302**	**0.0708**	**1,151.8220**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**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	Demolition	Demolition	1/25/2022	1/25/2022	5	1	

Acres of Grading (Site Preparation Phase): 0

Vista 1430 Decision Street Existing Baseline - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Acres of Grading (Grading Phase): 0

Acres of Paving: 2.94

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition			0.00	0.00	10.80	7.30				

3.1 Mitigation Measures Construction

3.2 Demolition - 2022

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
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
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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
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
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.3697	0.4037	3.3549	6.9100e-003	0.7350	5.4500e-003	0.7405	0.1962	5.0800e-003	0.2013	0.0000	649.1939	649.1939	0.0475	0.0299	659.2892
Unmitigated	0.3697	0.4037	3.3549	6.9100e-003	0.7350	5.4500e-003	0.7405	0.1962	5.0800e-003	0.2013	0.0000	649.1939	649.1939	0.0475	0.0299	659.2892

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Research & Development	784.00	784.00	784.00	1,964,898	1,964,898
Total	784.00	784.00	784.00	1,964,898	1,964,898

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Research & Development	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949
Research & Development	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949

5.0 Energy Detail

Vista 1430 Decision Street Existing Baseline - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	207.5593	207.5593	0.0127	1.5400e-003	208.3346
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	207.5593	207.5593	0.0127	1.5400e-003	208.3346
NaturalGas Mitigated	6.0900e-003	0.0553	0.0465	3.3000e-004		4.2100e-003	4.2100e-003		4.2100e-003	4.2100e-003	0.0000	60.2456	60.2456	1.1500e-003	1.1000e-003	60.6036
NaturalGas Unmitigated	6.0900e-003	0.0553	0.0465	3.3000e-004		4.2100e-003	4.2100e-003		4.2100e-003	4.2100e-003	0.0000	60.2456	60.2456	1.1500e-003	1.1000e-003	60.6036

Vista 1430 Decision Street Existing Baseline - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	1.12896e+006	6.0900e-003	0.0553	0.0465	3.3000e-004		4.2100e-003	4.2100e-003		4.2100e-003	4.2100e-003	0.0000	60.2456	60.2456	1.1500e-003	1.1000e-003	60.6036
Total		**6.0900e-003**	**0.0553**	**0.0465**	**3.3000e-004**		**4.2100e-003**	**4.2100e-003**		**4.2100e-003**	**4.2100e-003**	**0.0000**	**60.2456**	**60.2456**	**1.1500e-003**	**1.1000e-003**	**60.6036**

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	1.12896e+006	6.0900e-003	0.0553	0.0465	3.3000e-004		4.2100e-003	4.2100e-003		4.2100e-003	4.2100e-003	0.0000	60.2456	60.2456	1.1500e-003	1.1000e-003	60.6036
Total		**6.0900e-003**	**0.0553**	**0.0465**	**3.3000e-004**		**4.2100e-003**	**4.2100e-003**		**4.2100e-003**	**4.2100e-003**	**0.0000**	**60.2456**	**60.2456**	**1.1500e-003**	**1.1000e-003**	**60.6036**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	45780	11.2129	6.9000e-004	8.0000e-005	11.2548
Research & Development	801640	196.3463	0.0120	1.4500e-003	197.0798
Total		**207.5593**	**0.0127**	**1.5300e-003**	**208.3346**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	45780	11.2129	6.9000e-004	8.0000e-005	11.2548
Research & Development	801640	196.3463	0.0120	1.4500e-003	197.0798
Total		**207.5593**	**0.0127**	**1.5300e-003**	**208.3346**

6.0 Area Detail

Vista 1430 Decision Street Existing Baseline - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5097	4.0000e-005	3.9000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.5900e-003	7.5900e-003	2.0000e-005	0.0000	8.0900e-003
Unmitigated	0.5097	4.0000e-005	3.9000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.5900e-003	7.5900e-003	2.0000e-005	0.0000	8.0900e-003

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	0.1181					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3912					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.6000e-004	4.0000e-005	3.9000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.5900e-003	7.5900e-003	2.0000e-005	0.0000	8.0900e-003
Total	**0.5097**	**4.0000e-005**	**3.9000e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**7.5900e-003**	**7.5900e-003**	**2.0000e-005**	**0.0000**	**8.0900e-003**

Vista 1430 Decision Street Existing Baseline - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.1181					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3912					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.6000e-004	4.0000e-005	3.9000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.5900e-003	7.5900e-003	2.0000e-005	0.0000	8.0900e-003
Total	**0.5097**	**4.0000e-005**	**3.9000e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**7.5900e-003**	**7.5900e-003**	**2.0000e-005**	**0.0000**	**8.0900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	168.9641	1.5795	0.0382	219.8399
Unmitigated	168.9641	1.5795	0.0382	219.8399

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Research & Development	48.186 / 0	168.9641	1.5795	0.0382	219.8399
Total		**168.9641**	**1.5795**	**0.0382**	**219.8399**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Research & Development	48.186 / 0	168.9641	1.5795	0.0382	219.8399
Total		**168.9641**	**1.5795**	**0.0382**	**219.8399**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.5123	0.0894	0.0000	3.7466
Unmitigated	1.5123	0.0894	0.0000	3.7466

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Research & Development	7.45	1.5123	0.0894	0.0000	3.7466
Total		**1.5123**	**0.0894**	**0.0000**	**3.7466**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Research & Development	7.45	1.5123	0.0894	0.0000	3.7466
Total		**1.5123**	**0.0894**	**0.0000**	**3.7466**

9.0 Operational Offroad

Vista 1430 Decision Street Existing Baseline - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Vista 1430 Decision Street Existing Baseline - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Vista 1430 Decision Street Existing Baseline

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	98.00	1000sqft	5.56	98,000.00	0
Parking Lot	327.00	Space	2.94	130,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2024
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - existing 98,000 SF R&D office building with approximately 327 parking spaces

Construction Phase - Operations only

Off-road Equipment -

Vehicle Trips - From Project Trip Generation

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	1.00
tblConstructionPhase	PhaseEndDate	2/21/2022	1/25/2022
tblLandUse	LotAcreage	2.25	5.56
tblVehicleTrips	ST_TR	1.90	8.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	SU_TR	1.11	8.00
tblVehicleTrips	WD_TR	11.26	8.00

2.0 Emissions Summary

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					
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Vista 1430 Decision Street Existing Baseline - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

Vista 1430 Decision Street Existing Baseline - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	2.7947	3.9000e-004	0.0433	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0930	0.0930	2.4000e-004		0.0991
Energy	0.0334	0.3032	0.2547	1.8200e-003		0.0231	0.0231		0.0231	0.0231		363.8872	363.8872	6.9700e-003	6.6700e-003	366.0496
Mobile	2.1247	2.0696	18.2724	0.0395	4.1363	0.0300	4.1663	1.1018	0.0280	1.1298		4,087.2715	4,087.2715	0.2760	0.1735	4,145.8850
Total	**4.9527**	**2.3733**	**18.5705**	**0.0413**	**4.1363**	**0.0532**	**4.1895**	**1.1018**	**0.0512**	**1.1530**		**4,451.2517**	**4,451.2517**	**0.2833**	**0.1802**	**4,512.0337**

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	2.7947	3.9000e-004	0.0433	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0930	0.0930	2.4000e-004		0.0991
Energy	0.0334	0.3032	0.2547	1.8200e-003		0.0231	0.0231		0.0231	0.0231		363.8872	363.8872	6.9700e-003	6.6700e-003	366.0496
Mobile	2.1247	2.0696	18.2724	0.0395	4.1363	0.0300	4.1663	1.1018	0.0280	1.1298		4,087.2715	4,087.2715	0.2760	0.1735	4,145.8850
Total	**4.9527**	**2.3733**	**18.5705**	**0.0413**	**4.1363**	**0.0532**	**4.1895**	**1.1018**	**0.0512**	**1.1530**		**4,451.2517**	**4,451.2517**	**0.2833**	**0.1802**	**4,512.0337**

Vista 1430 Decision Street Existing Baseline - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**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	Demolition	Demolition	1/25/2022	1/25/2022	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 2.94

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition			0.00	0.00	10.80	7.30				

3.1 Mitigation Measures Construction

Vista 1430 Decision Street Existing Baseline - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0000**			**0.0000**

Vista 1430 Decision Street Existing Baseline - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0000**			**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Vista 1430 Decision Street Existing Baseline - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive 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	2.1247	2.0696	18.2724	0.0395	4.1363	0.0300	4.1663	1.1018	0.0280	1.1298		4,087.2715	4,087.2715	0.2760	0.1735	4,145.8850
Unmitigated	2.1247	2.0696	18.2724	0.0395	4.1363	0.0300	4.1663	1.1018	0.0280	1.1298		4,087.2715	4,087.2715	0.2760	0.1735	4,145.8850

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Research & Development	784.00	784.00	784.00	1,964,898	1,964,898
Total	784.00	784.00	784.00	1,964,898	1,964,898

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Research & Development	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949
Research & Development	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949

5.0 Energy Detail

Vista 1430 Decision Street Existing Baseline - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0334	0.3032	0.2547	1.8200e-003		0.0231	0.0231		0.0231	0.0231		363.8872	363.8872	6.9700e-003	6.6700e-003	366.0496
NaturalGas Unmitigated	0.0334	0.3032	0.2547	1.8200e-003		0.0231	0.0231		0.0231	0.0231		363.8872	363.8872	6.9700e-003	6.6700e-003	366.0496

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	3093.04	0.0334	0.3032	0.2547	1.8200e-003		0.0231	0.0231		0.0231	0.0231		363.8872	363.8872	6.9700e-003	6.6700e-003	366.0496
Total		**0.0334**	**0.3032**	**0.2547**	**1.8200e-003**		**0.0231**	**0.0231**		**0.0231**	**0.0231**		**363.8872**	**363.8872**	**6.9700e-003**	**6.6700e-003**	**366.0496**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	3.09304	0.0334	0.3032	0.2547	1.8200e-003		0.0231	0.0231		0.0231	0.0231		363.8872	363.8872	6.9700e-003	6.6700e-003	366.0496
Total		**0.0334**	**0.3032**	**0.2547**	**1.8200e-003**		**0.0231**	**0.0231**		**0.0231**	**0.0231**		**363.8872**	**363.8872**	**6.9700e-003**	**6.6700e-003**	**366.0496**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.7947	3.9000e-004	0.0433	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0930	0.0930	2.4000e-004		0.0991
Unmitigated	2.7947	3.9000e-004	0.0433	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0930	0.0930	2.4000e-004		0.0991

Vista 1430 Decision Street Existing Baseline - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.6472					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.1435					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0000e-003	3.9000e-004	0.0433	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0930	0.0930	2.4000e-004		0.0991
Total	**2.7947**	**3.9000e-004**	**0.0433**	**0.0000**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**		**0.0930**	**0.0930**	**2.4000e-004**		**0.0991**

Vista 1430 Decision Street Existing Baseline - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.6472					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.1435					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0000e-003	3.9000e-004	0.0433	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0930	0.0930	2.4000e-004		0.0991
Total	**2.7947**	**3.9000e-004**	**0.0433**	**0.0000**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**		**0.0930**	**0.0930**	**2.4000e-004**		**0.0991**

7.0 Water Detail

7.1 Mitigation Measures Water

Vista 1430 Decision Street Existing Baseline - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Vista 1430 Decision Street Existing Baseline - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Vista 1430 Decision Street Existing Baseline

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	98.00	1000sqft	5.56	98,000.00	0
Parking Lot	327.00	Space	2.94	130,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2024
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - existing 98,000 SF R&D office building with approximately 327 parking spaces

Construction Phase - Operations only

Off-road Equipment -

Vehicle Trips - From Project Trip Generation

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	1.00
tblConstructionPhase	PhaseEndDate	2/21/2022	1/25/2022
tblLandUse	LotAcreage	2.25	5.56
tblVehicleTrips	ST_TR	1.90	8.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	SU_TR	1.11	8.00
tblVehicleTrips	WD_TR	11.26	8.00

2.0 Emissions Summary

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					
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Vista 1430 Decision Street Existing Baseline - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

Vista 1430 Decision Street Existing Baseline - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	2.7947	3.9000e-004	0.0433	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0930	0.0930	2.4000e-004		0.0991
Energy	0.0334	0.3032	0.2547	1.8200e-003		0.0231	0.0231		0.0231	0.0231		363.8872	363.8872	6.9700e-003	6.6700e-003	366.0496
Mobile	2.0707	2.2442	18.8294	0.0377	4.1363	0.0300	4.1663	1.1018	0.0280	1.1298		3,910.1233	3,910.1233	0.2932	0.1830	3,971.9922
Total	**4.8988**	**2.5479**	**19.1274**	**0.0396**	**4.1363**	**0.0532**	**4.1895**	**1.1018**	**0.0512**	**1.1530**		**4,274.1035**	**4,274.1035**	**0.3004**	**0.1897**	**4,338.1408**

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	2.7947	3.9000e-004	0.0433	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0930	0.0930	2.4000e-004		0.0991
Energy	0.0334	0.3032	0.2547	1.8200e-003		0.0231	0.0231		0.0231	0.0231		363.8872	363.8872	6.9700e-003	6.6700e-003	366.0496
Mobile	2.0707	2.2442	18.8294	0.0377	4.1363	0.0300	4.1663	1.1018	0.0280	1.1298		3,910.1233	3,910.1233	0.2932	0.1830	3,971.9922
Total	**4.8988**	**2.5479**	**19.1274**	**0.0396**	**4.1363**	**0.0532**	**4.1895**	**1.1018**	**0.0512**	**1.1530**		**4,274.1035**	**4,274.1035**	**0.3004**	**0.1897**	**4,338.1408**

Vista 1430 Decision Street Existing Baseline - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**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	Demolition	Demolition	1/25/2022	1/25/2022	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 2.94

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition			0.00	0.00	10.80	7.30				

3.1 Mitigation Measures Construction

Vista 1430 Decision Street Existing Baseline - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0000**			**0.0000**

Vista 1430 Decision Street Existing Baseline - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0000**			**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Vista 1430 Decision Street Existing Baseline - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive 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	2.0707	2.2442	18.8294	0.0377	4.1363	0.0300	4.1663	1.1018	0.0280	1.1298		3,910.1233	3,910.1233	0.2932	0.1830	3,971.9922
Unmitigated	2.0707	2.2442	18.8294	0.0377	4.1363	0.0300	4.1663	1.1018	0.0280	1.1298		3,910.1233	3,910.1233	0.2932	0.1830	3,971.9922

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Research & Development	784.00	784.00	784.00	1,964,898	1,964,898
Total	784.00	784.00	784.00	1,964,898	1,964,898

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Research & Development	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949
Research & Development	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949

5.0 Energy Detail

Vista 1430 Decision Street Existing Baseline - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0334	0.3032	0.2547	1.8200e-003		0.0231	0.0231		0.0231	0.0231		363.8872	363.8872	6.9700e-003	6.6700e-003	366.0496
NaturalGas Unmitigated	0.0334	0.3032	0.2547	1.8200e-003		0.0231	0.0231		0.0231	0.0231		363.8872	363.8872	6.9700e-003	6.6700e-003	366.0496

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	3093.04	0.0334	0.3032	0.2547	1.8200e-003		0.0231	0.0231		0.0231	0.0231		363.8872	363.8872	6.9700e-003	6.6700e-003	366.0496
Total		**0.0334**	**0.3032**	**0.2547**	**1.8200e-003**		**0.0231**	**0.0231**		**0.0231**	**0.0231**		**363.8872**	**363.8872**	**6.9700e-003**	**6.6700e-003**	**366.0496**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	3.09304	0.0334	0.3032	0.2547	1.8200e-003		0.0231	0.0231		0.0231	0.0231		363.8872	363.8872	6.9700e-003	6.6700e-003	366.0496
Total		**0.0334**	**0.3032**	**0.2547**	**1.8200e-003**		**0.0231**	**0.0231**		**0.0231**	**0.0231**		**363.8872**	**363.8872**	**6.9700e-003**	**6.6700e-003**	**366.0496**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.7947	3.9000e-004	0.0433	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0930	0.0930	2.4000e-004		0.0991
Unmitigated	2.7947	3.9000e-004	0.0433	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0930	0.0930	2.4000e-004		0.0991

Vista 1430 Decision Street Existing Baseline - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.6472					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.1435					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0000e-003	3.9000e-004	0.0433	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0930	0.0930	2.4000e-004		0.0991
Total	**2.7947**	**3.9000e-004**	**0.0433**	**0.0000**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**		**0.0930**	**0.0930**	**2.4000e-004**		**0.0991**

Vista 1430 Decision Street Existing Baseline - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.6472					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.1435					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0000e-003	3.9000e-004	0.0433	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0930	0.0930	2.4000e-004		0.0991
Total	**2.7947**	**3.9000e-004**	**0.0433**	**0.0000**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**		**0.0930**	**0.0930**	**2.4000e-004**		**0.0991**

7.0 Water Detail

7.1 Mitigation Measures Water

Vista 1430 Decision Street Existing Baseline - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix B

Health Risk Assessment

Health Risk Assessment
for the
Decision Street Warehouse Project

Vista, California

Prepared For:

RCH GROUP
planning & environmental consulting

Prepared By:

ECORP Consulting, Inc.
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Chico, CA 95926

January 2023

TABLE OF CONTENTS

LIST OF TABLES

LIST OF ATTACHMENTS

LIST OF ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ASF	Age Sensitivity Factor
ATCM	Airborne Toxics Control Measure
BR	Breathing Rate
BW	Body Weight
CAA	Clean Air Act
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
DPM	Diesel Particulate Matter
EF	Exposure Frequency
FAH	Fraction of time at home
GLC	Ground Level Concentration
HAP	Hazardous Air Pollutant
HARP2	Hot Spots Analysis & Reporting Program
HRA	Health Risk Assessment
kg	Kilogram
L	Liter
MEIR	Maximum Exposed Individual Resident
MEIW	Maximum Exposed Individual Worker
mg	milligram
NAAQS	National Ambient Air Quality Standards
NESHAPs	National Emissions Standards for Hazardous Air Pollutants
O_3	Ozone
OEHHA	Office of Environment Health Hazard Assessment
Project	Decision Street Warehouse Project
REL	Reference Exposure Level
SB	Senate Bill
SDAPCD	San Diego Air Pollution Control
SDAB	San Diego Air Basin
TAC	Toxic Air Contaminants
T-BACT	Toxics Best Available Control Technology
USEPA	U.S. Environmental Protection Agency
USGS	U.S. Geological Survey

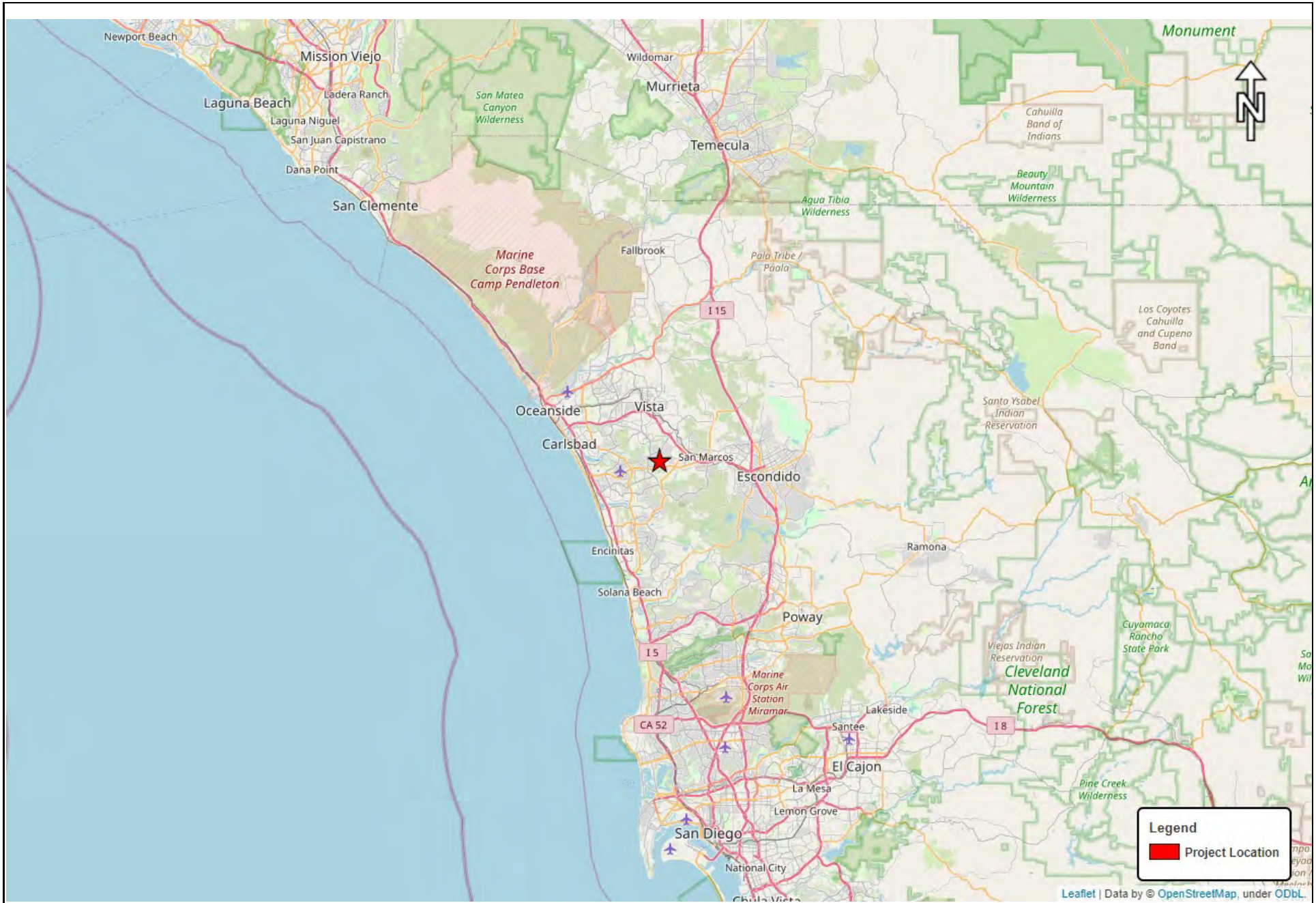
1.0 INTRODUCTION

This report documents the results of a Health Risk Assessment (HRA) completed for the emissions associated with construction and operations of the Decision Street Warehouse Project (Project), which consist of the proposal to construct a warehouse with office space in Vista, California. The proposed warehouse is unrefrigerated and 112,905 square feet with 10,800 square feet of additional office space. No residential, school, or other sensitive land uses exist within 1,000 feet of the Project. There is currently a science and research facility at the Project Site which is proposed to be demolished as part of Project construction analyzed in this document. This construction and operational HRA was prepared in accordance with the requirements and recommendations of the Office of Environmental Health Hazard Assessment (OEHHA), California Air Resources Board (CARB), California Air Pollution Control Officers Association (CAPCOA), and the San Diego Air Pollution Control District (SDAPCD) to determine if significant health risks are likely to occur to existing residents and workers in the vicinity of the Project Site due to Project Operations.

1.1 Project Location and Description

The Project Site is in the City of Vista within the "Vista Business Park Specific Plan" (Vista 2022) zoned area. The Site can be accessed from Decision Street via Business Park Dr. from the west and Poinsettia from the east. The site is bounded by Industrial and commercial land uses on all sites. The nearest residences are located over 2,000 feet to the east of the Project Site.

The Project proposes the construction of 112,905 square feet of unrefrigerated warehouse space and 10,800 square feet of office space. The demolition of the current office space structure on the Project Site is included in this analysis as part of the two-year construction period. Construction has been modeled to start in 2023, and Project operations has been modeled as beginning in 2025. The location of the Project is shown in Figure 1. *Project Location*. The Project vicinity is presented in Figure 2. *Project Vicinity*.



ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 1. Project Location

2022-039.05 1430 Decision Street Warehouse

ECORP Consulting, Inc.
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Figure 2. Project Vicinity

2022-039.05 1430 Decision Street Warehouse

2.0 HEALTH RISK ASSESSMENT

2.1 Environmental Setting

Air quality in a region is determined by its topography, meteorology, and existing air pollutant sources. These factors are discussed below, along with the current regulatory structure that applies to the San Diego Air Basin (SDAB), which encompasses the Project Site, pursuant to the regulatory authority of the SDAPCD.

Ambient air quality is commonly characterized by climate conditions, the meteorological influences on air quality, and the quantity and type of pollutants released. The air basin is subject to a combination of topographical and climatic factors that reduce the potential for high levels of regional and local air pollutants. The following section describes the pertinent characteristics of the air basin and provides an overview of the physical conditions affecting pollutant dispersion in the Project Area.

2.1.1 San Diego Air Basin

The Project Site is in the City of Vista which is within the SDAB. The topography in the SDAB varies greatly, from beaches on the west to mountains and desert on the east. Much of the topography in between consists of mesa tops intersected by canyon areas. The region's topography influences air flow and the dispersal and movement of pollutants in the basin. The mountains to the east prevent air flow mixing and prohibit dispersal of pollutants in that direction.

Regional climate and local meteorological conditions influence ambient air quality. The climate of the SDAB is dominated by a semi-permanent high-pressure cell located over the Pacific Ocean. This cell, called the Pacific High-Pressure Cell (or Zone) influences the direction of prevailing winds (westerly to northwesterly) and maintains clear skies for much of the year. The high-pressure cell also creates two types of temperature inversions that may act to degrade local air quality.

Subsidence inversions occur during the warmer months as descending air associated with the zone meets cool marine air. The boundary between the two layers of air creates a temperature inversion that traps pollutants. The other type of inversion, a radiation inversion, develops on winter nights, when air near the ground cools through radiation and the air aloft remains warm. The shallow inversion layer formed between these two air masses can also trap pollutants. During mild Santa Ana wind conditions, ambient air quality in the SDAB is affected by air quality in the South Coast Air Basin (the metropolitan areas of Los Angeles, Orange, San Bernardino, and Riverside counties). Air pollutants, specifically the components of smog, are transported to the County during relatively mild Santa Ana weather conditions. Winds blowing toward the southwest transport the polluted air from the South Coast Air Basin over the ocean. The sea breeze brings this air onshore into the County. When the transported smog is at ground level, the highest ozone (O_3) concentrations are measured at coastal and near-coastal monitoring sites. However, when the blown-in smog cloud is elevated, coastal sites may be passed over, and the transported O_3 is measured farther inland.

2.1.2 Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are considered either carcinogenic or noncarcinogenic based on the nature of

the health effects associated with exposure to the pollutant. For regulatory purposes, carcinogenic TACs are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Public exposure to TACs can result from emissions from normal operations, as well as from accidental releases of hazardous materials during upset conditions. The health effects of TACs include cancer, birth defects, neurological damage, and death.

2.1.2.1 Diesel Exhaust

Most recently, CARB identified diesel particulate matter (DPM) as a TAC. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Diesel exhaust is a complex mixture of particles and gases produced when an engine burns diesel fuel. DPM is a concern because it causes lung cancer; many compounds found in diesel exhaust are carcinogenic. DPM includes the particle-phase constituents in diesel exhaust. The chemical composition and particle sizes of DPM vary between different engine types (i.e., heavy-duty, light-duty), engine operating conditions (i.e., idle, accelerate, decelerate), fuel formulations (i.e., high/low sulfur fuel), and the year of the manufacture of the engine (USEPA 2002). Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause coughs, headaches, light-headedness, and nausea. DPM poses the greatest health risk among the TACs; due to their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

2.1.3 Sensitive Receptors

Sensitive receptors are defined as facilities or land uses that include members of the population who are particularly sensitive to the effects of air pollutants such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis.

The nearest sensitive land use to the Project Site are residences over 2,000 feet to the east of the Project. The residences to the south are over 2,500 feet from the Project Site. The nearest school is San Marcos High School located over a mile east of the Project Site.

2.2 Regulatory Framework

2.2.1 Federal

2.2.1.1 Clean Air Act

The Federal Clean Air Act (CAA) was amended in 1990 to address a large number of air pollutants that are known to cause or may reasonably be anticipated to cause adverse effects to human health or adverse environmental effects. 188 specific pollutants and chemical groups were initially identified as HAPs, and the list has been modified over time. The CAA Amendments included new regulatory programs to control acid deposition and for the issuance of stationary source operating permits.

Unlike the criteria pollutants, toxics do not have National Ambient Air Quality Standards (NAAQS) making evaluation of their impacts more subjective. National Emissions Standards for Hazardous Air Pollutants (NESHAPs) were incorporated into a greatly expanded program for controlling toxic air pollutants. Section 112 of the CAA Amendments governs the federal control program for hazardous air pollutants (HAPs). NESHAPs are issued to limit the release of specified HAPs from specific industrial sectors. These standards are technology-based, meaning that they represent the best available control technology an industrial sector could afford. The level of emissions controls required by NESHAPs are not based on health risk considerations because allowable releases and resulting concentrations have not been determined to be safe for the general public. The CAA does not establish air quality standards for HAPs that define legally acceptable concentrations of these pollutants in ambient air.

2.2.2 State

2.2.2.1 California Clean Air Act

California Air Resources Board

CARB's statewide comprehensive air toxics program was established in 1983 with AB 1807 the Toxic Air Contaminant Identification and Control Act (Tanner Air Toxics Act of 1983). AB 1807 created California's program to reduce exposure to air toxics and sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an airborne toxics control measure (ATCM) for sources that emit designated TACs. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology (T-BACT) to minimize emissions.

CARB also administers the state's mobile source emissions control program and oversees air quality programs established by state statute, such as AB 2588, the Air Toxics "Hot Spots" Information and Assessment Act of 1987. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment and, if specific thresholds are exceeded, required to communicate the results to the public in the form of notices and public meetings. In September 1992, the

"Hot Spots" Act was amended by Senate Bill (SB) 1731 which required facilities that pose a significant health risk to the community to reduce their risk through a risk management plan.

Tanner Air Toxics Act & Air Toxics "Hot Spot" Information and Assessment Act

CARB's Statewide comprehensive air toxics program was established in 1983 with Assembly Bill (AB) 1807, the Toxic Air Contaminant Identification and Control Act (Tanner Air Toxics Act of 1983). AB 1807 created California's program to reduce exposure to air toxics and sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an ATCM for sources that emit designated TACs. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate T-BACT to minimize emissions.

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2.2.3 Local

2.2.3.1 2.2.5 San Diego Air Pollution Control District

The SDAPCD has the primary responsibility for controlling emissions from construction activity throughout the SDAB. In December 2005, the SDAPCD adopted the Measures to Reduce Particulate Matter in the SDAB. This document identifies fugitive dust as the major source of directly emitted particulate matter in the SDAB, with mobile sources and residential wood combustion as minor contributors. Data on $PM_{2.5}$ source apportionment indicates that the main contributors to $PM_{2.5}$ in the SDAB are combustion organic carbon, and ammonium sulfate and ammonium nitrate from combustion sources. The main contributors to PM_{10} include resuspended soil and road dust from unpaved and paved roads, construction and demolition sites, and mineral extraction and processing. Based on the report's evaluation of control measures recommended by CARB to reduce particulate matter emissions, the SDAPCD adopted Rule 55, the Fugitive Dust Rule, in June 2009. The SDAPCD requires that construction activities implement the measures listed in Rule 55 to minimize fugitive dust emissions. Rule 55 requires the following:

1. No person shall engage in construction or demolition activity in a manner that discharges visible dust emissions into the atmosphere beyond the property line for a period or periods aggregating more than 3 minutes in any 60-minute period.

2. Visible roadway dust as a result of active operations, spillage from transport trucks, erosion, or track-out/carry-out shall be minimized by the use of any of the equally effective track-out/carry-out and erosion control measures listed in Rule 55 that apply to the project or operation. These measures

include track-out grates or gravel beds at each egress point; wheel-washing at each egress during muddy conditions; soil binders, chemical soil stabilizers, geotextiles, mulching, or seeding; watering for dust control; and using secured tarps or cargo covering, watering, or treating of transported material for outbound transport trucks. Erosion control measures must be removed at the conclusion of each workday when active operations cease, or every 24 hours for continuous operations.

There are other SDAPCD rules and regulations, not detailed here, which may apply to the Proposed Project, but are administrative or descriptive in nature. These include rules associated with fees, enforcement and penalty actions, and variance procedures. The following additional rules and regulations would apply to the construction of the Project:

- Rule 50 Visible Emissions: Establishes limits to the opacity of emissions within the SDAPCD.
- Rule 51 Nuisance: Prohibits emissions that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or which endanger the comfort, repose, health, or safety of any such persons or the public; or which cause injury or damage to business or property.
- Rule 52 Particulate Matter: Establishes limits to the discharge of any particulate matter from non-stationary sources.
- Rule 54 Dust and Fumes: Establishes limits to the amount of dust or fume discharged into the atmosphere in any single hour.
- Rule 67.0.1 Architectural Coatings: Requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.
- Rule 67.7 Cutback and Emulsified Asphalts: Prohibits the sale and use of cutback and emulsified asphalt materials for the paving, construction or maintenance of parking lots, driveways, streets, and highways which exceed the County standards for the percent by volume of VOC that evaporate into the atmosphere under temperate conditions.

2.2.4 Threshold of Significance

The impact analysis provided below is based on the following local (SDAPCD) health risk thresholds, as shown in Table 2-1.

Table 2-1. SDAPCD Health Risk Significance Thresholds

Air Pollutant/Risk Parameter	Value	Units
Elevated Cancer Risk	10	In One Million
Chronic Hazard Quotient	1	Health Hazard Index
Acute Hazard Quotient	1	Health Hazard Index

Cancer risk is expressed in terms of expected incremental incidence per million population. This threshold serves to determine whether Project sources of TACs (e.g., diesel exhaust) potentially have significant impacts on a receptor. The 10-in-one-million standard is a very health-protective significance threshold. A risk level of 10 in one million implies a likelihood that up to 10 persons out of one million equally exposed people would contract cancer if exposed continuously (24 hours per day) to the levels of TACs over a specified duration of time. This risk would be an excess cancer that is in addition to any cancer risk borne by a person not exposed to these air toxics. To put this risk in perspective, the risk of dying from accidental drowning is 1,000 in a million, which is 100 times more than the SDAPCD's threshold of 10 in one million.

The SDAPCD has also established non-carcinogenic risk parameters for use in HRAs. Noncarcinogenic risks are quantified by calculating a *hazard index*, expressed as the ratio between the ambient pollutant concentration and its toxicity or Reference Exposure Level (REL). An REL is a concentration at, or below which health effects are not likely to occur. A hazard index less of than one (1.0) means that adverse health effects are not expected. Within this analysis, non-carcinogenic exposures of less than 1.0 are considered less than significant.

2.3 Methodology

2.3.1.1 Diesel Exhaust Emissions

DPM concentrations resulting from on- and off-site Project construction and operations over 2,000 feet of the Project were modeled. Onsite construction DPM Emissions were calculated using the CalEEMod program. The CalEEMod derived onsite emissions were supplemented with off-model offsite construction and operational emissions as determined by supplemental calculations prepared by ECORP Consulting, Inc., (see Attachment B). Emission rates were generated for San Diego County during 2023 using the EMFAC2021 model (CARB 2022a). These emissions were used for all on-road diesel sources other than onsite construction trucks accounted for using CalEEMod.

All operational emissions modeled resulted from diesel truck traffic and were implemented off-model as described for construction and presented in Attachment B of this document. Operational truck trips were derived using the CalEEMod derived daily trips and the default percentage of heavy, medium, and light duty truck categories. The CalEEMod default truck rate of 1.04 trips per 1,000 square feet of warehouse space has been found to be highly conservative in recent studied by the South Coast Air Quality Management District (South Coast Air Quality Management District 2014), and air pollution control officer in the South Coast Air Basin.

2.3.1.2 Dispersion Modeling

The air dispersion modeling for the HRA was performed using the U.S. Environmental Protection Agency (USEPA) AERMOD Version 22112 dispersion model. AERMOD is a steady-state, multiple-source, Gaussian dispersion model designed for use with emission sources situated in terrain where ground elevations can exceed the stack heights of the emission sources. The appropriate USGS_NED file found at U.S. Geological Survey (USGS) was used for elevation data for all sources and receptors in the school domain. All regulatory

defaults were used for dispersion modeling. Regulatory Default and urban settings were used for dispersion modeling.

AERMOD requires hourly meteorological data consisting of wind vector, wind speed, temperature, stability class, and mixing height. Pre-processed meteorological data files provided by SDAPCD using USEPA's AERMET program, designed to create AERMOD input files for the McClellan-Palomar Airport monitoring station, were selected as being the most representative meteorology based on proximity. The location of the monitoring station in respect to the Project Site and wind rose are included in Attachment B to this document.

The unit emission rate of one gram per second was utilized in AERMOD to create plot files containing the dispersion factor (X/Q) for each source group. A uniform grid was placed over the Project Area with a spacing of 50 meters. Emissions for each source group as described above were input into HARP2 to calculate the ground level concentrations (GLC) at the modeled receptors. Source and receptor locations can be found in Attachment B of this document. AERMOD summary files can be found in Attachment B of this document. A large receptor grid was extended to the nearest residential areas, which are over 2,000 feet from the Project Site.

2.3.1.3 Health Risk Modeling

The latest version (22118) of the HARP2 model (CARB 2022b) with regulatory default urban settings was used to apply the below explained methodology. The HARP2 inputs used for this study consist of the calculated emissions and unit emissions by source group generated from AERMOD both presented in Attachment B of this document.

Based on the OEHHA methodology, the residential inhalation cancer risk from the annual average TAC concentrations is calculated by multiplying the daily inhalation or oral dose, by a cancer potency factor, the age sensitivity factor (ASF), the frequency of time spent at home, and the exposure duration divided by averaging time, to yield the excess cancer risk. These factors are discussed in more detail below. Cancer risk must be separately calculated for specified age groups, because of age differences in sensitivity to carcinogens and age differences in intake rates (per kilogram [kg] body weight). Separate risk estimates for these age groups provide a health-protective estimate of cancer risk by accounting for greater susceptibility in early life, including both age-related sensitivity and amount of exposure.

Exposure through inhalation (Dose-air) is a function the breathing rate, the exposure frequency, and the concentration of a substance in the air. The breathing rates are determined for specific age groups, so Dose-air is calculated for each of these age groups, 3rd trimester, 0<2, 2<9, 2<16, 16<30 and 16-70 years. To estimate cancer risk, the dose was estimated by applying the following formula to each ground-level concentration:

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

Where:

Dose-air	=	dose through inhalation (mg/kg/day)
C_{air}	=	air concentration ($\mu g/m^3$) from air dispersion model

{BR/BW}	=	daily breathing rate normalized to body weight (L/kg body weight – day) (361 L\kg BW-day for 3rd Trimester, 1,090 L/kg BW-day for 0<2 years, 861 L/kg BW-day for 2<9 years, 745 L/kg BW-day for 2<16 years, 335 L/kg BW-day for 16<30 years, and 290 L/kg BW-day 16<70 years)
A	=	Inhalation absorption factor (unitless [1])
EF	=	exposure frequency (unitless), days/365 days (0.96 [approximately 350 days per year])
10^{-6}	=	conversion factor (micrograms to milligrams, liters to cubic meters)

OEHHA developed ASFs to consider the increased sensitivity to carcinogens during early-in-life exposure. In the absence of chemical-specific data, OEHHA recommends a default ASF of 10 for the third trimester to age 2 years, an ASF of 3 for ages 2 through 15 years to account for potential increased sensitivity to carcinogens during childhood and an ASF of 1 for ages 16 through 70 years.

Fraction of time at home (FAH) during the day is used to adjust exposure duration and cancer risk from a specific facility's emissions, based on the assumption that exposure to Project gasoline vapors are not occurring away from home. OEHHA recommends the following FAH values: from the third trimester to age <2 years, 85 percent of time is spent at home; from age 2 through <16 years, 72 percent of time is spent at home; from age 16 years and greater, 73 percent of time is spent at home.

To estimate the cancer risk, the dose is multiplied by the cancer potency factor, the ASF, the exposure duration divided by averaging time, and the frequency of time spent at home (for residents only):

$$\mathbf{Risk_{inh\text{-}res} = (Dose_{air} * CPH * ASF * ED/AT * FAH)}$$

Where:

$Risk_{inh\text{-}res}$	=	residential inhalation cancer risk (potential chances per million)
$Dose_{air}$	=	daily dose through inhalation (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 (0.25 years for 3rd trimester, 2 years for 0<2, 7 years for 2<9, 14 years for 2<16, 14 years for 16<30, 54 years for 16-70)
AT	=	averaging time of lifetime cancer risk (years)
FAH	=	fraction of time spent at home (unitless)

Non-cancer chronic impacts are calculated by dividing the annual average concentration by the REL for that substance. The REL is defined as the concentration at which no adverse non-cancer health effects are anticipated. The following equation was used to determine the non-cancer risk:

$$\mathbf{Hazard\ Quotient = Ci/RELi}$$

Where:

Ci	=	Concentration in the air of substance i (annual average concentration in µg/m^3)
RELi	=	Chronic noncancer Reference Exposure Level for substance i (µg/m^3)

2.4 Results

2.4.1 Cancer Risk

Operational and construction cancer risk calculations for Project vicinity residential and worker receptors were completed for 70-, 30-, 25- and 9-year periods for operations and 2-year period for construction as shown in Tables 2-2 and 2-3 below, which contain risk values for Maximumly Exposed Individual Resident (MEIR) and Maximumly Exposed Individual Worker (MEIW) in the Project vicinity. The calculated cancer risk for operations and construction accounts for 350 days per year of exposure to residential and worker receptors. While the average American spends 87 percent of their life indoors (USEPA 2001), neither the pollutant dispersion modeling nor the health risk calculations account for the reduced exposure structures provide. Instead, health risk calculations account for the equivalent exposure of continual outdoor living and working.

The MEIR for both operations and construction is identified east of the Project as the single-family homes over 2,000 feet distant to the east (see Attachment A). The specific health risk values shown in both Tables 2-2 and 2-3 are specific to this location. The residences to the south and west of the Project are located further from the Project Site and would be subject to less maximum health risk than those presented in Tables 2-2 and 2-3. The MEIW for both operations and construction is located on the eastern fence line of the Project.

Table 2-2. Maximum Construction Cancer Risk Summary

Maximum Exposure Scenario	Total Maximum Risk (in 1 million)
2 Year Construction Exposure Resident	1.25
2 Year Construction Exposure Worker	2.34
Significance Threshold	*10*
Exceed Threshold?	**No**

Source: ECORP Consulting 2022. See Attachment B.

As shown, the existing residents and workers in the surrounding area would not experience a significant amount of cancer risk from Project construciton.

Table 2-3. Maximum Operations Cancer Risk Summary	
Maximum Exposure Scenario	**Total Maximum Risk (in 1 million)**
70-Year Exposure Resident	0.19
30-Year Exposure Resident	0.16
9-Year Exposure Resident	0.11
25-Year Exposure Worker	0.61
Significance Threshold	*10*
Exceed Threshold?	**No**

Source: ECORP Consulting 2022. See Attachment B.

As shown, the existing residents and workers in the surrounding area would not experience a significant amount of cancer risk from Project operations.

2.4.2 Non-Carcinogenic Hazards

In addition to cancer risk, the significance thresholds for TAC exposure requires an evaluation of non-cancer risk stated in terms of a hazard index. Non-cancer chronic impacts are calculated by dividing the annual average concentration by the REL for that substance. The REL is defined as the concentration at which no adverse non-cancer health effects are anticipated. The potential for chronic non-cancer hazards is evaluated by comparing the maximum long-term exposure level to a chronic REL. RELs are designed to protect sensitive individuals within the population. There is no acute (short-term) REL for diesel exhaust emissions, thus they are not quantified for this report.

A chronic or acute hazard index of 1.0 is considered individually significant. The hazard index is calculated by dividing the chronic exposure by the REL. The highest maximum chronic hazard indexes for residents and workers due to Project operations are presented in Table 2-4 for construction and operations.

Table 2-4. Maximum Non-Cancer Risk Summary		
	Health Hazard Index (HHI)	
Maximum Exposure Scenario	**Construction**	**Operations**
Resident (70 Year for Operational)	0.0005	0.0001
Worker (25 Year for Operational)	0.0483	0.002
Significance Threshold	*1*	*1*
Exceed Threshold?	**No**	**No**

Source: ECORP Consulting 2022. See Attachment B.

As shown in Table 2-4, the highest maximum chronic hazard indexes for residents and workers are under the SDAPCD significance threshold of 1.0.

3.0 REFERENCES

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LIST OF ATTACHMENTS

ATTACHMENT A

Health Risk Figures

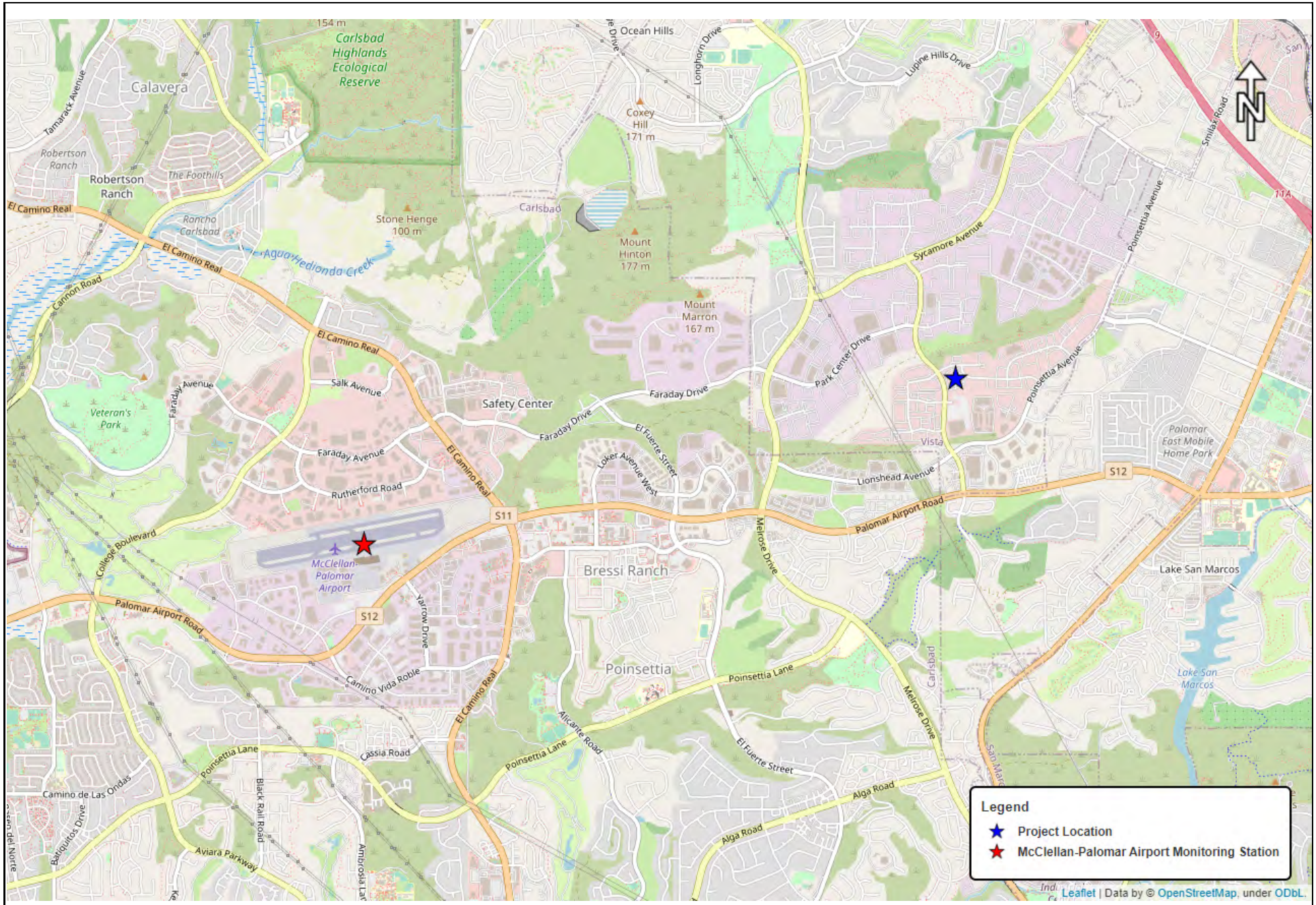

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Figure A-1. Meteorological Monitoring Station

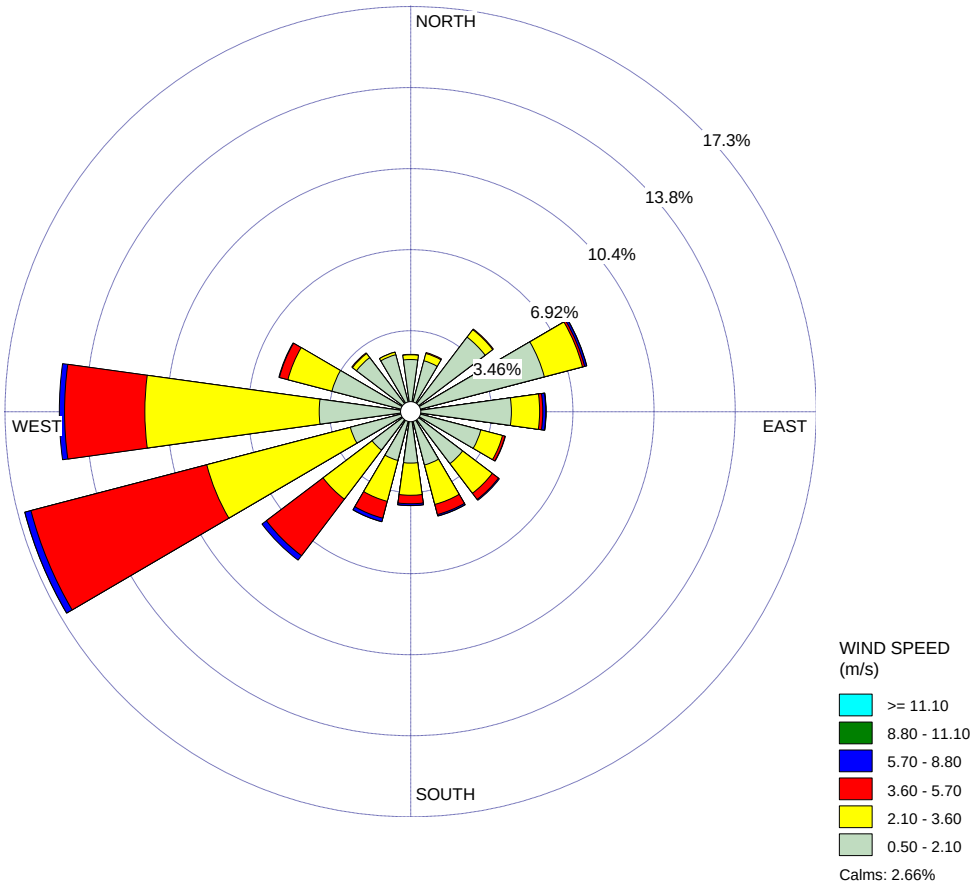
2022-039.05 1430 Decision Street Warehouse

WIND ROSE PLOT:

Palomar Airport

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD:	COMPANY NAME:	
BAAQMD AERMET Processed Data	**Start Date: 1/1/2019 - 00:00** **End Date: 12/31/2021 - 23:59**	MODELER:	
	CALM WINDS: **2.66%**	TOTAL COUNT: **26156 hrs.**	
	AVG. WIND SPEED: **2.36 m/s**	DATE: **1/18/2023**	PROJECT NO.: **2022-039.05**

WRPLOT View - Lakes Environmental Software

ECORP Consulting, Inc.
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Figure A-2. Wind Rose

2022-39.05-*1430 Decision Street Warehouse*

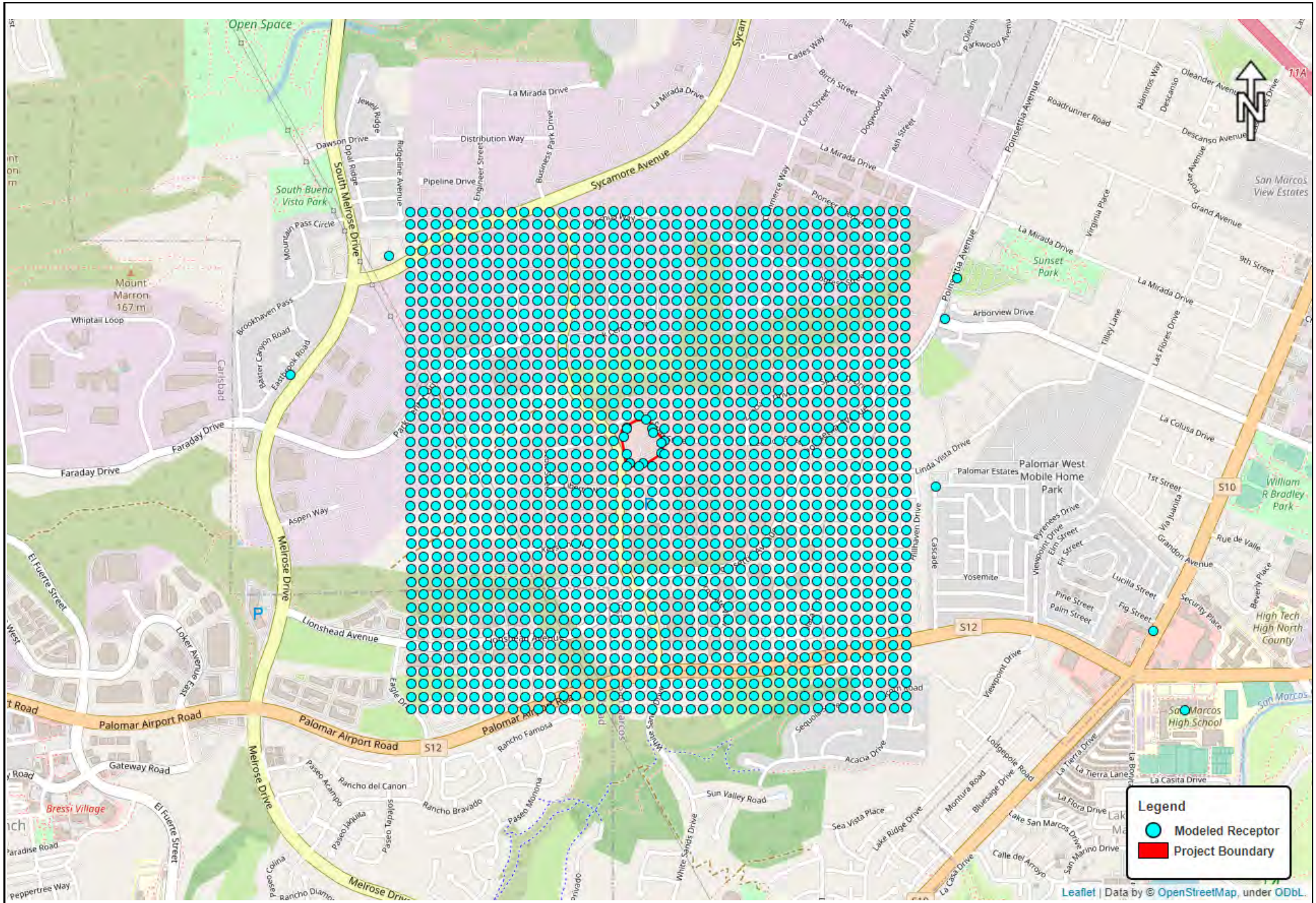

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Figure A-3. Receptor Locations

2022-039.05 1430 Decision Street Warehouse

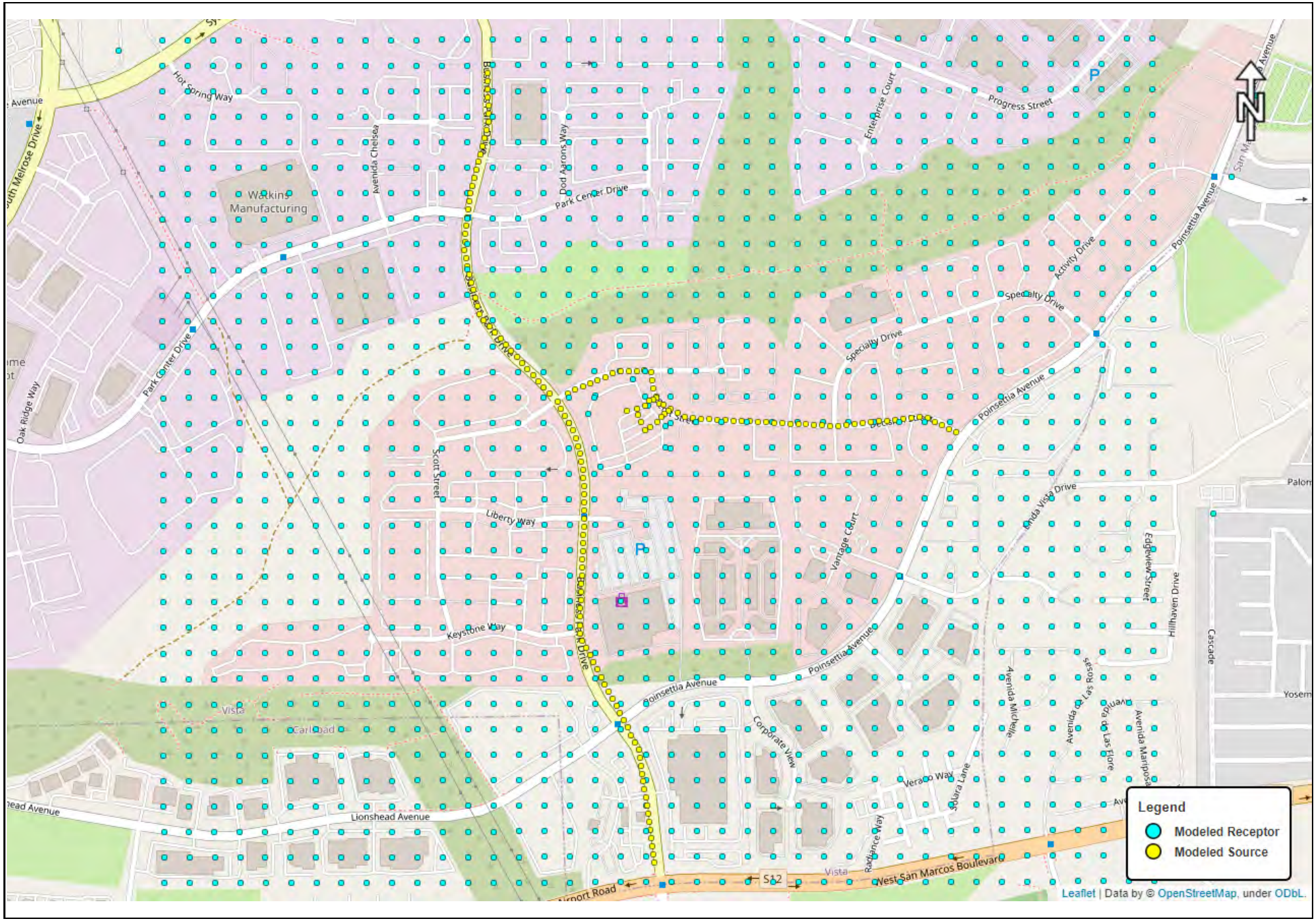

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Figure A-4. Source and Receptor Locations

2022-039.05 1430 Decision Street Warehouse

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Figure A-5. Maximum Construction Risk Locations

2022-039.05 1430 Decision Street Warehouse

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Figure A-6. Maximum Operational Risk Locations

2022-039.05 1430 Decision Street Warehouse

ATTACHMENT B

Health Risk Analysis Output Files

HARP2 Emissions Inputs

Decision Street Warehouse Project

Table B-1. HARP2 Source Information and Modeled Emissions - Operations				
			DPM Emissions	
Source Description	Source ID	Type	Max Hourly (lb/hr)	Annual (lb/yr)
Southeast Driveway	SLINE1	Line Volume	0.000006	0.026
Onsite Trucks	SLINE2	Line Volume	0.000052	0.207
Northwest Driveway	SLINE3	Line Volume	0.000005	0.021
Driveways to Park Dr	SLINE4	Line Volume	0.000065	0.261
Decision to Poinsettia Ave	SLINE5	Line Volume	0.000152	0.610
Buisness Park Northbound	SLINE7	Line Volume	0.000190	0.761
Buisness Park Southbound	SLINE8	Line Volume	0.000035	0.141
North Volume	VOL1	Volume	0.000308	1.238
South Volume	VOL2	Volume	0.000308	1.238

Table B-2. HARP2 Source Information and Modeled Emissions - Construction				
			DPM Emissions	
Source Description	Source ID	Type	Max Hourly (lb/hr)	Annual (lb/yr)
Southeast Driveway	SLINE1	Line Volume	0.000000	0.001923
Onsite Trucks	SLINE2	Line Volume	0.000004	0.015614
Northwest Driveway	SLINE3	Line Volume	0.000000	0.001583
Driveways to Park Dr	SLINE4	Line Volume	0.000005	0.019665
Decision to Poinsettia Ave	SLINE5	Line Volume	0.000011	0.045977
Buisness Park Northbound	SLINE7	Line Volume	0.000014	0.057426
Buisness Park Southbound	SLINE8	Line Volume	0.000003	0.010649
North Volume CalEEMod Onsite	VOL1	Volume	0.016502	45.381
South Volume CalEEMod Onsite	VOL2	Volume	0.016502	45.381

HARP2 Emissions Inputs

Diesel Truck Roadway Operations Emission Assumptions and Calculations

Table B-3. Modeled Roadway Dimensions				
Roadway Link Description	**AERMOD ID**	**Length (m)**	**Width[1] (m)**	**Area (m^2)**
Southeast Driveway	SLINE1	25.4	7.4	188.0
Onsite Trucks	SLINE2	103.1	7.4	762.9
Northwest Driveway	SLINE3	20.9	7.4	154.7
Driveways to Park Dr	SLINE4	259.7	7.4	1,921.8
Decision to Poinsettia Ave	SLINE5	607.2	7.4	4,493.3
Buisness Park Northbound	SLINE7	948.0	7.4	7,015.2
Buisness Park Southbound	SLINE8	703.2	7.4	5,203.7

(1) All roadways modeled as two lanes with standard 3.7 meter width per lane.

Table B-4. Total Trip Information	
Trip Type	**Trips**
Average Daily Trips[1]	133

(1) Daily trip count from Decision Street Emissions Calculations (RCH Group, 2022)

Table B-5. Vehicle EMFAC2021 Emission Rates						
	Type	**DPM Emission Rates[2] (g/mi)**				
Vehicle Type	**Breakdown[1]**	**Idle[3]**	**5 mph**	**15 mph**	**45 mph**	**Composite[4]**
LDT	49.7%	0.091	0.016	0.011	0.005	0.007
MDT	40.3%	0.091	0.072	0.032	0.011	0.021
HHDT	10.0%	0.111	0.111	0.014	0.015	0.030
Vehicle Composite		0.093	0.048	0.020	0.008	0.015

(1) Type breakdown from Decision Street Emissions Calculations (RCH Group, 2022)

(2) DPM Emission Rates conservatively represented using PM10 Exhaust emission factors for 2023.

(3) Idle emission rates in grams per hour per EMFAC2021 outputs.

(4) Speed composite breakdown is 70% @ 45 mph + 15% @ 15 mph + 15% @ 5 mph + 1 minute idle per mile

HARP2 Emissions Inputs

Diesel Truck Roadway Operations Emission Assumptions and Calculations

Table B-6. Percentage Project Trips			
	Trip Information		
Roadway Link	Percentage Total Trips	Peak Hourly[1]	Average Daily
Southeast Driveway	50%	6.0	66.3
Onsite Trucks	100%	12.1	132.6
Northwest Driveway	50%	6.0	66.3
Driveways to Park Dr	50%	6.0	66.3
Decision to Poinsettia Ave	50%	6.0	66.3
Buisness Park Northbound	40%	4.8	53.0
Buisness Park Southbound	10%	1.2	13.3

(1) Peak hourly is represented as average daily emissions divided by 11 per industry standard estimate.

Equations:

Emissions (lbs/hr) = Houly Trips * Composite Emission Factor (g/mi) * Distance (m) / 454 (g/lb) / 1,609 (m/mi)

Emissions (lbs/yr) = Daily Trips * Composite EF (g/mi) * Distance (m) * 365 (d) / 454 (g/lb) / 1,609 (m/mi)

Table B-7. Calculated Truck Emissions		
	Emissions	
Roadway Link	Peak Hourly (lbs/hr)	Annual (lbs/yr)
Southeast Driveway	0.000006	0.0255
Onsite Trucks	0.000052	0.2070
Northwest Driveway	0.000005	0.0210
Driveways to Park Dr	0.000065	0.2608
Decision to Poinsettia Ave	0.000152	0.6097
Buisness Park Northbound	0.000190	0.7615
Buisness Park Southbound	0.000035	0.1412

(1) Peak hourly is represented as average daily emissions divided by 11 per industry standard estimate.

HARP2 Emissions Inputs

Diesel Truck Construction Roadway Link Emission Assumptions and Calculations

Table B-8. Modeled Roadway Dimensions

Roadway Link Description	AERMOD ID	Length (m)	Width[1] (m)	Area (m^2)
Southeast Driveway	SLINE1	25.4	7.4	188.0
Onsite Trucks	SLINE2	103.1	7.4	762.9
Northwest Driveway	SLINE3	20.9	7.4	154.7
Driveways to Park Dr	SLINE4	259.7	7.4	1,921.8
Decision to Poinsettia Ave	SLINE5	607.2	7.4	4,493.3
Buisness Park Northbound	SLINE7	948.0	7.4	7,015.2
Buisness Park Southbound	SLINE8	703.2	7.4	5,203.7

(1) All roadways modeled as two lanes with standard 3.7 meter width per lane.

Table B-9. Total Trip Information

Trip Type	Trips
Average Daily Trips[1]	10

(1) Daily trip count from Decision Street Emissions Calculations (RCH Group, 2022)

Table B-10. Vehicle EMFAC2021 Emission Rates

Vehicle Type	Type Breakdown[1]	DPM Emission Rates[2] (g/mi)				
		Idle[3]	5 mph	15 mph	45 mph	Composite[4]
LDT	49.7%	0.091	0.016	0.011	0.005	0.007
MDT	40.3%	0.091	0.072	0.032	0.011	0.021
HHDT	10.0%	0.111	0.111	0.014	0.015	0.030
Vehicle Composite		0.093	0.048	0.020	0.008	0.015

(1) Type breakdown from Decision Street Emissions Calculations (RCH Group, 2022)

(2) DPM Emission Rates conservatively represented using PM10 Exhaust emission factors for 2023.

(3) Idle emission rates in grams per hour per EMFAC2021 outputs.

(4) Speed composite breakdown is 70% @ 45 mph + 15% @ 15 mph + 15% @ 5 mph + 1 minute idle per mile

HARP2 Emissions Inputs

Diesel Truck Construction Roadway Link Emission Assumptions and Calculations

Table B-11. Percentage Project Trips			
	Trip Information		
Roadway Link	Percentage Total Trips	Peak Hourly[1]	Average Daily
Southeast Driveway	50%	0.5	5.0
Onsite Trucks	100%	0.9	10.0
Northwest Driveway	50%	0.5	5.0
Driveways to Park Dr	50%	0.5	5.0
Decision to Poinsettia Ave	50%	0.5	5.0
Buisness Park Northbound	40%	0.4	4.0
Buisness Park Southbound	10%	0.1	1.0

(1) Peak hourly is represented as average daily emissions divided by 11 per industry standard estimate.

Equations:

Emissions (lbs/hr) = Houly Trips * Composite Emission Factor (g/mi) * Distance (m) / 454 (g/lb) / 1,609 (m/mi)

Emissions (lbs/yr) = Daily Trips * Composite EF (g/mi) * Distance (m) * 365 (d) / 454 (g/lb) / 1,609 (m/mi)

Table B-12. Calculated Truck Emissions		
	Emissions	
Roadway Link	Peak Hourly (lbs/hr)	Annual (lbs/yr)
Southeast Driveway	0.000000	0.0019
Onsite Trucks	0.000004	0.0156
Northwest Driveway	0.000000	0.0016
Driveways to Park Dr	0.000005	0.0197
Decision to Poinsettia Ave	0.000011	0.0460
Buisness Park Northbound	0.000014	0.0574
Buisness Park Southbound	0.000003	0.0106

(1) Peak hourly is represented as average daily emissions divided by 11 per industry standard estimate.

HARP2 Emissions Inputs

Diesel Truck Operational Onsite Idling Assumptions and Calculations

Table B-13. Calculated Emissions from all Modeled Sources					
On-Site Idle Emissions	**Composite Emission Factor (g/hour)**	**Idling Time (min)**	**Daily Trucks**	**Peak Hourly (lbs/hr)**	**Annual (lbs/yr)**
Project Trucks	0.093	15	133	0.0006	2.48
Total Onsite				0.0006	2.48
Total per Modeled Area Source (2)				0.0003	1.24

Sources:

EMFAC2021. PM10 Emission Factors are derived from the Year 2023 Trucks (Table A-4)

Control Pathway

Dispersion Options

Titles

W:\Projects\2022\2022-039.05 1430 Decision Street Warehouse_TO#5\Con

Dispersion Options

- [■] Regulatory Default
- [ ] Non-Default Options

Dispersion Coefficient

Urban

Population:
Name (Optional):
Roughness Length:

Output Type

- [■] Concentration
- [ ] Total Deposition (Dry & Wet)
- [ ] Dry Deposition
- [ ] Wet Deposition

Plume Depletion

- [ ] Dry Removal
- [ ] Wet Removal

Output Warnings

- [ ] No Output Warnings
- [ ] Non-fatal Warnings for Non-sequential Met Data

Pollutant / Averaging Time / Terrain Options

Pollutant Type

Averaging Time Options

Hours

1	2	3	4	6	8	12	24
■	☐	☐	☐	☐	☐	☐	☐

- [ ] Month
- [■] Period
- [ ] Annual

Exponential Decay

Half-life of 4 hrs will be used

Terrain Height Options

- [ ] Flat
- [■] Elevated

SO: Meters
RE: Meters
TG: Meters

Flagpole Receptors

- [ ] Yes
- [■] No

Default Height = 0.00 m

Control Pathway

Optional Files

Re-Start File	Init File	Multi-Year Analyses	Event Input File	Error Listing File
☐	☐	☐	☐	■

Detailed Error Listing File

Filename: vistaAERMOD.err

Receptor Pathway

Receptor Networks

Note: Terrain Elavations and Flagpole Heights for Network Grids are in Page RE2 - 1 (If applicable)
Generated Discrete Receptors for Multi-Tier (Risk) Grid and Receptor Locations for Fenceline Grid are in Page RE3 - 1 (If applicable)

Uniform Cartesian Grid

Receptor Network ID	Grid Origin X Coordinate [m]	Grid Origin Y Coordinate [m]	No. of X-Axis Receptors	No. of Y-Axis Receptors	Spacing for X-Axis [m]	Spacing for Y-Axis [m]
UCART1	477728.85	3665739.24	40	40	50.00	50.00

Discrete Receptors

Discrete Cartesian Receptors

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	479797.14	3666608.84		182.00	
2	480651.26	3666040.52		182.00	
3	477257.56	3667052.14		121.00	
4	477643.85	3667519.01		121.00	
5	479883.42	3667426.58		181.16	
6	479833.65	3667267.80		182.00	

Plant Boundary Receptors

Cartesian Plant Boundary

Primary

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	478590.44	3666703.06	FENCEPRI	133.64	
2	478566.49	3666806.06	FENCEPRI	132.70	
3	478580.86	3666841.99	FENCEPRI	133.19	
4	478655.11	3666873.13	FENCEPRI	136.69	
5	478683.86	3666822.83	FENCEPRI	138.72	
6	478717.39	3666782.11	FENCEPRI	140.71	
7	478717.39	3666741.39	FENCEPRI	140.71	
8	478643.14	3666703.06	FENCEPRI	136.03	

Discrete Cartesian Receptors (ARC) for EVALFILE Output

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	480776.09	3665731.72	ARCREC	182.00	

Receptor Pathway

Receptor Groups

Record Number	Group ID	Group Description
1	FENCEPRI	Cartesian plant boundary Primary Receptors
2	ARCREC	Discrete Cartesian Receptors for EVALFILE Output
3	UCART1	Receptors generated from Uniform Cartesian Grid

Source Pathway - Source Inputs

Volume Sources

Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL1	478641.88	3666812.55	136.02	4.20	1.00000	8.00		1.86	1.00
VOLUME	VOL2	478656.32 Southern Volume	3666773.35	136.96	4.20	1.00000	8.00		1.86	1.00

Source Pathway - Source Inputs

Line Volume Sources

Source Type: LINE VOLUME
Source: SLINE1 (SE Driveway)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
8.00	1.00000		478707.22	3666798.10	138.58	0.00
			478726.47	3666814.61	142.02	0.00

Source Type: LINE VOLUME
Source: SLINE2 (Onsite Trucks)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
8.00	1.00000		478704.46	3666792.60	138.43	0.00
			478679.71	3666771.97	137.75	0.00
			478659.08	3666814.61	137.50	0.00
			478681.08	3666822.86	137.60	0.00

Source Type: LINE VOLUME
Source: SLINE3 (NW Drivway)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
8.00	1.00000		478682.46	3666829.74	137.60	0.00
			478701.71	3666837.99	138.29	0.00

Source Type: LINE VOLUME
Source: SLINE4 (Drivways to Park Dr)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
8.00	1.00000		478708.59	3666822.86	138.69	0.00
			478694.84	3666853.12	138.09	0.00
			478689.33	3666891.63	137.45	0.00
			478621.94	3666888.88	136.18	0.00
			478511.91	3666840.74	130.37	0.00

Source Pathway - Source Inputs

Source Type: LINE VOLUME
Source: SLINE5 (Dicision to Poinsetia Ave)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
8.00	1.00000		478711.34	3666825.61	140.40	0.00
			478758.11	3666798.10	143.62	0.00
			479051.07	3666781.60	155.11	0.00
			479228.50	3666799.48	164.62	0.00
			479301.40	3666763.72	169.54	0.00

Source Type: LINE VOLUME
Source: SLINE7 (Buisness Park S)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
8.00	1.00000		478503.65	3666833.87	129.81	0.00
			478540.79	3666765.09	131.89	0.00
			478555.92	3666699.07	132.07	0.00
			478558.67	3666627.55	132.03	0.00
			478550.42	3666437.74	131.03	0.00
			478549.04	3666371.72	131.00	0.00
			478666.45	3666144.89	127.15	0.00
			478693.46	3665927.46	121.51	0.00

Source Type: LINE VOLUME
Source: SLINE8 (Buisness Park North)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
8.00	1.00000		478492.48	3666844.18	129.31	0.00
			478353.21	3666998.92	123.85	0.00
			478322.27	3667125.80	122.12	0.00
			478334.65	3667240.31	122.07	0.00
			478371.78	3667382.66	123.94	0.00
			478368.69	3667484.79	123.83	0.00

Source Pathway - Source Inputs

Volume Sources Generated from Line Sources

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE1	L0000001	478710.25	3666800.71	140.34	0.00	0.33333	8.00		4.04	1.95
	L0000002	478716.84	3666806.36	140.68	0.00	0.33333	8.00		4.04	1.95
	L0000003	478723.43	3666812.01	141.01	0.00	0.33333	8.00		4.04	1.95

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE2	L0000004	478701.39	3666790.04	139.85	0.00	0.14286	8.00		7.44	1.95
	L0000005	478689.10	3666779.80	139.06	0.00	0.14286	8.00		7.44	1.95
	L0000006	478678.06	3666775.37	138.35	0.00	0.14286	8.00		7.44	1.95
	L0000007	478671.09	3666789.77	137.90	0.00	0.14286	8.00		7.44	1.95
	L0000008	478664.13	3666804.17	137.45	0.00	0.14286	8.00		7.44	1.95
	L0000009	478663.20	3666816.16	137.39	0.00	0.14286	8.00		7.44	1.95
	L0000010	478678.18	3666821.77	138.35	0.00	0.14286	8.00		7.44	1.95

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE3	L0000011	478686.13	3666831.31	138.86	0.00	0.33333	8.00		3.72	1.95
	L0000012	478693.49	3666834.47	139.30	0.00	0.33333	8.00		3.72	1.95
	L0000013	478700.84	3666837.62	139.74	0.00	0.33333	8.00		3.72	1.95

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE4	L0000014	478706.94	3666826.50	140.16	0.00	0.06250	8.00		7.44	1.95
	L0000015	478700.31	3666841.07	139.67	0.00	0.06250	8.00		7.44	1.95
	L0000016	478694.45	3666855.85	139.16	0.00	0.06250	8.00		7.44	1.95
	L0000017	478692.18	3666871.69	138.87	0.00	0.06250	8.00		7.44	1.95

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE4	L0000018	478689.92	3666887.53	138.60	0.00	0.06250	8.00		7.44	1.95
	L0000019	478677.49	3666891.15	137.87	0.00	0.06250	8.00		7.44	1.95
	L0000020	478661.50	3666890.50	136.98	0.00	0.06250	8.00		7.44	1.95
	L0000021	478645.51	3666889.84	136.08	0.00	0.06250	8.00		7.44	1.95
	L0000022	478629.53	3666889.19	135.19	0.00	0.06250	8.00		7.44	1.95
	L0000023	478614.24	3666885.51	134.45	0.00	0.06250	8.00		7.44	1.95
	L0000024	478599.58	3666879.10	133.80	0.00	0.06250	8.00		7.44	1.95
	L0000025	478584.92	3666872.69	133.17	0.00	0.06250	8.00		7.44	1.95
	L0000026	478570.26	3666866.27	132.57	0.00	0.06250	8.00		7.44	1.95
	L0000027	478555.60	3666859.86	132.00	0.00	0.06250	8.00		7.44	1.95
	L0000028	478540.94	3666853.45	131.47	0.00	0.06250	8.00		7.44	1.95
	L0000029	478526.29	3666847.03	130.98	0.00	0.06250	8.00		7.44	1.95

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE5	L0000178	478714.79	3666823.58	140.57	0.00	0.02632	8.00		7.44	1.95
	L0000179	478728.58	3666815.47	141.28	0.00	0.02632	8.00		7.44	1.95
	L0000180	478742.37	3666807.36	141.99	0.00	0.02632	8.00		7.44	1.95
	L0000181	478756.16	3666799.25	142.70	0.00	0.02632	8.00		7.44	1.95
	L0000182	478771.83	3666797.33	143.51	0.00	0.02632	8.00		7.44	1.95
	L0000183	478787.80	3666796.43	144.25	0.00	0.02632	8.00		7.44	1.95
	L0000184	478803.78	3666795.53	144.86	0.00	0.02632	8.00		7.44	1.95
	L0000185	478819.75	3666794.63	145.48	0.00	0.02632	8.00		7.44	1.95
	L0000186	478835.73	3666793.73	146.10	0.00	0.02632	8.00		7.44	1.95
	L0000187	478851.70	3666792.83	146.71	0.00	0.02632	8.00		7.44	1.95
	L0000188	478867.68	3666791.93	147.33	0.00	0.02632	8.00		7.44	1.95

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE5	L0000189	478883.65	3666791.03	147.95	0.00	0.02632	8.00		7.44	1.95
	L0000190	478899.63	3666790.13	148.56	0.00	0.02632	8.00		7.44	1.95
	L0000191	478915.60	3666789.23	149.18	0.00	0.02632	8.00		7.44	1.95
	L0000192	478931.58	3666788.33	149.80	0.00	0.02632	8.00		7.44	1.95
	L0000193	478947.55	3666787.43	150.55	0.00	0.02632	8.00		7.44	1.95
	L0000194	478963.52	3666786.53	151.37	0.00	0.02632	8.00		7.44	1.95
	L0000195	478979.50	3666785.63	152.19	0.00	0.02632	8.00		7.44	1.95
	L0000196	478995.47	3666784.73	153.02	0.00	0.02632	8.00		7.44	1.95
	L0000197	479011.45	3666783.83	153.84	0.00	0.02632	8.00		7.44	1.95
	L0000198	479027.42	3666782.93	154.83	0.00	0.02632	8.00		7.44	1.95
	L0000199	479043.40	3666782.03	155.85	0.00	0.02632	8.00		7.44	1.95
	L0000200	479059.34	3666782.43	156.88	0.00	0.02632	8.00		7.44	1.95
	L0000201	479075.26	3666784.04	157.90	0.00	0.02632	8.00		7.44	1.95
	L0000202	479091.18	3666785.64	158.93	0.00	0.02632	8.00		7.44	1.95
	L0000203	479107.10	3666787.25	159.67	0.00	0.02632	8.00		7.44	1.95
	L0000204	479123.02	3666788.85	160.41	0.00	0.02632	8.00		7.44	1.95
	L0000205	479138.94	3666790.45	161.14	0.00	0.02632	8.00		7.44	1.95
	L0000206	479154.86	3666792.06	161.89	0.00	0.02632	8.00		7.44	1.95
	L0000207	479170.78	3666793.66	162.64	0.00	0.02632	8.00		7.44	1.95
	L0000208	479186.70	3666795.27	163.35	0.00	0.02632	8.00		7.44	1.95
	L0000209	479202.62	3666796.87	164.05	0.00	0.02632	8.00		7.44	1.95
	L0000210	479218.54	3666798.48	164.74	0.00	0.02632	8.00		7.44	1.95
	L0000211	479233.88	3666796.84	165.40	0.00	0.02632	8.00		7.44	1.95
	L0000212	479248.24	3666789.80	166.02	0.00	0.02632	8.00		7.44	1.95
	L0000213	479262.60	3666782.75	166.76	0.00	0.02632	8.00		7.44	1.95

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE5	L0000214	479276.97	3666775.70	167.50	0.00	0.02632	8.00		7.44	1.95
	L0000215	479291.33	3666768.66	168.24	0.00	0.02632	8.00		7.44	1.95

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE7	L0000514	478505.55	3666830.35	130.35	0.00	0.01667	8.00		7.44	1.95
	L0000515	478513.16	3666816.27	130.64	0.00	0.01667	8.00		7.44	1.95
	L0000516	478520.76	3666802.19	130.94	0.00	0.01667	8.00		7.44	1.95
	L0000517	478528.36	3666788.11	131.23	0.00	0.01667	8.00		7.44	1.95
	L0000518	478535.96	3666774.03	131.53	0.00	0.01667	8.00		7.44	1.95
	L0000519	478542.09	3666759.40	131.77	0.00	0.01667	8.00		7.44	1.95
	L0000520	478545.67	3666743.80	131.90	0.00	0.01667	8.00		7.44	1.95
	L0000521	478549.24	3666728.21	132.04	0.00	0.01667	8.00		7.44	1.95
	L0000522	478552.82	3666712.61	132.18	0.00	0.01667	8.00		7.44	1.95
	L0000523	478556.00	3666696.96	132.31	0.00	0.01667	8.00		7.44	1.95
	L0000524	478556.62	3666680.98	132.33	0.00	0.01667	8.00		7.44	1.95
	L0000525	478557.23	3666664.99	132.36	0.00	0.01667	8.00		7.44	1.95
	L0000526	478557.84	3666649.00	132.38	0.00	0.01667	8.00		7.44	1.95
	L0000527	478558.46	3666633.01	132.39	0.00	0.01667	8.00		7.44	1.95
	L0000528	478558.21	3666617.03	132.36	0.00	0.01667	8.00		7.44	1.95
	L0000529	478557.52	3666601.04	132.31	0.00	0.01667	8.00		7.44	1.95
	L0000530	478556.82	3666585.06	132.27	0.00	0.01667	8.00		7.44	1.95
	L0000531	478556.13	3666569.07	132.23	0.00	0.01667	8.00		7.44	1.95
	L0000532	478555.43	3666553.09	132.19	0.00	0.01667	8.00		7.44	1.95
	L0000533	478554.74	3666537.10	132.02	0.00	0.01667	8.00		7.44	1.95
	L0000534	478554.04	3666521.12	131.84	0.00	0.01667	8.00		7.44	1.95

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE7	L0000535	478553.35	3666505.13	131.66	0.00	0.01667	8.00		7.44	1.95
	L0000536	478552.65	3666489.15	131.48	0.00	0.01667	8.00		7.44	1.95
	L0000537	478551.96	3666473.16	131.29	0.00	0.01667	8.00		7.44	1.95
	L0000538	478551.26	3666457.18	131.14	0.00	0.01667	8.00		7.44	1.95
	L0000539	478550.57	3666441.19	131.11	0.00	0.01667	8.00		7.44	1.95
	L0000540	478550.16	3666425.20	131.09	0.00	0.01667	8.00		7.44	1.95
	L0000541	478549.82	3666409.20	131.08	0.00	0.01667	8.00		7.44	1.95
	L0000542	478549.49	3666393.20	131.06	0.00	0.01667	8.00		7.44	1.95
	L0000543	478549.16	3666377.21	131.05	0.00	0.01667	8.00		7.44	1.95
	L0000544	478553.88	3666362.39	131.02	0.00	0.01667	8.00		7.44	1.95
	L0000545	478561.23	3666348.18	130.91	0.00	0.01667	8.00		7.44	1.95
	L0000546	478568.58	3666333.97	130.79	0.00	0.01667	8.00		7.44	1.95
	L0000547	478575.94	3666319.76	130.67	0.00	0.01667	8.00		7.44	1.95
	L0000548	478583.29	3666305.55	130.55	0.00	0.01667	8.00		7.44	1.95
	L0000549	478590.65	3666291.34	130.44	0.00	0.01667	8.00		7.44	1.95
	L0000550	478598.00	3666277.13	130.32	0.00	0.01667	8.00		7.44	1.95
	L0000551	478605.36	3666262.92	130.35	0.00	0.01667	8.00		7.44	1.95
	L0000552	478612.71	3666248.71	130.39	0.00	0.01667	8.00		7.44	1.95
	L0000553	478620.07	3666234.50	130.42	0.00	0.01667	8.00		7.44	1.95
	L0000554	478627.42	3666220.29	130.47	0.00	0.01667	8.00		7.44	1.95
	L0000555	478634.77	3666206.08	130.53	0.00	0.01667	8.00		7.44	1.95
	L0000556	478642.13	3666191.87	130.55	0.00	0.01667	8.00		7.44	1.95
	L0000557	478649.48	3666177.66	130.41	0.00	0.01667	8.00		7.44	1.95
	L0000558	478656.84	3666163.45	130.07	0.00	0.01667	8.00		7.44	1.95
	L0000559	478664.19	3666149.24	129.69	0.00	0.01667	8.00		7.44	1.95

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE7	L0000560	478667.81	3666133.88	129.18	0.00	0.01667	8.00		7.44	1.95
	L0000561	478669.79	3666118.00	128.60	0.00	0.01667	8.00		7.44	1.95
	L0000562	478671.76	3666102.12	128.02	0.00	0.01667	8.00		7.44	1.95
	L0000563	478673.73	3666086.24	127.40	0.00	0.01667	8.00		7.44	1.95
	L0000564	478675.71	3666070.36	126.74	0.00	0.01667	8.00		7.44	1.95
	L0000565	478677.68	3666054.49	126.07	0.00	0.01667	8.00		7.44	1.95
	L0000566	478679.65	3666038.61	125.41	0.00	0.01667	8.00		7.44	1.95
	L0000567	478681.62	3666022.73	124.75	0.00	0.01667	8.00		7.44	1.95
	L0000568	478683.60	3666006.85	124.09	0.00	0.01667	8.00		7.44	1.95
	L0000569	478685.57	3665990.97	123.61	0.00	0.01667	8.00		7.44	1.95
	L0000570	478687.54	3665975.10	123.29	0.00	0.01667	8.00		7.44	1.95
	L0000571	478689.52	3665959.22	122.97	0.00	0.01667	8.00		7.44	1.95
	L0000572	478691.49	3665943.34	122.66	0.00	0.01667	8.00		7.44	1.95
	L0000573	478693.46	3665927.46	122.34	0.00	0.01667	8.00		7.44	1.95

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE8	L0000574	478489.80	3666847.16	129.57	0.00	0.02273	8.00		7.44	1.95
	L0000575	478479.10	3666859.05	129.02	0.00	0.02273	8.00		7.44	1.95
	L0000576	478468.39	3666870.94	128.48	0.00	0.02273	8.00		7.44	1.95
	L0000577	478457.69	3666882.83	127.94	0.00	0.02273	8.00		7.44	1.95
	L0000578	478446.99	3666894.73	127.40	0.00	0.02273	8.00		7.44	1.95
	L0000579	478436.28	3666906.62	126.85	0.00	0.02273	8.00		7.44	1.95
	L0000580	478425.58	3666918.51	126.31	0.00	0.02273	8.00		7.44	1.95
	L0000581	478414.88	3666930.40	125.84	0.00	0.02273	8.00		7.44	1.95
	L0000582	478404.17	3666942.30	125.43	0.00	0.02273	8.00		7.44	1.95

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE8	L0000583	478393.47	3666954.19	125.01	0.00	0.02273	8.00		7.44	1.95
	L0000584	478382.77	3666966.08	124.67	0.00	0.02273	8.00		7.44	1.95
	L0000585	478372.06	3666977.98	124.30	0.00	0.02273	8.00		7.44	1.95
	L0000586	478361.36	3666989.87	123.89	0.00	0.02273	8.00		7.44	1.95
	L0000587	478352.31	3667002.63	123.50	0.00	0.02273	8.00		7.44	1.95
	L0000588	478348.52	3667018.18	123.27	0.00	0.02273	8.00		7.44	1.95
	L0000589	478344.73	3667033.72	123.12	0.00	0.02273	8.00		7.44	1.95
	L0000590	478340.93	3667049.27	122.98	0.00	0.02273	8.00		7.44	1.95
	L0000591	478337.14	3667064.81	122.83	0.00	0.02273	8.00		7.44	1.95
	L0000592	478333.35	3667080.36	122.68	0.00	0.02273	8.00		7.44	1.95
	L0000593	478329.56	3667095.90	122.53	0.00	0.02273	8.00		7.44	1.95
	L0000594	478325.77	3667111.44	122.39	0.00	0.02273	8.00		7.44	1.95
	L0000595	478322.40	3667127.02	122.25	0.00	0.02273	8.00		7.44	1.95
	L0000596	478324.12	3667142.92	122.32	0.00	0.02273	8.00		7.44	1.95
	L0000597	478325.84	3667158.83	122.38	0.00	0.02273	8.00		7.44	1.95
	L0000598	478327.56	3667174.74	122.45	0.00	0.02273	8.00		7.44	1.95
	L0000599	478329.28	3667190.65	122.51	0.00	0.02273	8.00		7.44	1.95
	L0000600	478331.00	3667206.55	122.53	0.00	0.02273	8.00		7.44	1.95
	L0000601	478332.72	3667222.46	122.46	0.00	0.02273	8.00		7.44	1.95
	L0000602	478334.44	3667238.37	122.40	0.00	0.02273	8.00		7.44	1.95
	L0000603	478338.19	3667253.90	122.44	0.00	0.02273	8.00		7.44	1.95
	L0000604	478342.23	3667269.38	122.52	0.00	0.02273	8.00		7.44	1.95
	L0000605	478346.27	3667284.86	122.61	0.00	0.02273	8.00		7.44	1.95
	L0000606	478350.31	3667300.35	122.72	0.00	0.02273	8.00		7.44	1.95
	L0000607	478354.35	3667315.83	122.84	0.00	0.02273	8.00		7.44	1.95

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE8	L0000608	478358.39	3667331.31	122.95	0.00	0.02273	8.00		7.44	1.95
	L0000609	478362.42	3667346.79	123.03	0.00	0.02273	8.00		7.44	1.95
	L0000610	478366.46	3667362.27	123.10	0.00	0.02273	8.00		7.44	1.95
	L0000611	478370.50	3667377.76	123.15	0.00	0.02273	8.00		7.44	1.95
	L0000612	478371.45	3667393.59	123.12	0.00	0.02273	8.00		7.44	1.95
	L0000613	478370.97	3667409.58	123.10	0.00	0.02273	8.00		7.44	1.95
	L0000614	478370.48	3667425.57	123.08	0.00	0.02273	8.00		7.44	1.95
	L0000615	478370.00	3667441.56	123.06	0.00	0.02273	8.00		7.44	1.95
	L0000616	478369.51	3667457.56	123.04	0.00	0.02273	8.00		7.44	1.95
	L0000617	478369.03	3667473.55	123.02	0.00	0.02273	8.00		7.44	1.95

1430 Decision Street Project, City of Vista
Greenhouse Gas Emissions Technical Report

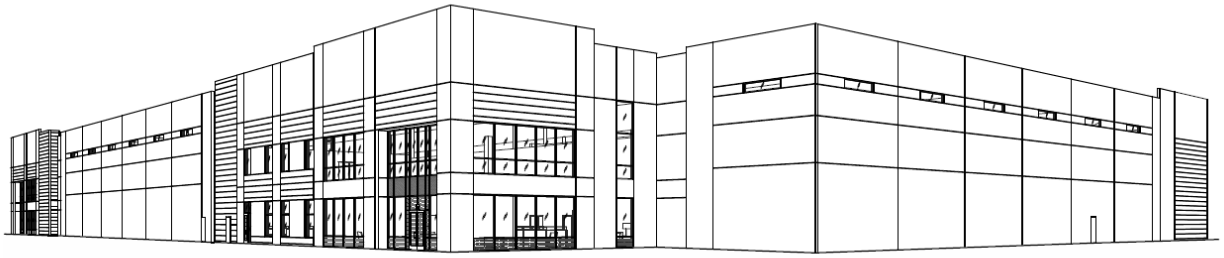

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TABLE OF CONTENTS

1430 DECISION STREET PROJECT, CITY OF VISTA GREENHOUSE GAS EMISSIONS TECHNICAL REPORT

GREENHOUSE GAS EMISSIONS TECHNICAL REPORT

1430 DECISION STREET PROJECT, CITY OF VISTA

1.1 INTRODUCTION

This report presents an analysis of potential greenhouse gas (GHG) emissions impacts associated with the 1430 Decision Street Project (the "Project") in the City of Vista, CA. The Project consists of the demolition of an existing two-story office (research and development) building (approximately 98,000 square feet) and the construction of an approximately 123,000 square foot industrial building on the 7.81-acre property (APN# 219-011-88). The Project would not change the General Plan Land Use Designation (Research Light Industrial [RLI]) or the Zoning Designation (Vista Business Park Specific Plan, Specific Plan Area B) for the property.

The nearest residences are approximately 2,000 feet to the east and the nearest school is approximately 3,000 feet to the north. The adjacent land uses to the property are of the same General Plan Land Use and Zoning designation, except for the parcel to the south, which has the General Plan Land Use Designation of General Commercial (GC).

Project construction would commence in June 2022 and would be completed in July 2023 (approximately 13 months). Demolition would be required to remove the existing structure onsite. Site preparation and grading activities would follow but would not require haul trucks for soil import/export (cut/fill would be balanced). Building construction would follow and would comprise most of the construction period. Paving and architectural coating phases would be the final construction phases.

This report presents a background on GHG emissions, an overview of regulations applicable to the Project, and an analysis of potential GHG emissions impacts that would result from implementation of the Project. All GHG emissions impacts were found to be **less than significant**.

1.2 EXISTING CONDITIONS

1.2.1 BACKGROUND AND GENERAL PRINCIPLES

"Global warming" and "global climate change" are the terms used to describe the increase in the average temperature of the earth's near-surface air and oceans since the mid-20th century and its projected continuation. Warming of the climate system is now considered to be unequivocal, with global surface temperature increasing approximately 1.33 degrees Fahrenheit (°F) over the last 100 years. Continued warming is projected to increase global average temperature between 2 and 11°F over the next 100 years.

Natural processes and human actions have been identified as the causes of this warming. The International Panel on Climate Change (IPCC) concludes that variations in natural phenomena such as solar radiation and volcanoes produced most of the warming from pre-industrial times to 1950 and had a small cooling effect afterward (IPCC, 2014). After 1950, however, increasing GHG concentrations resulting from human activity such as fossil fuel burning, and deforestation have been responsible for most of the observed temperature increase. These basic conclusions have been endorsed by more than 45 scientific societies and academies of science, including all the national academies of science of the major industrialized countries. Since 2007, no scientific body of national or international standing has maintained a dissenting opinion.

Increases in GHG concentrations in the earth's atmosphere are thought to be the main cause of human-induced climate change. The IPCC is now 95 percent certain that humans are the main cause of current global warming (IPCC, 2014). GHG naturally trap heat by impeding the exit of solar radiation that has hit the earth and is reflected back into space. Some GHG occur naturally and are necessary for keeping the earth's surface inhabitable. However, increases in the concentrations of these gases in the atmosphere during the last 100 years have decreased the amount of solar radiation that is reflected back into space, intensifying the natural greenhouse effect and resulting in the increase of global average temperature.

Gases that trap heat in the atmosphere are referred to as GHG because they capture heat radiated from the sun as it is reflected back into the atmosphere, much like a greenhouse does. The accumulation of GHG has been implicated as the driving force for global climate change. The primary GHG are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O), ozone, and water vapor.

While the presence of the primary GHG in the atmosphere are naturally occurring, CO_2, CH_4, and N_2O are also emitted from human activities, accelerating the rate at which these compounds occur within earth's atmosphere. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas methane results from off-gassing associated with agricultural practices, coal mines, and landfills. Other GHG include hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, and are generated in certain industrial processes.

CO_2 is the reference gas for climate change because it is the predominant GHG emitted. The effect that each of the aforementioned gases can have on global warming is a combination of the mass of their emissions and their global warming potential (GWP). GWP indicates, on a pound-for-pound basis, how much a gas is predicted to contribute to global warming relative to how much warming would be predicted to be caused by the same mass of CO_2. CH_4 and N_2O are substantially more potent GHG than CO_2, with GWP of 28 and 265 times that of CO_2, respectively (IPCC, 2014).

In emissions inventories, GHG emissions are typically reported in terms of pounds or metric tons of CO_2 equivalents (CO_2e). CO_2e are calculated as the product of the mass emitted of a given GHG and its specific GWP. While CH_4 and N_2O have much higher GWP than CO_2, CO_2 is emitted in such vastly higher quantities that it accounts for the majority of GHG emissions in CO_2e.

Fossil fuel combustion, especially for the generation of electricity and powering of motor vehicles, has led to substantial increases in CO_2 emissions (and thus substantial increases in atmospheric concentrations of CO_2). In pre-industrial times (c. 1860), concentrations of atmospheric CO_2 were approximately 280 parts per million (ppm). By December 2020, atmospheric CO_2 concentrations had increased to 414 ppm, 48 percent above pre-industrial concentrations (NOAA, 2021).

There is international scientific consensus that human-caused increases in GHGs have and will continue to contribute to global warming. Potential global warming impacts in California may include, but are not limited to, loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years. Secondary effects are likely to include a global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity (CalEPA, 2006).

1.2.2 REGULATORY SETTING

State Regulations and Standards

State regulations and standards applicable to the Project are listed below.

Solid Waste Regulations

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

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

California Code of Regulations Title 24

Although not originally intended to reduce greenhouse gas emissions, Title 24 of the California Code of Regulations, Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow for the consideration and possible incorporation of new energy efficiency technologies and methods.

Energy efficient buildings require less electricity, natural gas, and other fuels. Electricity production from fossil fuels and on-site fuel combustion (typically for water heating) results in GHG emissions. Therefore, increased energy efficiency results in decreased GHG emissions. Accordingly, Title 24 in the CALGreen Building Code is now a part of the statewide strategy for reducing GHG emissions and is the only statewide plan for reduction of GHG emissions that every local agency must adopt in a public hearing by adopting the state building code. Consistent with CALGreen, the state recognized that GHG reductions would be achieved through buildings that exceed minimum energy-efficiency standards, decrease consumption of potable water, reduce sold waste during construction and operation, and incorporate sustainable materials. Compliance with Title 24 of the CALGreen Building Code is thus a vehicle to achieve statewide electricity and natural gas efficiency targets, and lower GHG emissions from waste and water transport sectors. The Title 24 Building Energy Efficiency Standards were updated in 2019 and buildings whose permit application are dated on or after January 1, 2020 must comply with the 2019 Standards.

Pavley Standards

California AB 1493 (Pavley) enacted on July 22, 2002, required the California Air Resource Board (CARB) to develop and adopt regulations that reduce greenhouse gases emitted by passenger vehicles and light duty trucks for model years 2009–2016, which are often times referred to as the "Pavley I" standards. The CARB obtained a waiver from the USEPA that allows for implementation of these regulations notwithstanding possible federal preemption concerns.

Executive Order S-3-05

Executive Order (EO) S-3-05, signed by Governor Schwarzenegger on June 1, 2005, calls for a reduction in GHG emissions to 1990 levels by 2020 and for an 80 percent reduction in GHG emissions below 1990 levels by 2050. EO S-3-05 also calls for the CalEPA to prepare biennial science reports on the potential impact of continued global climate change on certain sectors of the California economy. The first of these reports, "Our Changing Climate: Assessing Risks to California", and its supporting document "Scenarios of Climate Change in California: An Overview" were published by the California Climate Change Center in 2006.

Assembly Bill 32

In September 2006, Governor Schwarzenegger signed Assembly Bill (AB) 32 into law. AB 32 required that, by January 1, 2008, the California Air Resources Board (CARB) shall determine what the statewide GHG emissions level was in 1990 and approve a statewide GHG emissions limit that is equivalent to that level, to be achieved by 2020. The CARB adopted its AB 32 Scoping Plan in December 2008, which provided estimates of the 1990 GHG emissions level and identified sectors for the reduction of GHG emissions. In 2011, the CARB developed a Supplement to the AB 32 Scoping Plan which updated the emissions inventory based on current projections and included adopted measures such as the Pavley Fuel Efficiency Standards and 20 percent Renewable Portfolio Standard (RPS) requirement.

In 2014, the CARB published its First Update to the Climate Change Scoping Plan. This update indicated that the State is on target to meet the goal of reducing GHG emissions to 1990 level by 2020. The First Update tracks progress in achieving the goals of AB 32 and lays out a new set of actions that will move the State further along the path to achieving the 2050 goal of reducing emissions to 80 percent below 1990 levels. While the First Update discusses setting a mid-term target, the plan does not yet set a quantifiable target toward meeting the 2050 goal.

In January 2017, the CARB released the draft of The 2017 Climate Change Scoping Plan Update: The Proposed Strategy for Achieving California's 2030 Greenhouse Gas Target (Second Update). This update addresses the statewide emissions reduction target established pursuant to Senate Bill (SB) 32 and Executive Order B-30-15, as discussed below. The major elements of the Second Update, as proposed in the CARB's January 2017 draft, include (but are not limited to) achieving the following milestones by 2030: a 50 percent Renewable Portfolio Standard (discussed below); a more stringent Low Carbon Fuel Standard (discussed below) that requires an 18 percent reduction in carbon intensity; deploying additional near-zero and zero emissions technologies in the transportation sectors; increasing the stringency of the SB 375 (discussed below) reduction targets for 2035; a 20 percent reduction in GHG emissions from the refinery sector; and, continued deployment of a declining emissions cap under the Cap-and-Trade Program.

Senate Bill 97

Senate Bill (SB) 97, enacted in 2007, amends the CEQA statute to clearly establish that GHG emissions and the effects of GHG emissions are appropriate subjects for CEQA analysis. SB 97 directed the Governor's Office of Planning and Research (OPR) to develop draft CEQA guidelines "for the mitigation of greenhouse gas emissions or the effects of OPR published a technical advisory on CEQA and climate change on June 19, 2008. The guidance did not include a suggested threshold but stated that the OPR had asked the CARB to "recommend a method for setting thresholds which will encourage consistency and uniformity in the CEQA analysis of greenhouse gas emissions throughout the state."

The OPR technical advisory does recommend that CEQA analyses include the following components:

- Identification of greenhouse gas emissions;
- Determination of significance; and
- Mitigation of impacts, as needed and as feasible.

On December 31, 2009, the California Natural Resources Agency adopted the proposed amendments to the State CEQA Guidelines. These amendments became effective on March 18, 2010.

Senate Bill 375

The Sustainable Communities and Climate Protection Act of 2008 (SB 375) finds that GHG from autos and light trucks can be substantially reduced by new vehicle technology, but even so "it will

be necessary to achieve significant additional GHG reductions from changed land use patterns and improved transportation. Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32." Therefore, SB 375 requires that regions with metropolitan planning organizations adopt sustainable communities' strategies, as part of their regional transportation plans, which are designed to achieve certain goals for the reduction of GHG emissions from mobile sources.

SB 375 also includes CEQA streamlining provisions for "transit priority projects" that are consistent with an adopted sustainable communities' strategy. As defined in SB 375, a "transit priority project" shall: (1) contain at least 50 percent residential use, based on total building square footage and, if the project contains between 26 and 50 percent nonresidential uses, a floor area ratio of not less than 0.75; (2) provide a maximum net density of at least 20 dwelling units per acre; and (3) be within 0.5 mile of a major transit stop or high quality transit corridor.

Low Carbon Fuel Standard

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

Advanced Clean Cars Program

In 2012, the CARB approved the Advanced Clean Cars (ACC) program, a new emissions-control program for model years 2017–2025. (This program is sometimes referred to as "Pavley II.") The program combines the control of smog, soot, and GHGs with requirements for greater numbers of zero-emission vehicles. By 2025, when the rules will be fully implemented, new automobiles will emit 34 percent fewer GHGs.

Zero Emission Vehicles

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

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

The proliferation of zero emission vehicles is being supported in multiple ways. For example, California is incentivizing the purchase of ZEVs through implementation of the Clean Vehicle Rebate Project (CVRP), which is administered by a non-profit organization (The Center for Sustainable Energy) for the ARB and currently subsidizes the purchase of passenger near-zero

and zero emission vehicles. Additionally, CALGreen requires new residential and non-residential construction to be pre-wired to facilitate the future installation and use of electric vehicle chargers (see Section 4.106.4 and Section 5.106.5.3 of CALGreen Standards for the residential and non-residential pre-wiring requirements, respectively). As a final example, in January 2017, San Diego Gas & Electric Company (SDG&E) applied to the California Public Utilities Commission for authority to implement numerous programs intended to accelerate the electrification of the transportation sector. SDG&E's application includes, but is not limited to, proposals to: (i) install up to 90,000 charging stations at single-family homes throughout the company's service area; (ii) install charging infrastructure at various park-and-ride locations; (iii) provide incentives for electric taxis and shuttles; and, (iv) provide educational programs and financial incentives for the sale of electric vehicles.

Executive Order B-30-15

In April 2015, Governor Brown signed Executive Order B-30-15, which established the following GHG emission reduction goal for California: by 2030, reduce GHG emissions to 40 percent below 1990 levels. This Executive Order also directed all state agencies with jurisdiction over GHG-emitting sources to implement measures designed to achieve the new interim 2030 goal, as well as the pre-existing, long-term 2050 goal identified in Executive Order S-3-05.

Senate Bill 32 and Assembly Bill 197

Enacted in 2016, SB 32 codifies the 2030 emissions reduction goal of Executive Order B-30-15 by requiring the CARB to ensure that statewide GHG emissions are reduced to 40 percent below 1990 levels by 2030. SB 32 was coupled with a companion bill: AB 197. Designed to improve the transparency of the CARB's regulatory and policy-oriented processes, AB 197 created the Joint Legislative Committee on Climate Change Policies, a committee with the responsibility to ascertain facts and make recommendations to the Legislature concerning statewide programs, policies and investments related to climate change. AB 197 also requires the CARB to make certain GHG emissions inventory data publicly available on its web site; consider the social costs of GHG emissions when adopting rules and regulations designed to achieve GHG emission reductions; and include specified information in all Scoping Plan updates for the emission reduction measures contained therein.

City of Vista Regulations and Standards

City of Vista General Plan 2030

In February 2012, the City of Vista (COV) adopted GP 2030 (City of Vista, 2012a) and certified the accompanying Program EIR (PEIR) (City of Vista, 2012b). The GP 2030 PEIR included Mitigation Measure MCC1, which required the COV to implement a quantified Climate Action Plan (CAP) within 24 months of adoption of GP 2030. GP 2030 includes a Resource Conservation and Sustainability Element, which includes the following: "RCS Goal 2: Reduce GHG emissions from community activities and municipal facilities and operations within the COV boundaries to support the State's efforts under AB 32, SB 375, and other State and federal mandates, and to mitigate the community's contributions to global climate change." The GP 2030 policy that applies to the project includes the following:

RCS Policy 2.7: Through California Environmental Quality Act (CEQA) documents, evaluate and disclose the contribution new projects could have on climate change and require mitigation measures as appropriate.

City of Vista Climate Action Plan

The COV adopted its CAP in 2013 to reduce GHG emissions in Vista in order to comply with AB 32. The CAP provided an estimate of business as usual emissions by the year 2020, and a projection of the amount of reductions needed to meet the COV's requirement to reduce GHG emissions to 1990 levels. The CAP estimated that a reduction of 27,187 metric tons of CO_2e would be required. The CAP adopts climate action measures designed to provide the necessary reductions to meet the 2020 target. The measures that would apply to development projects include energy efficiency measures, transportation and land use measures designed to reduce vehicle miles traveled, and solid waste reduction measures.

1.2.3 PROJECT SITE

The Project site is at 1430 Decision Street (APN# 219-011-88) in City of Vista, CA. The Project consists of the demolition of an existing two-story office (research and development) building (approximately 98,000 square feet) and the construction of an approximately 123,000 square foot industrial building. The Project would change the existing E-1 (Estates Residential) zoning to R-1 zoning (Single Family Residential). The Project would not change the General Plan Land Use Designation (Research Light Industrial [RLI]) or the Zoning Designation (Vista Business Park Specific Plan, Specific Plan Area B) for the property.

The nearest residences are approximately 2,000 feet to the east and the nearest school is approximately 3,000 feet to the north. The adjacent land uses to the property are of the same General Plan Land Use and Zoning designation, except for the parcel to the south, which has the General Plan Land Use Designation of General Commercial (GC).

1.3 THRESHOLDS OF SIGNIFICANCE

According to the California Natural Resources Agency (July 2009), "due to the global nature of GHG emissions and their potential effects, GHG emissions will typically be addressed in a cumulative impacts analysis." Significance criteria were developed in Appendix G of the CEQA Guidelines.

In the GP 2030 PEIR (City of Vista 2012b), the following criteria were used to establish the significance of GCC emissions:

The Project would have a significant impact if it would:

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

- Expose property and persons to the physical effects of climate change, including but not limited to flooding, public health, wildfire risk or other impacts resulting from climate change.

The California Resources Agency adopted an Amendment to the State CEQA Guidelines to assist lead agencies in determining the significance of impact from GHG emissions. State CEQA Guidelines Section 15064.4, CEQA Guidelines for Determining the Significance of Impacts from Greenhouse Gas Emissions, states the following:

a. The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:

   i. Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use. The lead agency has discretion to select the model or methodology it considers most appropriate provided it supports its decision with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use; and/or

   ii. Rely on a qualitative analysis or performance-based standards.

b. A lead agency should consider the following factors, among others, when assessing the significance of impacts from greenhouse gas emissions on the environment:

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

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

   iii. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

The COV has not established a GHG significance threshold to date. Several lead agencies in California have adopted a screening threshold as recommended by the CAPCOA Report, CEQA and Climate Change – Evaluating and Addressing Greenhouse Gas Emissions from Projects

Subject to the California Environmental Quality Act, which proposes a screening-level threshold of 900 metric tons of CO_2e to evaluate whether a project must conduct further analysis.

Based on a review of projects within the city, a level of 1,185 metric tons of CO_2e would capture 90 percent of the city's emissions that are attributable to development projects. Therefore, a "bright line" threshold of 1,185 metric tons of CO_2e is an appropriate significance threshold for the COV. The Project's emissions were evaluated based on this threshold.

1.4 IMPACT ANALYSIS

1.4.1 CONSTRUCTION AND OPERATIONAL GHG EMISSIONS

GHG emissions associated with the Project were estimated for six categories of emissions: (1) construction; (2) area sources; (3) energy (electricity) use; (4) motor vehicles; (5) water and wastewater conveyance; and (6) solid waste disposal. The Project site currently generates GHG emissions associated with the existing two-story office (research and development) building. Therefore, this analysis assumes the existing baseline generates the GHG emissions stated below for the existing operation onsite.

Existing Baseline

GHG emissions from operation of the existing two-story office (research and development) building were estimated using the California Emissions Estimator Model (CalEEMod). According to the Project's traffic study, the existing operation generates 784 average daily trips (ADT). As shown in **Table GHG-1**, operation of the existing building generates approximately 1,152 metric tons of CO_2e annually (calculated for year 2024, the first full year of Project operations). These existing baseline emissions are subtracted from the Project operational emissions to account for the GHG emissions that the Project is replacing.

TABLE GHG-1 ESTIMATED EXISTING BASELINE GHG EMISSIONS FOR 2024

Emission Source	Annual Emissions (Metric tons CO_2e per year)
Area Sources	<0.01
Energy Use	268.9
Vehicle Trips	659.3
Solid Waste Disposal	3.7
Water/Wastewater Conveyance	219.8
Total CO_2 Equivalent Emissions	**1,151.8**

Source: SCAQMD, 2021.
1 Values may differ slightly from estimates shown in **Appendix A** due to rounding.
2. 2030 emissions would be approximately 922 metric tons of CO_2e per year and 2050 emissions would be approximately 652 metric tons of CO_2e per year under the existing baseline.

Construction Impacts

Construction GHG emissions include emissions from construction equipment, heavy trucks and worker trips. GHG emissions from construction of the Project were estimated using CalEEMod. Construction of the Project would generate approximately 490 metric tons of CO_2e over the approximately 13-month construction period. Per guidance from the SCAQMD (SCAQMD 2008), construction emissions are amortized over a 30-year period to account for the contribution of construction emissions over the lifetime of the project. Amortizing the emissions from construction of the Project over a 30-year period would result in an annual contribution of approximately 16 metric tons of CO_2e. These emissions are added to operational emissions to account for the contribution of construction to GHG emissions for the lifetime of the Project.

Operational Impacts

The main sources of Project operational GHG emissions would be vehicle trips, water use, and energy use. According to the traffic study, the Project would generate 781 ADT. Therefore, after considering the existing baseline (784 ADT), the Project would result in a decrease of 3 ADT. Project operational GHG emissions assume an operational year of 2024 and were modeled with CalEEMod as shown in **Table GHG-2** and in **Appendix A**. As noted previously, operational GHG emissions that would be generated from the existing office building in 2024 are subtracted from the Project emissions to calculate the net emissions increase from the Project.

TABLE GHG-2 ESTIMATED PROJECT NET GHG EMISSIONS FOR 2024

Emission Source	Annual Emissions (Metric tons CO_2e per year)
Area Sources	<0.01
Energy Use	124.9
Vehicle Trips	761.6
Solid Waste Disposal	58.5
Water/Wastewater Conveyance	130.5
Amortized Construction Emissions	16.3
Total Project CO_2 Equivalent Emissions	1,091.8
Existing Baseline CO_2 Equivalent Emissions	1,151.8
Net CO_2 Equivalent Emissions	[60.0]
Significance Threshold	1,150

Source: SCAQMD, 2021.
1 Values may differ slightly from estimates shown in **Appendix A** due to rounding.

As shown in **Table GHG-2**, the Project would result in a reduction of approximately 60 metric tons of CO_2e per year. Therefore, the Project would result in a **less-than-significant impact**.

1.4.2 CONSISTENCY WITH PLANS AND REGULATIONS

Horizon Years 2030 and 2050

As described in Section 1.2, Executive Order B-30-15 established a statewide emissions reduction target of 40% below 1990 levels by 2030, which has been implemented by SB 32. This measure was identified to keep the state on a trajectory needed to meet the 2050 goal of reducing GHG emissions to 80% below 1990 levels by 2050 pursuant to Executive Order S-3-05.

Further analyses were conducted to provide information on future GHG emissions in the years 2030 and 2050. **Tables GHG-3** and **GHG-4** present estimated emissions for 2030 and 2050 for the Project. Because there is no information on additional plans and programs that may be implemented pursuant to SB 32, **Tables GHG-3** and **GHG-4** consider the following additional GHG measures beyond the year 2024 analysis:

- Implementation of the 60% Renewable Portfolio Standard by 2030, and net zero GHG emissions for SDG&E by 2045.
- Various state regulations that reduce GHG emissions from vehicle trips assumed within CalEEMod.

As shown in **Tables GHG-3** and **GHG-4**, Project GHG emissions would be further reduced in 2030 and 2050 from the 2024 Project emissions shown in **Table GHG-2** with further implementation of the Renewable Portfolio Standard and other statewide measures for reducing GHG emissions from motor vehicles. As noted previously, operational GHG emissions that would be generated from the existing office building in 2030 and 2050 are subtracted from the 2030 and 2050 Project emissions to calculate the net emissions increase from the Project for the given years of operation.

TABLE GHG-3 ESTIMATED PROJECT NET GHG EMISSIONS FOR 2030

Emission Source	Annual Emissions (Metric tons CO_2e per year)
Area Sources	<0.01
Energy Use	78.3
Vehicle Trips	667.7
Solid Waste Disposal	58.5
Water/Wastewater Conveyance	93.0
Amortized Construction Emissions	16.3

Total Project CO_2 Equivalent Emissions	913.8
Existing Baseline CO_2 Equivalent Emissions	922.1
Net CO_2 Equivalent Emissions	[8.3]
Significance Threshold	1,150

Source: SCAQMD, 2021.
1 Values may differ slightly from estimates shown in **Appendix A** due to rounding.

TABLE GHG-4 ESTIMATED PROJECT NET GHG EMISSIONS FOR 2050

Emission Source	Annual Emissions (Metric tons CO_2e per year)
Area Sources	<0.01
Energy Use	11.0
Vehicle Trips	603.4
Solid Waste Disposal	58.5
Water/Wastewater Conveyance	38.9
Amortized Construction Emissions	16.3
Total Project CO_2 Equivalent Emissions	728.1
Existing Baseline CO_2 Equivalent Emissions	652.2
Net CO_2 Equivalent Emissions	**75.9**

Source: SCAQMD, 2021.
1 Values may differ slightly from estimates shown in **Appendix A** due to rounding.

As shown in **Tables GHG-3** and **GHG-4**, the Project would result in a small net decrease in GHG emissions for year 2030 and a small net increase for year 2050. The Project would not conflict with the state's goals and regulations adopted for reducing GHG emissions. Therefore, the Project would result in a **less-than-significant impact**.

1.5 CONCLUSIONS

Emissions of GHGs were quantified for both construction and operation of the Project. The Project's GHG emissions would be below bright line significance threshold of 1,150 metric tons of CO_2e per year. Through the Renewable Portfolio Standard and other statewide measures for reducing GHG emissions from motor vehicles, GHG emissions would be reduced further for the Project to a level that is consistent with the goals of AB 32 and SB 32. Therefore, the Project would not result in a cumulatively considerable global climate change impact.

1.6 REFERENCES

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Appendix A

I. CalEEMod Project Annual Emissions Output (Year 2024)

II. CalEEMod Project Annual Emissions Output (Year 2030)

III. CalEEMod Project Annual Emissions Output (Year 2050)

IV. CalEEMod Existing Annual Emissions Output (Year 2024)

V. CalEEMod Existing Annual Emissions Output (Year 2030)

VI. CalEEMod Existing Annual Emissions Output (Year 2050)

Vista 1430 Decision Street Project - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Vista 1430 Decision Street Project

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	123.71	1000sqft	6.24	123,705.00	0
Parking Lot	175.00	Space	1.57	70,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2024
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 7.81 acre project site

Construction Phase - Approximately 13 months of construction

Grading - balanced site, no import/export

Demolition - existing office building is 98,000 sf

Vehicle Trips - From Applicant's trip generation

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	NumDays	230.00	200.00
tblConstructionPhase	NumDays	20.00	30.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	10.00	25.00
tblConstructionPhase	PhaseEndDate	9/21/2023	7/26/2023
tblConstructionPhase	PhaseEndDate	7/27/2023	7/5/2023
tblConstructionPhase	PhaseEndDate	7/28/2022	8/10/2022
tblConstructionPhase	PhaseEndDate	9/8/2022	9/28/2022
tblConstructionPhase	PhaseEndDate	8/24/2023	7/19/2023
tblConstructionPhase	PhaseEndDate	8/11/2022	9/14/2022
tblConstructionPhase	PhaseStartDate	8/25/2023	7/20/2023
tblConstructionPhase	PhaseStartDate	9/9/2022	9/29/2022
tblConstructionPhase	PhaseStartDate	7/1/2022	6/30/2022
tblConstructionPhase	PhaseStartDate	8/12/2022	9/15/2022
tblConstructionPhase	PhaseStartDate	7/28/2023	7/6/2023
tblConstructionPhase	PhaseStartDate	7/29/2022	8/11/2022
tblLandUse	LotAcreage	2.84	6.24
tblVehicleTrips	ST_TR	1.74	6.31
tblVehicleTrips	SU_TR	1.74	6.31
tblVehicleTrips	WD_TR	1.74	6.31

2.0 Emissions Summary

Vista 1430 Decision Street Project - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2022	0.1588	1.5301	1.2875	2.7100e-003	0.3669	0.0717	0.4386	0.1608	0.0668	0.2276	0.0000	241.1311	241.1311	0.0527	6.0800e-003	244.2611
2023	1.5874	1.1156	1.3167	2.7300e-003	0.0583	0.0501	0.1083	0.0158	0.0471	0.0629	0.0000	242.8477	242.8477	0.0423	7.1600e-003	246.0385
Maximum	**1.5874**	**1.5301**	**1.3167**	**2.7300e-003**	**0.3669**	**0.0717**	**0.4386**	**0.1608**	**0.0668**	**0.2276**	**0.0000**	**242.8477**	**242.8477**	**0.0527**	**7.1600e-003**	**246.0385**

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					
2022	0.1588	1.5301	1.2875	2.7100e-003	0.3669	0.0717	0.4386	0.1608	0.0668	0.2276	0.0000	241.1309	241.1309	0.0527	6.0800e-003	244.2608
2023	1.5874	1.1156	1.3167	2.7300e-003	0.0583	0.0501	0.1083	0.0158	0.0471	0.0629	0.0000	242.8475	242.8475	0.0423	7.1600e-003	246.0383
Maximum	**1.5874**	**1.5301**	**1.3167**	**2.7300e-003**	**0.3669**	**0.0717**	**0.4386**	**0.1608**	**0.0668**	**0.2276**	**0.0000**	**242.8475**	**242.8475**	**0.0527**	**7.1600e-003**	**246.0383**

Vista 1430 Decision Street Project - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**7-1-2022**	**9-30-2022**	1.0352	1.0352
2	**10-1-2022**	**12-31-2022**	0.6436	0.6436
3	**1-1-2023**	**3-31-2023**	0.5728	0.5728
4	**4-1-2023**	**6-30-2023**	0.5761	0.5761
5	**7-1-2023**	**9-30-2023**	1.5519	1.5519
		Highest	1.5519	1.5519

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	0.6337	2.0000e-005	2.7400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3400e-003	5.3400e-003	1.0000e-005	0.0000	5.6900e-003
Energy	1.1000e-003	0.0100	8.4000e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004	0.0000	124.4551	124.4551	7.1500e-003	1.0400e-003	124.9440
Mobile	0.3977	0.4541	3.7687	7.9800e-003	0.8529	6.2400e-003	0.8591	0.2276	5.8200e-003	0.2334	0.0000	750.2831	750.2831	0.0525	0.0335	761.5671
Waste						0.0000	0.0000		0.0000	0.0000	23.6038	0.0000	23.6038	1.3949	0.0000	58.4774
Water						0.0000	0.0000		0.0000	0.0000	9.0753	91.2303	100.3056	0.9377	0.0227	130.5080
Total	**1.0325**	**0.4641**	**3.7798**	**8.0400e-003**	**0.8529**	**7.0100e-003**	**0.8599**	**0.2276**	**6.5900e-003**	**0.2342**	**32.6790**	**965.9739**	**998.6529**	**2.3923**	**0.0572**	**1,075.5021**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.6337	2.0000e-005	2.7400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3400e-003	5.3400e-003	1.0000e-005	0.0000	5.6900e-003
Energy	1.1000e-003	0.0100	8.4000e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004	0.0000	124.4551	124.4551	7.1500e-003	1.0400e-003	124.9440
Mobile	0.3977	0.4541	3.7687	7.9800e-003	0.8529	6.2400e-003	0.8591	0.2276	5.8200e-003	0.2334	0.0000	750.2831	750.2831	0.0525	0.0335	761.5671
Waste						0.0000	0.0000		0.0000	0.0000	23.6038	0.0000	23.6038	1.3949	0.0000	58.4774
Water						0.0000	0.0000		0.0000	0.0000	9.0753	91.2303	100.3056	0.9377	0.0227	130.5080
Total	**1.0325**	**0.4641**	**3.7798**	**8.0400e-003**	**0.8529**	**7.0100e-003**	**0.8599**	**0.2276**	**6.5900e-003**	**0.2342**	**32.6790**	**965.9739**	**998.6529**	**2.3923**	**0.0572**	**1,075.5021**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**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	Demolition	Demolition	6/30/2022	8/10/2022	5	30	
2	Site Preparation	Site Preparation	8/11/2022	9/14/2022	5	25	
3	Grading	Grading	9/15/2022	9/28/2022	5	10	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Building Construction	Building Construction	9/29/2022	7/5/2023	5	200	
5	Paving	Paving	7/6/2023	7/19/2023	5	10	
6	Architectural Coating	Architectural Coating	7/20/2023	7/26/2023	5	5	

Acres of Grading (Site Preparation Phase): 37.5

Acres of Grading (Grading Phase): 10

Acres of Paving: 1.57

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 185,558; Non-Residential Outdoor: 61,853; Striped Parking Area: 4,200 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	7.00	231	0.29
Demolition	Excavators	3	8.00	158	0.38
Grading	Excavators	1	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	446.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	81.00	32.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	16.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0488	0.0000	0.0488	7.4000e-003	0.0000	7.4000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0396	0.3858	0.3089	5.8000e-004		0.0186	0.0186		0.0173	0.0173	0.0000	50.9853	50.9853	0.0143	0.0000	51.3434
Total	**0.0396**	**0.3858**	**0.3089**	**5.8000e-004**	**0.0488**	**0.0186**	**0.0675**	**7.4000e-003**	**0.0173**	**0.0247**	**0.0000**	**50.9853**	**50.9853**	**0.0143**	**0.0000**	**51.3434**

Vista 1430 Decision Street Project - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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	9.9000e-004	0.0376	8.8600e-003	1.4000e-004	3.8200e-003	3.5000e-004	4.1700e-003	1.0500e-003	3.3000e-004	1.3800e-003	0.0000	13.9779	13.9779	6.7000e-004	2.2200e-003	14.6564
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	6.5000e-004	4.7000e-004	5.5300e-003	2.0000e-005	1.8000e-003	1.0000e-005	1.8100e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4839	1.4839	5.0000e-005	4.0000e-005	1.4978
Total	**1.6400e-003**	**0.0380**	**0.0144**	**1.6000e-004**	**5.6200e-003**	**3.6000e-004**	**5.9800e-003**	**1.5300e-003**	**3.4000e-004**	**1.8700e-003**	**0.0000**	**15.4618**	**15.4618**	**7.2000e-004**	**2.2600e-003**	**16.1542**

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					0.0488	0.0000	0.0488	7.4000e-003	0.0000	7.4000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0396	0.3858	0.3089	5.8000e-004		0.0186	0.0186		0.0173	0.0173	0.0000	50.9853	50.9853	0.0143	0.0000	51.3433
Total	**0.0396**	**0.3858**	**0.3089**	**5.8000e-004**	**0.0488**	**0.0186**	**0.0675**	**7.4000e-003**	**0.0173**	**0.0247**	**0.0000**	**50.9853**	**50.9853**	**0.0143**	**0.0000**	**51.3433**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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	9.9000e-004	0.0376	8.8600e-003	1.4000e-004	3.8200e-003	3.5000e-004	4.1700e-003	1.0500e-003	3.3000e-004	1.3800e-003	0.0000	13.9779	13.9779	6.7000e-004	2.2200e-003	14.6564
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	6.5000e-004	4.7000e-004	5.5300e-003	2.0000e-005	1.8000e-003	1.0000e-005	1.8100e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4839	1.4839	5.0000e-005	4.0000e-005	1.4978
Total	**1.6400e-003**	**0.0380**	**0.0144**	**1.6000e-004**	**5.6200e-003**	**3.6000e-004**	**5.9800e-003**	**1.5300e-003**	**3.4000e-004**	**1.8700e-003**	**0.0000**	**15.4618**	**15.4618**	**7.2000e-004**	**2.2600e-003**	**16.1542**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2457	0.0000	0.2457	0.1263	0.0000	0.1263	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0396	0.4135	0.2462	4.8000e-004		0.0202	0.0202		0.0185	0.0185	0.0000	41.7992	41.7992	0.0135	0.0000	42.1372
Total	**0.0396**	**0.4135**	**0.2462**	**4.8000e-004**	**0.2457**	**0.0202**	**0.2659**	**0.1263**	**0.0185**	**0.1448**	**0.0000**	**41.7992**	**41.7992**	**0.0135**	**0.0000**	**42.1372**

Vista 1430 Decision Street Project - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

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	6.5000e-004	4.7000e-004	5.5300e-003	2.0000e-005	1.8000e-003	1.0000e-005	1.8100e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4839	1.4839	5.0000e-005	4.0000e-005	1.4978
Total	**6.5000e-004**	**4.7000e-004**	**5.5300e-003**	**2.0000e-005**	**1.8000e-003**	**1.0000e-005**	**1.8100e-003**	**4.8000e-004**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**1.4839**	**1.4839**	**5.0000e-005**	**4.0000e-005**	**1.4978**

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					0.2457	0.0000	0.2457	0.1263	0.0000	0.1263	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0396	0.4135	0.2462	4.8000e-004		0.0202	0.0202		0.0185	0.0185	0.0000	41.7992	41.7992	0.0135	0.0000	42.1372
Total	**0.0396**	**0.4135**	**0.2462**	**4.8000e-004**	**0.2457**	**0.0202**	**0.2659**	**0.1263**	**0.0185**	**0.1448**	**0.0000**	**41.7992**	**41.7992**	**0.0135**	**0.0000**	**42.1372**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

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	6.5000e-004	4.7000e-004	5.5300e-003	2.0000e-005	1.8000e-003	1.0000e-005	1.8100e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4839	1.4839	5.0000e-005	4.0000e-005	1.4978
Total	**6.5000e-004**	**4.7000e-004**	**5.5300e-003**	**2.0000e-005**	**1.8000e-003**	**1.0000e-005**	**1.8100e-003**	**4.8000e-004**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**1.4839**	**1.4839**	**5.0000e-005**	**4.0000e-005**	**1.4978**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0354	0.0000	0.0354	0.0171	0.0000	0.0171	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.7400e-003	0.1043	0.0764	1.5000e-004		4.7000e-003	4.7000e-003		4.3300e-003	4.3300e-003	0.0000	13.0274	13.0274	4.2100e-003	0.0000	13.1327
Total	**9.7400e-003**	**0.1043**	**0.0764**	**1.5000e-004**	**0.0354**	**4.7000e-003**	**0.0401**	**0.0171**	**4.3300e-003**	**0.0215**	**0.0000**	**13.0274**	**13.0274**	**4.2100e-003**	**0.0000**	**13.1327**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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	2.2000e-004	1.6000e-004	1.8400e-003	1.0000e-005	6.0000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4946	0.4946	2.0000e-005	1.0000e-005	0.4993
Total	**2.2000e-004**	**1.6000e-004**	**1.8400e-003**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**6.0000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4946**	**0.4946**	**2.0000e-005**	**1.0000e-005**	**0.4993**

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					0.0354	0.0000	0.0354	0.0171	0.0000	0.0171	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.7400e-003	0.1043	0.0764	1.5000e-004		4.7000e-003	4.7000e-003		4.3300e-003	4.3300e-003	0.0000	13.0274	13.0274	4.2100e-003	0.0000	13.1327
Total	**9.7400e-003**	**0.1043**	**0.0764**	**1.5000e-004**	**0.0354**	**4.7000e-003**	**0.0401**	**0.0171**	**4.3300e-003**	**0.0215**	**0.0000**	**13.0274**	**13.0274**	**4.2100e-003**	**0.0000**	**13.1327**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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	2.2000e-004	1.6000e-004	1.8400e-003	1.0000e-005	6.0000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4946	0.4946	2.0000e-005	1.0000e-005	0.4993
Total	**2.2000e-004**	**1.6000e-004**	**1.8400e-003**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**6.0000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4946**	**0.4946**	**2.0000e-005**	**1.0000e-005**	**0.4993**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0572	0.5231	0.5482	9.0000e-004		0.0271	0.0271		0.0255	0.0255	0.0000	77.6280	77.6280	0.0186	0.0000	78.0929
Total	**0.0572**	**0.5231**	**0.5482**	**9.0000e-004**		**0.0271**	**0.0271**		**0.0255**	**0.0255**	**0.0000**	**77.6280**	**77.6280**	**0.0186**	**0.0000**	**78.0929**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.3700e-003	0.0590	0.0193	2.3000e-004	7.1200e-003	6.2000e-004	7.7400e-003	2.0600e-003	5.9000e-004	2.6500e-003	0.0000	22.3554	22.3554	6.8000e-004	3.2500e-003	23.3401
Worker	7.8300e-003	5.6900e-003	0.0667	1.9000e-004	0.0218	1.3000e-004	0.0219	5.7800e-003	1.2000e-004	5.9000e-003	0.0000	17.8955	17.8955	5.6000e-004	5.2000e-004	18.0635
Total	**0.0102**	**0.0647**	**0.0860**	**4.2000e-004**	**0.0289**	**7.5000e-004**	**0.0296**	**7.8400e-003**	**7.1000e-004**	**8.5500e-003**	**0.0000**	**40.2509**	**40.2509**	**1.2400e-003**	**3.7700e-003**	**41.4036**

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	0.0572	0.5231	0.5482	9.0000e-004		0.0271	0.0271		0.0255	0.0255	0.0000	77.6279	77.6279	0.0186	0.0000	78.0928
Total	**0.0572**	**0.5231**	**0.5482**	**9.0000e-004**		**0.0271**	**0.0271**		**0.0255**	**0.0255**	**0.0000**	**77.6279**	**77.6279**	**0.0186**	**0.0000**	**78.0928**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.3700e-003	0.0590	0.0193	2.3000e-004	7.1200e-003	6.2000e-004	7.7400e-003	2.0600e-003	5.9000e-004	2.6500e-003	0.0000	22.3554	22.3554	6.8000e-004	3.2500e-003	23.3401
Worker	7.8300e-003	5.6900e-003	0.0667	1.9000e-004	0.0218	1.3000e-004	0.0219	5.7800e-003	1.2000e-004	5.9000e-003	0.0000	17.8955	17.8955	5.6000e-004	5.2000e-004	18.0635
Total	**0.0102**	**0.0647**	**0.0860**	**4.2000e-004**	**0.0289**	**7.5000e-004**	**0.0296**	**7.8400e-003**	**7.1000e-004**	**8.5500e-003**	**0.0000**	**40.2509**	**40.2509**	**1.2400e-003**	**3.7700e-003**	**41.4036**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1046	0.9566	1.0802	1.7900e-003		0.0465	0.0465		0.0438	0.0438	0.0000	154.1502	154.1502	0.0367	0.0000	155.0669
Total	**0.1046**	**0.9566**	**1.0802**	**1.7900e-003**		**0.0465**	**0.0465**		**0.0438**	**0.0438**	**0.0000**	**154.1502**	**154.1502**	**0.0367**	**0.0000**	**155.0669**

Vista 1430 Decision Street Project - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5000e-003	0.0945	0.0333	4.4000e-004	0.0141	5.6000e-004	0.0147	4.0800e-003	5.3000e-004	4.6100e-003	0.0000	42.6984	42.6984	1.2900e-003	6.1900e-003	44.5744
Worker	0.0146	0.0101	0.1231	3.7000e-004	0.0432	2.4000e-004	0.0434	0.0115	2.2000e-004	0.0117	0.0000	34.6085	34.6085	1.0100e-003	9.5000e-004	34.9180
Total	**0.0171**	**0.1046**	**0.1564**	**8.1000e-004**	**0.0573**	**8.0000e-004**	**0.0581**	**0.0156**	**7.5000e-004**	**0.0163**	**0.0000**	**77.3069**	**77.3069**	**2.3000e-003**	**7.1400e-003**	**79.4924**

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	0.1046	0.9566	1.0802	1.7900e-003		0.0465	0.0465		0.0438	0.0438	0.0000	154.1500	154.1500	0.0367	0.0000	155.0667
Total	**0.1046**	**0.9566**	**1.0802**	**1.7900e-003**		**0.0465**	**0.0465**		**0.0438**	**0.0438**	**0.0000**	**154.1500**	**154.1500**	**0.0367**	**0.0000**	**155.0667**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5000e-003	0.0945	0.0333	4.4000e-004	0.0141	5.6000e-004	0.0147	4.0800e-003	5.3000e-004	4.6100e-003	0.0000	42.6984	42.6984	1.2900e-003	6.1900e-003	44.5744
Worker	0.0146	0.0101	0.1231	3.7000e-004	0.0432	2.4000e-004	0.0434	0.0115	2.2000e-004	0.0117	0.0000	34.6085	34.6085	1.0100e-003	9.5000e-004	34.9180
Total	**0.0171**	**0.1046**	**0.1564**	**8.1000e-004**	**0.0573**	**8.0000e-004**	**0.0581**	**0.0156**	**7.5000e-004**	**0.0163**	**0.0000**	**77.3069**	**77.3069**	**2.3000e-003**	**7.1400e-003**	**79.4924**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.1600e-003	0.0510	0.0729	1.1000e-004		2.5500e-003	2.5500e-003		2.3500e-003	2.3500e-003	0.0000	10.0134	10.0134	3.2400e-003	0.0000	10.0944
Paving	2.0600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.2200e-003**	**0.0510**	**0.0729**	**1.1000e-004**		**2.5500e-003**	**2.5500e-003**		**2.3500e-003**	**2.3500e-003**	**0.0000**	**10.0134**	**10.0134**	**3.2400e-003**	**0.0000**	**10.0944**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

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	2.0000e-004	1.4000e-004	1.7100e-003	1.0000e-005	6.0000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4819	0.4819	1.0000e-005	1.0000e-005	0.4862
Total	**2.0000e-004**	**1.4000e-004**	**1.7100e-003**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**6.0000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4819**	**0.4819**	**1.0000e-005**	**1.0000e-005**	**0.4862**

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	5.1600e-003	0.0510	0.0729	1.1000e-004		2.5500e-003	2.5500e-003		2.3500e-003	2.3500e-003	0.0000	10.0134	10.0134	3.2400e-003	0.0000	10.0944
Paving	2.0600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.2200e-003**	**0.0510**	**0.0729**	**1.1000e-004**		**2.5500e-003**	**2.5500e-003**		**2.3500e-003**	**2.3500e-003**	**0.0000**	**10.0134**	**10.0134**	**3.2400e-003**	**0.0000**	**10.0944**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

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	2.0000e-004	1.4000e-004	1.7100e-003	1.0000e-005	6.0000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4819	0.4819	1.0000e-005	1.0000e-005	0.4862
Total	**2.0000e-004**	**1.4000e-004**	**1.7100e-003**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**6.0000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4819**	**0.4819**	**1.0000e-005**	**1.0000e-005**	**0.4862**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.4578					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.8000e-004	3.2600e-003	4.5300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6393
Total	**1.4583**	**3.2600e-003**	**4.5300e-003**	**1.0000e-005**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6393**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

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	1.1000e-004	7.0000e-005	9.1000e-004	0.0000	3.2000e-004	0.0000	3.2000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2570	0.2570	1.0000e-005	1.0000e-005	0.2593
Total	**1.1000e-004**	**7.0000e-005**	**9.1000e-004**	**0.0000**	**3.2000e-004**	**0.0000**	**3.2000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2570**	**0.2570**	**1.0000e-005**	**1.0000e-005**	**0.2593**

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	1.4578					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.8000e-004	3.2600e-003	4.5300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6393
Total	**1.4583**	**3.2600e-003**	**4.5300e-003**	**1.0000e-005**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6393**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

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	1.1000e-004	7.0000e-005	9.1000e-004	0.0000	3.2000e-004	0.0000	3.2000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2570	0.2570	1.0000e-005	1.0000e-005	0.2593
Total	**1.1000e-004**	**7.0000e-005**	**9.1000e-004**	**0.0000**	**3.2000e-004**	**0.0000**	**3.2000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2570**	**0.2570**	**1.0000e-005**	**1.0000e-005**	**0.2593**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.3977	0.4541	3.7687	7.9800e-003	0.8529	6.2400e-003	0.8591	0.2276	5.8200e-003	0.2334	0.0000	750.2831	750.2831	0.0525	0.0335	761.5671
Unmitigated	0.3977	0.4541	3.7687	7.9800e-003	0.8529	6.2400e-003	0.8591	0.2276	5.8200e-003	0.2334	0.0000	750.2831	750.2831	0.0525	0.0335	761.5671

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	780.95	780.95	780.95	2,279,991	2,279,991
Total	780.95	780.95	780.95	2,279,991	2,279,991

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949
Unrefrigerated Warehouse-No Rail	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	113.5628	113.5628	6.9400e-003	8.4000e-004	113.9870
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	113.5628	113.5628	6.9400e-003	8.4000e-004	113.9870
NaturalGas Mitigated	1.1000e-003	0.0100	8.4000e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004	0.0000	10.8923	10.8923	2.1000e-004	2.0000e-004	10.9570
NaturalGas Unmitigated	1.1000e-003	0.0100	8.4000e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004	0.0000	10.8923	10.8923	2.1000e-004	2.0000e-004	10.9570

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	204113	1.1000e-003	0.0100	8.4000e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004	0.0000	10.8923	10.8923	2.1000e-004	2.0000e-004	10.9570
Total		**1.1000e-003**	**0.0100**	**8.4000e-003**	**6.0000e-005**		**7.6000e-004**	**7.6000e-004**		**7.6000e-004**	**7.6000e-004**	**0.0000**	**10.8923**	**10.8923**	**2.1000e-004**	**2.0000e-004**	**10.9570**

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	204113	1.1000e-003	0.0100	8.4000e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004	0.0000	10.8923	10.8923	2.1000e-004	2.0000e-004	10.9570
Total		**1.1000e-003**	**0.0100**	**8.4000e-003**	**6.0000e-005**		**7.6000e-004**	**7.6000e-004**		**7.6000e-004**	**7.6000e-004**	**0.0000**	**10.8923**	**10.8923**	**2.1000e-004**	**2.0000e-004**	**10.9570**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	24500	6.0008	3.7000e-004	4.0000e-005	6.0232
Unrefrigerated Warehouse-No Rail	439153	107.5620	6.5700e-003	8.0000e-004	107.9638
Total		**113.5628**	**6.9400e-003**	**8.4000e-004**	**113.9870**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	24500	6.0008	3.7000e-004	4.0000e-005	6.0232
Unrefrigerated Warehouse-No Rail	439153	107.5620	6.5700e-003	8.0000e-004	107.9638
Total		**113.5628**	**6.9400e-003**	**8.4000e-004**	**113.9870**

6.0 Area Detail

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6337	2.0000e-005	2.7400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3400e-003	5.3400e-003	1.0000e-005	0.0000	5.6900e-003
Unmitigated	0.6337	2.0000e-005	2.7400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3400e-003	5.3400e-003	1.0000e-005	0.0000	5.6900e-003

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	0.1458					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4877					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.5000e-004	2.0000e-005	2.7400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3400e-003	5.3400e-003	1.0000e-005	0.0000	5.6900e-003
Total	**0.6337**	**2.0000e-005**	**2.7400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.3400e-003**	**5.3400e-003**	**1.0000e-005**	**0.0000**	**5.6900e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.1458					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4877					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.5000e-004	2.0000e-005	2.7400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3400e-003	5.3400e-003	1.0000e-005	0.0000	5.6900e-003
Total	**0.6337**	**2.0000e-005**	**2.7400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.3400e-003**	**5.3400e-003**	**1.0000e-005**	**0.0000**	**5.6900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	100.3056	0.9377	0.0227	130.5080
Unmitigated	100.3056	0.9377	0.0227	130.5080

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	28.6056 / 0	100.3056	0.9377	0.0227	130.5080
Total		**100.3056**	**0.9377**	**0.0227**	**130.5080**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	28.6056 / 0	100.3056	0.9377	0.0227	130.5080
Total		**100.3056**	**0.9377**	**0.0227**	**130.5080**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	23.6038	1.3949	0.0000	58.4774
Unmitigated	23.6038	1.3949	0.0000	58.4774

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	116.28	23.6038	1.3949	0.0000	58.4774
Total		**23.6038**	**1.3949**	**0.0000**	**58.4774**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	116.28	23.6038	1.3949	0.0000	58.4774
Total		**23.6038**	**1.3949**	**0.0000**	**58.4774**

9.0 Operational Offroad

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Vista 1430 Decision Street Project - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Vista 1430 Decision Street Project

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	123.71	1000sqft	6.24	123,705.00	0
Parking Lot	175.00	Space	1.57	70,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2030
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	318.218	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - 60% RPS by 2030

Land Use - 7.81 acre project site

Construction Phase - Approximately 13 months of construction

Grading - balanced site, no import/export

Demolition - existing office building is 98,000 sf

Vehicle Trips - From Applicant's trip generation

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	NumDays	230.00	200.00
tblConstructionPhase	NumDays	20.00	30.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	10.00	25.00
tblConstructionPhase	PhaseEndDate	9/21/2023	7/26/2023
tblConstructionPhase	PhaseEndDate	7/27/2023	7/5/2023
tblConstructionPhase	PhaseEndDate	7/28/2022	8/10/2022
tblConstructionPhase	PhaseEndDate	9/8/2022	9/28/2022
tblConstructionPhase	PhaseEndDate	8/24/2023	7/19/2023
tblConstructionPhase	PhaseEndDate	8/11/2022	9/14/2022
tblConstructionPhase	PhaseStartDate	8/25/2023	7/20/2023
tblConstructionPhase	PhaseStartDate	9/9/2022	9/29/2022
tblConstructionPhase	PhaseStartDate	7/1/2022	6/30/2022
tblConstructionPhase	PhaseStartDate	8/12/2022	9/15/2022
tblConstructionPhase	PhaseStartDate	7/28/2023	7/6/2023
tblConstructionPhase	PhaseStartDate	7/29/2022	8/11/2022
tblLandUse	LotAcreage	2.84	6.24
tblProjectCharacteristics	CO2IntensityFactor	539.98	318.218
tblVehicleTrips	ST_TR	1.74	6.31
tblVehicleTrips	SU_TR	1.74	6.31
tblVehicleTrips	WD_TR	1.74	6.31

2.0 Emissions Summary

Vista 1430 Decision Street Project - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2022	0.1588	1.5301	1.2875	2.7100e-003	0.3669	0.0717	0.4386	0.1608	0.0668	0.2276	0.0000	241.1311	241.1311	0.0527	6.0800e-003	244.2611
2023	1.5874	1.1156	1.3167	2.7300e-003	0.0583	0.0501	0.1083	0.0158	0.0471	0.0629	0.0000	242.8477	242.8477	0.0423	7.1600e-003	246.0385
Maximum	**1.5874**	**1.5301**	**1.3167**	**2.7300e-003**	**0.3669**	**0.0717**	**0.4386**	**0.1608**	**0.0668**	**0.2276**	**0.0000**	**242.8477**	**242.8477**	**0.0527**	**7.1600e-003**	**246.0385**

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					
2022	0.1588	1.5301	1.2875	2.7100e-003	0.3669	0.0717	0.4386	0.1608	0.0668	0.2276	0.0000	241.1309	241.1309	0.0527	6.0800e-003	244.2608
2023	1.5874	1.1156	1.3167	2.7300e-003	0.0583	0.0501	0.1083	0.0158	0.0471	0.0629	0.0000	242.8475	242.8475	0.0423	7.1600e-003	246.0383
Maximum	**1.5874**	**1.5301**	**1.3167**	**2.7300e-003**	**0.3669**	**0.0717**	**0.4386**	**0.1608**	**0.0668**	**0.2276**	**0.0000**	**242.8475**	**242.8475**	**0.0527**	**7.1600e-003**	**246.0383**

Vista 1430 Decision Street Project - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**7-1-2022**	**9-30-2022**	1.0352	1.0352
2	**10-1-2022**	**12-31-2022**	0.6436	0.6436
3	**1-1-2023**	**3-31-2023**	0.5728	0.5728
4	**4-1-2023**	**6-30-2023**	0.5761	0.5761
5	**7-1-2023**	**9-30-2023**	1.5519	1.5519
		Highest	1.5519	1.5519

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	0.6337	2.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3400e-003	5.3400e-003	1.0000e-005	0.0000	5.6800e-003
Energy	1.1000e-003	0.0100	8.4000e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004	0.0000	77.8165	77.8165	7.1500e-003	1.0400e-003	78.3054
Mobile	0.3232	0.3365	3.1120	6.7300e-003	0.8527	4.6400e-003	0.8573	0.2276	4.3300e-003	0.2319	0.0000	658.2450	658.2450	0.0443	0.0280	667.7087
Waste						0.0000	0.0000		0.0000	0.0000	23.6038	0.0000	23.6038	1.3949	0.0000	58.4774
Water						0.0000	0.0000		0.0000	0.0000	9.0753	53.7633	62.8386	0.9377	0.0227	93.0410
Total	**0.9580**	**0.3466**	**3.1232**	**6.7900e-003**	**0.8527**	**5.4100e-003**	**0.8581**	**0.2276**	**5.1000e-003**	**0.2326**	**32.6790**	**789.8302**	**822.5092**	**2.3841**	**0.0518**	**897.5382**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.6337	2.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3400e-003	5.3400e-003	1.0000e-005	0.0000	5.6800e-003
Energy	1.1000e-003	0.0100	8.4000e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004	0.0000	77.8165	77.8165	7.1500e-003	1.0400e-003	78.3054
Mobile	0.3232	0.3365	3.1120	6.7300e-003	0.8527	4.6400e-003	0.8573	0.2276	4.3300e-003	0.2319	0.0000	658.2450	658.2450	0.0443	0.0280	667.7087
Waste						0.0000	0.0000		0.0000	0.0000	23.6038	0.0000	23.6038	1.3949	0.0000	58.4774
Water						0.0000	0.0000		0.0000	0.0000	9.0753	53.7633	62.8386	0.9377	0.0227	93.0410
Total	**0.9580**	**0.3466**	**3.1232**	**6.7900e-003**	**0.8527**	**5.4100e-003**	**0.8581**	**0.2276**	**5.1000e-003**	**0.2326**	**32.6790**	**789.8302**	**822.5092**	**2.3841**	**0.0518**	**897.5382**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**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	Demolition	Demolition	6/30/2022	8/10/2022	5	30	
2	Site Preparation	Site Preparation	8/11/2022	9/14/2022	5	25	
3	Grading	Grading	9/15/2022	9/28/2022	5	10	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Building Construction	Building Construction	9/29/2022	7/5/2023	5	200	
5	Paving	Paving	7/6/2023	7/19/2023	5	10	
6	Architectural Coating	Architectural Coating	7/20/2023	7/26/2023	5	5	

Acres of Grading (Site Preparation Phase): 37.5

Acres of Grading (Grading Phase): 10

Acres of Paving: 1.57

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 185,558; Non-Residential Outdoor: 61,853; Striped Parking Area: 4,200 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	7.00	231	0.29
Demolition	Excavators	3	8.00	158	0.38
Grading	Excavators	1	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	446.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	81.00	32.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	16.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0488	0.0000	0.0488	7.4000e-003	0.0000	7.4000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0396	0.3858	0.3089	5.8000e-004		0.0186	0.0186		0.0173	0.0173	0.0000	50.9853	50.9853	0.0143	0.0000	51.3434
Total	**0.0396**	**0.3858**	**0.3089**	**5.8000e-004**	**0.0488**	**0.0186**	**0.0675**	**7.4000e-003**	**0.0173**	**0.0247**	**0.0000**	**50.9853**	**50.9853**	**0.0143**	**0.0000**	**51.3434**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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	9.9000e-004	0.0376	8.8600e-003	1.4000e-004	3.8200e-003	3.5000e-004	4.1700e-003	1.0500e-003	3.3000e-004	1.3800e-003	0.0000	13.9779	13.9779	6.7000e-004	2.2200e-003	14.6564
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	6.5000e-004	4.7000e-004	5.5300e-003	2.0000e-005	1.8000e-003	1.0000e-005	1.8100e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4839	1.4839	5.0000e-005	4.0000e-005	1.4978
Total	**1.6400e-003**	**0.0380**	**0.0144**	**1.6000e-004**	**5.6200e-003**	**3.6000e-004**	**5.9800e-003**	**1.5300e-003**	**3.4000e-004**	**1.8700e-003**	**0.0000**	**15.4618**	**15.4618**	**7.2000e-004**	**2.2600e-003**	**16.1542**

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					0.0488	0.0000	0.0488	7.4000e-003	0.0000	7.4000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0396	0.3858	0.3089	5.8000e-004		0.0186	0.0186		0.0173	0.0173	0.0000	50.9853	50.9853	0.0143	0.0000	51.3433
Total	**0.0396**	**0.3858**	**0.3089**	**5.8000e-004**	**0.0488**	**0.0186**	**0.0675**	**7.4000e-003**	**0.0173**	**0.0247**	**0.0000**	**50.9853**	**50.9853**	**0.0143**	**0.0000**	**51.3433**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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	9.9000e-004	0.0376	8.8600e-003	1.4000e-004	3.8200e-003	3.5000e-004	4.1700e-003	1.0500e-003	3.3000e-004	1.3800e-003	0.0000	13.9779	13.9779	6.7000e-004	2.2200e-003	14.6564
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	6.5000e-004	4.7000e-004	5.5300e-003	2.0000e-005	1.8000e-003	1.0000e-005	1.8100e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4839	1.4839	5.0000e-005	4.0000e-005	1.4978
Total	**1.6400e-003**	**0.0380**	**0.0144**	**1.6000e-004**	**5.6200e-003**	**3.6000e-004**	**5.9800e-003**	**1.5300e-003**	**3.4000e-004**	**1.8700e-003**	**0.0000**	**15.4618**	**15.4618**	**7.2000e-004**	**2.2600e-003**	**16.1542**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2457	0.0000	0.2457	0.1263	0.0000	0.1263	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0396	0.4135	0.2462	4.8000e-004		0.0202	0.0202		0.0185	0.0185	0.0000	41.7992	41.7992	0.0135	0.0000	42.1372
Total	**0.0396**	**0.4135**	**0.2462**	**4.8000e-004**	**0.2457**	**0.0202**	**0.2659**	**0.1263**	**0.0185**	**0.1448**	**0.0000**	**41.7992**	**41.7992**	**0.0135**	**0.0000**	**42.1372**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

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	6.5000e-004	4.7000e-004	5.5300e-003	2.0000e-005	1.8000e-003	1.0000e-005	1.8100e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4839	1.4839	5.0000e-005	4.0000e-005	1.4978
Total	**6.5000e-004**	**4.7000e-004**	**5.5300e-003**	**2.0000e-005**	**1.8000e-003**	**1.0000e-005**	**1.8100e-003**	**4.8000e-004**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**1.4839**	**1.4839**	**5.0000e-005**	**4.0000e-005**	**1.4978**

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					0.2457	0.0000	0.2457	0.1263	0.0000	0.1263	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0396	0.4135	0.2462	4.8000e-004		0.0202	0.0202		0.0185	0.0185	0.0000	41.7992	41.7992	0.0135	0.0000	42.1372
Total	**0.0396**	**0.4135**	**0.2462**	**4.8000e-004**	**0.2457**	**0.0202**	**0.2659**	**0.1263**	**0.0185**	**0.1448**	**0.0000**	**41.7992**	**41.7992**	**0.0135**	**0.0000**	**42.1372**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

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	6.5000e-004	4.7000e-004	5.5300e-003	2.0000e-005	1.8000e-003	1.0000e-005	1.8100e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4839	1.4839	5.0000e-005	4.0000e-005	1.4978
Total	**6.5000e-004**	**4.7000e-004**	**5.5300e-003**	**2.0000e-005**	**1.8000e-003**	**1.0000e-005**	**1.8100e-003**	**4.8000e-004**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**1.4839**	**1.4839**	**5.0000e-005**	**4.0000e-005**	**1.4978**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0354	0.0000	0.0354	0.0171	0.0000	0.0171	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.7400e-003	0.1043	0.0764	1.5000e-004		4.7000e-003	4.7000e-003		4.3300e-003	4.3300e-003	0.0000	13.0274	13.0274	4.2100e-003	0.0000	13.1327
Total	**9.7400e-003**	**0.1043**	**0.0764**	**1.5000e-004**	**0.0354**	**4.7000e-003**	**0.0401**	**0.0171**	**4.3300e-003**	**0.0215**	**0.0000**	**13.0274**	**13.0274**	**4.2100e-003**	**0.0000**	**13.1327**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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	2.2000e-004	1.6000e-004	1.8400e-003	1.0000e-005	6.0000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4946	0.4946	2.0000e-005	1.0000e-005	0.4993
Total	**2.2000e-004**	**1.6000e-004**	**1.8400e-003**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**6.0000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4946**	**0.4946**	**2.0000e-005**	**1.0000e-005**	**0.4993**

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					0.0354	0.0000	0.0354	0.0171	0.0000	0.0171	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.7400e-003	0.1043	0.0764	1.5000e-004		4.7000e-003	4.7000e-003		4.3300e-003	4.3300e-003	0.0000	13.0274	13.0274	4.2100e-003	0.0000	13.1327
Total	**9.7400e-003**	**0.1043**	**0.0764**	**1.5000e-004**	**0.0354**	**4.7000e-003**	**0.0401**	**0.0171**	**4.3300e-003**	**0.0215**	**0.0000**	**13.0274**	**13.0274**	**4.2100e-003**	**0.0000**	**13.1327**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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	2.2000e-004	1.6000e-004	1.8400e-003	1.0000e-005	6.0000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4946	0.4946	2.0000e-005	1.0000e-005	0.4993
Total	**2.2000e-004**	**1.6000e-004**	**1.8400e-003**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**6.0000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4946**	**0.4946**	**2.0000e-005**	**1.0000e-005**	**0.4993**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0572	0.5231	0.5482	9.0000e-004		0.0271	0.0271		0.0255	0.0255	0.0000	77.6280	77.6280	0.0186	0.0000	78.0929
Total	**0.0572**	**0.5231**	**0.5482**	**9.0000e-004**		**0.0271**	**0.0271**		**0.0255**	**0.0255**	**0.0000**	**77.6280**	**77.6280**	**0.0186**	**0.0000**	**78.0929**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.3700e-003	0.0590	0.0193	2.3000e-004	7.1200e-003	6.2000e-004	7.7400e-003	2.0600e-003	5.9000e-004	2.6500e-003	0.0000	22.3554	22.3554	6.8000e-004	3.2500e-003	23.3401
Worker	7.8300e-003	5.6900e-003	0.0667	1.9000e-004	0.0218	1.3000e-004	0.0219	5.7800e-003	1.2000e-004	5.9000e-003	0.0000	17.8955	17.8955	5.6000e-004	5.2000e-004	18.0635
Total	**0.0102**	**0.0647**	**0.0860**	**4.2000e-004**	**0.0289**	**7.5000e-004**	**0.0296**	**7.8400e-003**	**7.1000e-004**	**8.5500e-003**	**0.0000**	**40.2509**	**40.2509**	**1.2400e-003**	**3.7700e-003**	**41.4036**

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	0.0572	0.5231	0.5482	9.0000e-004		0.0271	0.0271		0.0255	0.0255	0.0000	77.6279	77.6279	0.0186	0.0000	78.0928
Total	**0.0572**	**0.5231**	**0.5482**	**9.0000e-004**		**0.0271**	**0.0271**		**0.0255**	**0.0255**	**0.0000**	**77.6279**	**77.6279**	**0.0186**	**0.0000**	**78.0928**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.3700e-003	0.0590	0.0193	2.3000e-004	7.1200e-003	6.2000e-004	7.7400e-003	2.0600e-003	5.9000e-004	2.6500e-003	0.0000	22.3554	22.3554	6.8000e-004	3.2500e-003	23.3401
Worker	7.8300e-003	5.6900e-003	0.0667	1.9000e-004	0.0218	1.3000e-004	0.0219	5.7800e-003	1.2000e-004	5.9000e-003	0.0000	17.8955	17.8955	5.6000e-004	5.2000e-004	18.0635
Total	**0.0102**	**0.0647**	**0.0860**	**4.2000e-004**	**0.0289**	**7.5000e-004**	**0.0296**	**7.8400e-003**	**7.1000e-004**	**8.5500e-003**	**0.0000**	**40.2509**	**40.2509**	**1.2400e-003**	**3.7700e-003**	**41.4036**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1046	0.9566	1.0802	1.7900e-003		0.0465	0.0465		0.0438	0.0438	0.0000	154.1502	154.1502	0.0367	0.0000	155.0669
Total	**0.1046**	**0.9566**	**1.0802**	**1.7900e-003**		**0.0465**	**0.0465**		**0.0438**	**0.0438**	**0.0000**	**154.1502**	**154.1502**	**0.0367**	**0.0000**	**155.0669**

Vista 1430 Decision Street Project - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5000e-003	0.0945	0.0333	4.4000e-004	0.0141	5.6000e-004	0.0147	4.0800e-003	5.3000e-004	4.6100e-003	0.0000	42.6984	42.6984	1.2900e-003	6.1900e-003	44.5744
Worker	0.0146	0.0101	0.1231	3.7000e-004	0.0432	2.4000e-004	0.0434	0.0115	2.2000e-004	0.0117	0.0000	34.6085	34.6085	1.0100e-003	9.5000e-004	34.9180
Total	**0.0171**	**0.1046**	**0.1564**	**8.1000e-004**	**0.0573**	**8.0000e-004**	**0.0581**	**0.0156**	**7.5000e-004**	**0.0163**	**0.0000**	**77.3069**	**77.3069**	**2.3000e-003**	**7.1400e-003**	**79.4924**

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	0.1046	0.9566	1.0802	1.7900e-003		0.0465	0.0465		0.0438	0.0438	0.0000	154.1500	154.1500	0.0367	0.0000	155.0667
Total	**0.1046**	**0.9566**	**1.0802**	**1.7900e-003**		**0.0465**	**0.0465**		**0.0438**	**0.0438**	**0.0000**	**154.1500**	**154.1500**	**0.0367**	**0.0000**	**155.0667**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5000e-003	0.0945	0.0333	4.4000e-004	0.0141	5.6000e-004	0.0147	4.0800e-003	5.3000e-004	4.6100e-003	0.0000	42.6984	42.6984	1.2900e-003	6.1900e-003	44.5744
Worker	0.0146	0.0101	0.1231	3.7000e-004	0.0432	2.4000e-004	0.0434	0.0115	2.2000e-004	0.0117	0.0000	34.6085	34.6085	1.0100e-003	9.5000e-004	34.9180
Total	**0.0171**	**0.1046**	**0.1564**	**8.1000e-004**	**0.0573**	**8.0000e-004**	**0.0581**	**0.0156**	**7.5000e-004**	**0.0163**	**0.0000**	**77.3069**	**77.3069**	**2.3000e-003**	**7.1400e-003**	**79.4924**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.1600e-003	0.0510	0.0729	1.1000e-004		2.5500e-003	2.5500e-003		2.3500e-003	2.3500e-003	0.0000	10.0134	10.0134	3.2400e-003	0.0000	10.0944
Paving	2.0600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.2200e-003**	**0.0510**	**0.0729**	**1.1000e-004**		**2.5500e-003**	**2.5500e-003**		**2.3500e-003**	**2.3500e-003**	**0.0000**	**10.0134**	**10.0134**	**3.2400e-003**	**0.0000**	**10.0944**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

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	2.0000e-004	1.4000e-004	1.7100e-003	1.0000e-005	6.0000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4819	0.4819	1.0000e-005	1.0000e-005	0.4862
Total	**2.0000e-004**	**1.4000e-004**	**1.7100e-003**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**6.0000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4819**	**0.4819**	**1.0000e-005**	**1.0000e-005**	**0.4862**

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	5.1600e-003	0.0510	0.0729	1.1000e-004		2.5500e-003	2.5500e-003		2.3500e-003	2.3500e-003	0.0000	10.0134	10.0134	3.2400e-003	0.0000	10.0944
Paving	2.0600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.2200e-003**	**0.0510**	**0.0729**	**1.1000e-004**		**2.5500e-003**	**2.5500e-003**		**2.3500e-003**	**2.3500e-003**	**0.0000**	**10.0134**	**10.0134**	**3.2400e-003**	**0.0000**	**10.0944**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

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	2.0000e-004	1.4000e-004	1.7100e-003	1.0000e-005	6.0000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4819	0.4819	1.0000e-005	1.0000e-005	0.4862
Total	**2.0000e-004**	**1.4000e-004**	**1.7100e-003**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**6.0000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4819**	**0.4819**	**1.0000e-005**	**1.0000e-005**	**0.4862**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.4578					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.8000e-004	3.2600e-003	4.5300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6393
Total	**1.4583**	**3.2600e-003**	**4.5300e-003**	**1.0000e-005**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6393**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

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	1.1000e-004	7.0000e-005	9.1000e-004	0.0000	3.2000e-004	0.0000	3.2000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2570	0.2570	1.0000e-005	1.0000e-005	0.2593
Total	**1.1000e-004**	**7.0000e-005**	**9.1000e-004**	**0.0000**	**3.2000e-004**	**0.0000**	**3.2000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2570**	**0.2570**	**1.0000e-005**	**1.0000e-005**	**0.2593**

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	1.4578					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.8000e-004	3.2600e-003	4.5300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6393
Total	**1.4583**	**3.2600e-003**	**4.5300e-003**	**1.0000e-005**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6393**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

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	1.1000e-004	7.0000e-005	9.1000e-004	0.0000	3.2000e-004	0.0000	3.2000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2570	0.2570	1.0000e-005	1.0000e-005	0.2593
Total	**1.1000e-004**	**7.0000e-005**	**9.1000e-004**	**0.0000**	**3.2000e-004**	**0.0000**	**3.2000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2570**	**0.2570**	**1.0000e-005**	**1.0000e-005**	**0.2593**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Vista 1430 Decision Street Project - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.3232	0.3365	3.1120	6.7300e-003	0.8527	4.6400e-003	0.8573	0.2276	4.3300e-003	0.2319	0.0000	658.2450	658.2450	0.0443	0.0280	667.7087
Unmitigated	0.3232	0.3365	3.1120	6.7300e-003	0.8527	4.6400e-003	0.8573	0.2276	4.3300e-003	0.2319	0.0000	658.2450	658.2450	0.0443	0.0280	667.7087

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	780.95	780.95	780.95	2,279,991	2,279,991
Total	780.95	780.95	780.95	2,279,991	2,279,991

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.575453	0.061728	0.171227	0.112384	0.022882	0.006522	0.009800	0.006298	0.000679	0.000623	0.027611	0.000857	0.003936
Unrefrigerated Warehouse-No Rail	0.575453	0.061728	0.171227	0.112384	0.022882	0.006522	0.009800	0.006298	0.000679	0.000623	0.027611	0.000857	0.003936

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	66.9242	66.9242	6.9400e-003	8.4000e-004	67.3484
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	66.9242	66.9242	6.9400e-003	8.4000e-004	67.3484
NaturalGas Mitigated	1.1000e-003	0.0100	8.4000e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004	0.0000	10.8923	10.8923	2.1000e-004	2.0000e-004	10.9570
NaturalGas Unmitigated	1.1000e-003	0.0100	8.4000e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004	0.0000	10.8923	10.8923	2.1000e-004	2.0000e-004	10.9570

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	204113	1.1000e-003	0.0100	8.4000e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004	0.0000	10.8923	10.8923	2.1000e-004	2.0000e-004	10.9570
Total		**1.1000e-003**	**0.0100**	**8.4000e-003**	**6.0000e-005**		**7.6000e-004**	**7.6000e-004**		**7.6000e-004**	**7.6000e-004**	**0.0000**	**10.8923**	**10.8923**	**2.1000e-004**	**2.0000e-004**	**10.9570**

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	204113	1.1000e-003	0.0100	8.4000e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004	0.0000	10.8923	10.8923	2.1000e-004	2.0000e-004	10.9570
Total		**1.1000e-003**	**0.0100**	**8.4000e-003**	**6.0000e-005**		**7.6000e-004**	**7.6000e-004**		**7.6000e-004**	**7.6000e-004**	**0.0000**	**10.8923**	**10.8923**	**2.1000e-004**	**2.0000e-004**	**10.9570**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	24500	3.5364	3.7000e-004	4.0000e-005	3.5588
Unrefrigerated Warehouse-No Rail	439153	63.3879	6.5700e-003	8.0000e-004	63.7896
Total		**66.9242**	**6.9400e-003**	**8.4000e-004**	**67.3484**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	24500	3.5364	3.7000e-004	4.0000e-005	3.5588
Unrefrigerated Warehouse-No Rail	439153	63.3879	6.5700e-003	8.0000e-004	63.7896
Total		**66.9242**	**6.9400e-003**	**8.4000e-004**	**67.3484**

6.0 Area Detail

Vista 1430 Decision Street Project - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6337	2.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3400e-003	5.3400e-003	1.0000e-005	0.0000	5.6800e-003
Unmitigated	0.6337	2.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3400e-003	5.3400e-003	1.0000e-005	0.0000	5.6800e-003

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	0.1458					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4877					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.5000e-004	2.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3400e-003	5.3400e-003	1.0000e-005	0.0000	5.6800e-003
Total	**0.6337**	**2.0000e-005**	**2.7300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.3400e-003**	**5.3400e-003**	**1.0000e-005**	**0.0000**	**5.6800e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.1458					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4877					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.5000e-004	2.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3400e-003	5.3400e-003	1.0000e-005	0.0000	5.6800e-003
Total	**0.6337**	**2.0000e-005**	**2.7300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.3400e-003**	**5.3400e-003**	**1.0000e-005**	**0.0000**	**5.6800e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	62.8386	0.9377	0.0227	93.0410
Unmitigated	62.8386	0.9377	0.0227	93.0410

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	28.6056 / 0	62.8386	0.9377	0.0227	93.0410
Total		**62.8386**	**0.9377**	**0.0227**	**93.0410**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	28.6056 / 0	62.8386	0.9377	0.0227	93.0410
Total		**62.8386**	**0.9377**	**0.0227**	**93.0410**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	23.6038	1.3949	0.0000	58.4774
Unmitigated	23.6038	1.3949	0.0000	58.4774

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	116.28	23.6038	1.3949	0.0000	58.4774
Total		**23.6038**	**1.3949**	**0.0000**	**58.4774**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	116.28	23.6038	1.3949	0.0000	58.4774
Total		**23.6038**	**1.3949**	**0.0000**	**58.4774**

9.0 Operational Offroad

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Vista 1430 Decision Street Project - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Vista 1430 Decision Street Project

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	123.71	1000sqft	6.24	123,705.00	0
Parking Lot	175.00	Space	1.57	70,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2050
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - SDGE net zero by 2045

Land Use - 7.81 acre project site

Construction Phase - Approximately 13 months of construction

Grading - balanced site, no import/export

Demolition - existing office building is 98,000 sf

Vehicle Trips - From Applicant's trip generation

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	NumDays	230.00	200.00
tblConstructionPhase	NumDays	20.00	30.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	10.00	25.00
tblConstructionPhase	PhaseEndDate	9/21/2023	7/26/2023
tblConstructionPhase	PhaseEndDate	7/27/2023	7/5/2023
tblConstructionPhase	PhaseEndDate	7/28/2022	8/10/2022
tblConstructionPhase	PhaseEndDate	9/8/2022	9/28/2022
tblConstructionPhase	PhaseEndDate	8/24/2023	7/19/2023
tblConstructionPhase	PhaseEndDate	8/11/2022	9/14/2022
tblConstructionPhase	PhaseStartDate	8/25/2023	7/20/2023
tblConstructionPhase	PhaseStartDate	9/9/2022	9/29/2022
tblConstructionPhase	PhaseStartDate	7/1/2022	6/30/2022
tblConstructionPhase	PhaseStartDate	8/12/2022	9/15/2022
tblConstructionPhase	PhaseStartDate	7/28/2023	7/6/2023
tblConstructionPhase	PhaseStartDate	7/29/2022	8/11/2022
tblLandUse	LotAcreage	2.84	6.24
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	539.98	0
tblProjectCharacteristics	N2OIntensityFactor	0.004	0
tblVehicleTrips	ST_TR	1.74	6.31
tblVehicleTrips	SU_TR	1.74	6.31
tblVehicleTrips	WD_TR	1.74	6.31

2.0 Emissions Summary

Vista 1430 Decision Street Project - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2022	0.1588	1.5301	1.2875	2.7100e-003	0.3669	0.0717	0.4386	0.1608	0.0668	0.2276	0.0000	241.1311	241.1311	0.0527	6.0800e-003	244.2611
2023	1.5874	1.1156	1.3167	2.7300e-003	0.0583	0.0501	0.1083	0.0158	0.0471	0.0629	0.0000	242.8477	242.8477	0.0423	7.1600e-003	246.0385
Maximum	**1.5874**	**1.5301**	**1.3167**	**2.7300e-003**	**0.3669**	**0.0717**	**0.4386**	**0.1608**	**0.0668**	**0.2276**	**0.0000**	**242.8477**	**242.8477**	**0.0527**	**7.1600e-003**	**246.0385**

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					
2022	0.1588	1.5301	1.2875	2.7100e-003	0.3669	0.0717	0.4386	0.1608	0.0668	0.2276	0.0000	241.1309	241.1309	0.0527	6.0800e-003	244.2608
2023	1.5874	1.1156	1.3167	2.7300e-003	0.0583	0.0501	0.1083	0.0158	0.0471	0.0629	0.0000	242.8475	242.8475	0.0423	7.1600e-003	246.0383
Maximum	**1.5874**	**1.5301**	**1.3167**	**2.7300e-003**	**0.3669**	**0.0717**	**0.4386**	**0.1608**	**0.0668**	**0.2276**	**0.0000**	**242.8475**	**242.8475**	**0.0527**	**7.1600e-003**	**246.0383**

Vista 1430 Decision Street Project - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**7-1-2022**	**9-30-2022**	1.0352	1.0352
2	**10-1-2022**	**12-31-2022**	0.6436	0.6436
3	**1-1-2023**	**3-31-2023**	0.5728	0.5728
4	**4-1-2023**	**6-30-2023**	0.5761	0.5761
5	**7-1-2023**	**9-30-2023**	1.5519	1.5519
		Highest	1.5519	1.5519

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	0.6337	2.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3400e-003	5.3400e-003	1.0000e-005	0.0000	5.6800e-003
Energy	1.1000e-003	0.0100	8.4000e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004	0.0000	10.8923	10.8923	2.1000e-004	2.0000e-004	10.9570
Mobile	0.2515	0.2726	2.6600	5.8300e-003	0.8530	2.7800e-003	0.8558	0.2277	2.6000e-003	0.2303	0.0000	594.8807	594.8807	0.0380	0.0254	603.3991
Waste						0.0000	0.0000		0.0000	0.0000	23.6038	0.0000	23.6038	1.3949	0.0000	58.4774
Water						0.0000	0.0000		0.0000	0.0000	9.0753	0.0000	9.0753	0.9321	0.0220	38.9369
Total	**0.8863**	**0.2826**	**2.6711**	**5.8900e-003**	**0.8530**	**3.5500e-003**	**0.8565**	**0.2277**	**3.3700e-003**	**0.2310**	**32.6790**	**605.7783**	**638.4573**	**2.3653**	**0.0476**	**711.7761**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.6337	2.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3400e-003	5.3400e-003	1.0000e-005	0.0000	5.6800e-003
Energy	1.1000e-003	0.0100	8.4000e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004	0.0000	10.8923	10.8923	2.1000e-004	2.0000e-004	10.9570
Mobile	0.2515	0.2726	2.6600	5.8300e-003	0.8530	2.7800e-003	0.8558	0.2277	2.6000e-003	0.2303	0.0000	594.8807	594.8807	0.0380	0.0254	603.3991
Waste						0.0000	0.0000		0.0000	0.0000	23.6038	0.0000	23.6038	1.3949	0.0000	58.4774
Water						0.0000	0.0000		0.0000	0.0000	9.0753	0.0000	9.0753	0.9321	0.0220	38.9369
Total	**0.8863**	**0.2826**	**2.6711**	**5.8900e-003**	**0.8530**	**3.5500e-003**	**0.8565**	**0.2277**	**3.3700e-003**	**0.2310**	**32.6790**	**605.7783**	**638.4573**	**2.3653**	**0.0476**	**711.7761**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**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	Demolition	Demolition	6/30/2022	8/10/2022	5	30	
2	Site Preparation	Site Preparation	8/11/2022	9/14/2022	5	25	
3	Grading	Grading	9/15/2022	9/28/2022	5	10	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Building Construction	Building Construction	9/29/2022	7/5/2023	5	200	
5	Paving	Paving	7/6/2023	7/19/2023	5	10	
6	Architectural Coating	Architectural Coating	7/20/2023	7/26/2023	5	5	

Acres of Grading (Site Preparation Phase): 37.5

Acres of Grading (Grading Phase): 10

Acres of Paving: 1.57

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 185,558; Non-Residential Outdoor: 61,853; Striped Parking Area: 4,200 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	7.00	231	0.29
Demolition	Excavators	3	8.00	158	0.38
Grading	Excavators	1	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	446.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	81.00	32.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	16.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0488	0.0000	0.0488	7.4000e-003	0.0000	7.4000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0396	0.3858	0.3089	5.8000e-004		0.0186	0.0186		0.0173	0.0173	0.0000	50.9853	50.9853	0.0143	0.0000	51.3434
Total	**0.0396**	**0.3858**	**0.3089**	**5.8000e-004**	**0.0488**	**0.0186**	**0.0675**	**7.4000e-003**	**0.0173**	**0.0247**	**0.0000**	**50.9853**	**50.9853**	**0.0143**	**0.0000**	**51.3434**

Vista 1430 Decision Street Project - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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	9.9000e-004	0.0376	8.8600e-003	1.4000e-004	3.8200e-003	3.5000e-004	4.1700e-003	1.0500e-003	3.3000e-004	1.3800e-003	0.0000	13.9779	13.9779	6.7000e-004	2.2200e-003	14.6564
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	6.5000e-004	4.7000e-004	5.5300e-003	2.0000e-005	1.8000e-003	1.0000e-005	1.8100e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4839	1.4839	5.0000e-005	4.0000e-005	1.4978
Total	**1.6400e-003**	**0.0380**	**0.0144**	**1.6000e-004**	**5.6200e-003**	**3.6000e-004**	**5.9800e-003**	**1.5300e-003**	**3.4000e-004**	**1.8700e-003**	**0.0000**	**15.4618**	**15.4618**	**7.2000e-004**	**2.2600e-003**	**16.1542**

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					0.0488	0.0000	0.0488	7.4000e-003	0.0000	7.4000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0396	0.3858	0.3089	5.8000e-004		0.0186	0.0186		0.0173	0.0173	0.0000	50.9853	50.9853	0.0143	0.0000	51.3433
Total	**0.0396**	**0.3858**	**0.3089**	**5.8000e-004**	**0.0488**	**0.0186**	**0.0675**	**7.4000e-003**	**0.0173**	**0.0247**	**0.0000**	**50.9853**	**50.9853**	**0.0143**	**0.0000**	**51.3433**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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	9.9000e-004	0.0376	8.8600e-003	1.4000e-004	3.8200e-003	3.5000e-004	4.1700e-003	1.0500e-003	3.3000e-004	1.3800e-003	0.0000	13.9779	13.9779	6.7000e-004	2.2200e-003	14.6564
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	6.5000e-004	4.7000e-004	5.5300e-003	2.0000e-005	1.8000e-003	1.0000e-005	1.8100e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4839	1.4839	5.0000e-005	4.0000e-005	1.4978
Total	**1.6400e-003**	**0.0380**	**0.0144**	**1.6000e-004**	**5.6200e-003**	**3.6000e-004**	**5.9800e-003**	**1.5300e-003**	**3.4000e-004**	**1.8700e-003**	**0.0000**	**15.4618**	**15.4618**	**7.2000e-004**	**2.2600e-003**	**16.1542**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2457	0.0000	0.2457	0.1263	0.0000	0.1263	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0396	0.4135	0.2462	4.8000e-004		0.0202	0.0202		0.0185	0.0185	0.0000	41.7992	41.7992	0.0135	0.0000	42.1372
Total	**0.0396**	**0.4135**	**0.2462**	**4.8000e-004**	**0.2457**	**0.0202**	**0.2659**	**0.1263**	**0.0185**	**0.1448**	**0.0000**	**41.7992**	**41.7992**	**0.0135**	**0.0000**	**42.1372**

Vista 1430 Decision Street Project - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

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	6.5000e-004	4.7000e-004	5.5300e-003	2.0000e-005	1.8000e-003	1.0000e-005	1.8100e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4839	1.4839	5.0000e-005	4.0000e-005	1.4978
Total	**6.5000e-004**	**4.7000e-004**	**5.5300e-003**	**2.0000e-005**	**1.8000e-003**	**1.0000e-005**	**1.8100e-003**	**4.8000e-004**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**1.4839**	**1.4839**	**5.0000e-005**	**4.0000e-005**	**1.4978**

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					0.2457	0.0000	0.2457	0.1263	0.0000	0.1263	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0396	0.4135	0.2462	4.8000e-004		0.0202	0.0202		0.0185	0.0185	0.0000	41.7992	41.7992	0.0135	0.0000	42.1372
Total	**0.0396**	**0.4135**	**0.2462**	**4.8000e-004**	**0.2457**	**0.0202**	**0.2659**	**0.1263**	**0.0185**	**0.1448**	**0.0000**	**41.7992**	**41.7992**	**0.0135**	**0.0000**	**42.1372**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

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	6.5000e-004	4.7000e-004	5.5300e-003	2.0000e-005	1.8000e-003	1.0000e-005	1.8100e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4839	1.4839	5.0000e-005	4.0000e-005	1.4978
Total	**6.5000e-004**	**4.7000e-004**	**5.5300e-003**	**2.0000e-005**	**1.8000e-003**	**1.0000e-005**	**1.8100e-003**	**4.8000e-004**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**1.4839**	**1.4839**	**5.0000e-005**	**4.0000e-005**	**1.4978**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0354	0.0000	0.0354	0.0171	0.0000	0.0171	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.7400e-003	0.1043	0.0764	1.5000e-004		4.7000e-003	4.7000e-003		4.3300e-003	4.3300e-003	0.0000	13.0274	13.0274	4.2100e-003	0.0000	13.1327
Total	**9.7400e-003**	**0.1043**	**0.0764**	**1.5000e-004**	**0.0354**	**4.7000e-003**	**0.0401**	**0.0171**	**4.3300e-003**	**0.0215**	**0.0000**	**13.0274**	**13.0274**	**4.2100e-003**	**0.0000**	**13.1327**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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	2.2000e-004	1.6000e-004	1.8400e-003	1.0000e-005	6.0000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4946	0.4946	2.0000e-005	1.0000e-005	0.4993
Total	**2.2000e-004**	**1.6000e-004**	**1.8400e-003**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**6.0000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4946**	**0.4946**	**2.0000e-005**	**1.0000e-005**	**0.4993**

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					0.0354	0.0000	0.0354	0.0171	0.0000	0.0171	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.7400e-003	0.1043	0.0764	1.5000e-004		4.7000e-003	4.7000e-003		4.3300e-003	4.3300e-003	0.0000	13.0274	13.0274	4.2100e-003	0.0000	13.1327
Total	**9.7400e-003**	**0.1043**	**0.0764**	**1.5000e-004**	**0.0354**	**4.7000e-003**	**0.0401**	**0.0171**	**4.3300e-003**	**0.0215**	**0.0000**	**13.0274**	**13.0274**	**4.2100e-003**	**0.0000**	**13.1327**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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	2.2000e-004	1.6000e-004	1.8400e-003	1.0000e-005	6.0000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4946	0.4946	2.0000e-005	1.0000e-005	0.4993
Total	**2.2000e-004**	**1.6000e-004**	**1.8400e-003**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**6.0000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4946**	**0.4946**	**2.0000e-005**	**1.0000e-005**	**0.4993**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0572	0.5231	0.5482	9.0000e-004		0.0271	0.0271		0.0255	0.0255	0.0000	77.6280	77.6280	0.0186	0.0000	78.0929
Total	**0.0572**	**0.5231**	**0.5482**	**9.0000e-004**		**0.0271**	**0.0271**		**0.0255**	**0.0255**	**0.0000**	**77.6280**	**77.6280**	**0.0186**	**0.0000**	**78.0929**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.3700e-003	0.0590	0.0193	2.3000e-004	7.1200e-003	6.2000e-004	7.7400e-003	2.0600e-003	5.9000e-004	2.6500e-003	0.0000	22.3554	22.3554	6.8000e-004	3.2500e-003	23.3401
Worker	7.8300e-003	5.6900e-003	0.0667	1.9000e-004	0.0218	1.3000e-004	0.0219	5.7800e-003	1.2000e-004	5.9000e-003	0.0000	17.8955	17.8955	5.6000e-004	5.2000e-004	18.0635
Total	**0.0102**	**0.0647**	**0.0860**	**4.2000e-004**	**0.0289**	**7.5000e-004**	**0.0296**	**7.8400e-003**	**7.1000e-004**	**8.5500e-003**	**0.0000**	**40.2509**	**40.2509**	**1.2400e-003**	**3.7700e-003**	**41.4036**

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	0.0572	0.5231	0.5482	9.0000e-004		0.0271	0.0271		0.0255	0.0255	0.0000	77.6279	77.6279	0.0186	0.0000	78.0928
Total	**0.0572**	**0.5231**	**0.5482**	**9.0000e-004**		**0.0271**	**0.0271**		**0.0255**	**0.0255**	**0.0000**	**77.6279**	**77.6279**	**0.0186**	**0.0000**	**78.0928**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.3700e-003	0.0590	0.0193	2.3000e-004	7.1200e-003	6.2000e-004	7.7400e-003	2.0600e-003	5.9000e-004	2.6500e-003	0.0000	22.3554	22.3554	6.8000e-004	3.2500e-003	23.3401
Worker	7.8300e-003	5.6900e-003	0.0667	1.9000e-004	0.0218	1.3000e-004	0.0219	5.7800e-003	1.2000e-004	5.9000e-003	0.0000	17.8955	17.8955	5.6000e-004	5.2000e-004	18.0635
Total	**0.0102**	**0.0647**	**0.0860**	**4.2000e-004**	**0.0289**	**7.5000e-004**	**0.0296**	**7.8400e-003**	**7.1000e-004**	**8.5500e-003**	**0.0000**	**40.2509**	**40.2509**	**1.2400e-003**	**3.7700e-003**	**41.4036**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1046	0.9566	1.0802	1.7900e-003		0.0465	0.0465		0.0438	0.0438	0.0000	154.1502	154.1502	0.0367	0.0000	155.0669
Total	**0.1046**	**0.9566**	**1.0802**	**1.7900e-003**		**0.0465**	**0.0465**		**0.0438**	**0.0438**	**0.0000**	**154.1502**	**154.1502**	**0.0367**	**0.0000**	**155.0669**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5000e-003	0.0945	0.0333	4.4000e-004	0.0141	5.6000e-004	0.0147	4.0800e-003	5.3000e-004	4.6100e-003	0.0000	42.6984	42.6984	1.2900e-003	6.1900e-003	44.5744
Worker	0.0146	0.0101	0.1231	3.7000e-004	0.0432	2.4000e-004	0.0434	0.0115	2.2000e-004	0.0117	0.0000	34.6085	34.6085	1.0100e-003	9.5000e-004	34.9180
Total	**0.0171**	**0.1046**	**0.1564**	**8.1000e-004**	**0.0573**	**8.0000e-004**	**0.0581**	**0.0156**	**7.5000e-004**	**0.0163**	**0.0000**	**77.3069**	**77.3069**	**2.3000e-003**	**7.1400e-003**	**79.4924**

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	0.1046	0.9566	1.0802	1.7900e-003		0.0465	0.0465		0.0438	0.0438	0.0000	154.1500	154.1500	0.0367	0.0000	155.0667
Total	**0.1046**	**0.9566**	**1.0802**	**1.7900e-003**		**0.0465**	**0.0465**		**0.0438**	**0.0438**	**0.0000**	**154.1500**	**154.1500**	**0.0367**	**0.0000**	**155.0667**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5000e-003	0.0945	0.0333	4.4000e-004	0.0141	5.6000e-004	0.0147	4.0800e-003	5.3000e-004	4.6100e-003	0.0000	42.6984	42.6984	1.2900e-003	6.1900e-003	44.5744
Worker	0.0146	0.0101	0.1231	3.7000e-004	0.0432	2.4000e-004	0.0434	0.0115	2.2000e-004	0.0117	0.0000	34.6085	34.6085	1.0100e-003	9.5000e-004	34.9180
Total	**0.0171**	**0.1046**	**0.1564**	**8.1000e-004**	**0.0573**	**8.0000e-004**	**0.0581**	**0.0156**	**7.5000e-004**	**0.0163**	**0.0000**	**77.3069**	**77.3069**	**2.3000e-003**	**7.1400e-003**	**79.4924**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.1600e-003	0.0510	0.0729	1.1000e-004		2.5500e-003	2.5500e-003		2.3500e-003	2.3500e-003	0.0000	10.0134	10.0134	3.2400e-003	0.0000	10.0944
Paving	2.0600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.2200e-003**	**0.0510**	**0.0729**	**1.1000e-004**		**2.5500e-003**	**2.5500e-003**		**2.3500e-003**	**2.3500e-003**	**0.0000**	**10.0134**	**10.0134**	**3.2400e-003**	**0.0000**	**10.0944**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

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	2.0000e-004	1.4000e-004	1.7100e-003	1.0000e-005	6.0000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4819	0.4819	1.0000e-005	1.0000e-005	0.4862
Total	**2.0000e-004**	**1.4000e-004**	**1.7100e-003**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**6.0000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4819**	**0.4819**	**1.0000e-005**	**1.0000e-005**	**0.4862**

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	5.1600e-003	0.0510	0.0729	1.1000e-004		2.5500e-003	2.5500e-003		2.3500e-003	2.3500e-003	0.0000	10.0134	10.0134	3.2400e-003	0.0000	10.0944
Paving	2.0600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.2200e-003**	**0.0510**	**0.0729**	**1.1000e-004**		**2.5500e-003**	**2.5500e-003**		**2.3500e-003**	**2.3500e-003**	**0.0000**	**10.0134**	**10.0134**	**3.2400e-003**	**0.0000**	**10.0944**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

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	2.0000e-004	1.4000e-004	1.7100e-003	1.0000e-005	6.0000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4819	0.4819	1.0000e-005	1.0000e-005	0.4862
Total	**2.0000e-004**	**1.4000e-004**	**1.7100e-003**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**6.0000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4819**	**0.4819**	**1.0000e-005**	**1.0000e-005**	**0.4862**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.4578					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.8000e-004	3.2600e-003	4.5300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6393
Total	**1.4583**	**3.2600e-003**	**4.5300e-003**	**1.0000e-005**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6393**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

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	1.1000e-004	7.0000e-005	9.1000e-004	0.0000	3.2000e-004	0.0000	3.2000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2570	0.2570	1.0000e-005	1.0000e-005	0.2593
Total	**1.1000e-004**	**7.0000e-005**	**9.1000e-004**	**0.0000**	**3.2000e-004**	**0.0000**	**3.2000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2570**	**0.2570**	**1.0000e-005**	**1.0000e-005**	**0.2593**

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	1.4578					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.8000e-004	3.2600e-003	4.5300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6393
Total	**1.4583**	**3.2600e-003**	**4.5300e-003**	**1.0000e-005**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6393**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

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	1.1000e-004	7.0000e-005	9.1000e-004	0.0000	3.2000e-004	0.0000	3.2000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2570	0.2570	1.0000e-005	1.0000e-005	0.2593
Total	**1.1000e-004**	**7.0000e-005**	**9.1000e-004**	**0.0000**	**3.2000e-004**	**0.0000**	**3.2000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2570**	**0.2570**	**1.0000e-005**	**1.0000e-005**	**0.2593**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.2515	0.2726	2.6600	5.8300e-003	0.8530	2.7800e-003	0.8558	0.2277	2.6000e-003	0.2303	0.0000	594.8807	594.8807	0.0380	0.0254	603.3991
Unmitigated	0.2515	0.2726	2.6600	5.8300e-003	0.8530	2.7800e-003	0.8558	0.2277	2.6000e-003	0.2303	0.0000	594.8807	594.8807	0.0380	0.0254	603.3991

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	780.95	780.95	780.95	2,279,991	2,279,991
Total	780.95	780.95	780.95	2,279,991	2,279,991

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.584721	0.061219	0.165591	0.108994	0.022611	0.007030	0.011356	0.006685	0.000606	0.000664	0.026637	0.000823	0.003063
Unrefrigerated Warehouse-No Rail	0.584721	0.061219	0.165591	0.108994	0.022611	0.007030	0.011356	0.006685	0.000606	0.000664	0.026637	0.000823	0.003063

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	1.1000e-003	0.0100	8.4000e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004	0.0000	10.8923	10.8923	2.1000e-004	2.0000e-004	10.9570
NaturalGas Unmitigated	1.1000e-003	0.0100	8.4000e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004	0.0000	10.8923	10.8923	2.1000e-004	2.0000e-004	10.9570

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	204113	1.1000e-003	0.0100	8.4000e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004	0.0000	10.8923	10.8923	2.1000e-004	2.0000e-004	10.9570
Total		**1.1000e-003**	**0.0100**	**8.4000e-003**	**6.0000e-005**		**7.6000e-004**	**7.6000e-004**		**7.6000e-004**	**7.6000e-004**	**0.0000**	**10.8923**	**10.8923**	**2.1000e-004**	**2.0000e-004**	**10.9570**

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	204113	1.1000e-003	0.0100	8.4000e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004	0.0000	10.8923	10.8923	2.1000e-004	2.0000e-004	10.9570
Total		**1.1000e-003**	**0.0100**	**8.4000e-003**	**6.0000e-005**		**7.6000e-004**	**7.6000e-004**		**7.6000e-004**	**7.6000e-004**	**0.0000**	**10.8923**	**10.8923**	**2.1000e-004**	**2.0000e-004**	**10.9570**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	24500	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	439153	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	24500	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	439153	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6337	2.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3400e-003	5.3400e-003	1.0000e-005	0.0000	5.6800e-003
Unmitigated	0.6337	2.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3400e-003	5.3400e-003	1.0000e-005	0.0000	5.6800e-003

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	0.1458					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4877					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.5000e-004	2.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3400e-003	5.3400e-003	1.0000e-005	0.0000	5.6800e-003
Total	**0.6337**	**2.0000e-005**	**2.7300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.3400e-003**	**5.3400e-003**	**1.0000e-005**	**0.0000**	**5.6800e-003**

Vista 1430 Decision Street Project - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.1458					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4877					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.5000e-004	2.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3400e-003	5.3400e-003	1.0000e-005	0.0000	5.6800e-003
Total	**0.6337**	**2.0000e-005**	**2.7300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.3400e-003**	**5.3400e-003**	**1.0000e-005**	**0.0000**	**5.6800e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	9.0753	0.9321	0.0220	38.9369
Unmitigated	9.0753	0.9321	0.0220	38.9369

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	28.6056 / 0	9.0753	0.9321	0.0220	38.9369
Total		**9.0753**	**0.9321**	**0.0220**	**38.9369**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	28.6056 / 0	9.0753	0.9321	0.0220	38.9369
Total		**9.0753**	**0.9321**	**0.0220**	**38.9369**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	23.6038	1.3949	0.0000	58.4774
Unmitigated	23.6038	1.3949	0.0000	58.4774

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	116.28	23.6038	1.3949	0.0000	58.4774
Total		**23.6038**	**1.3949**	**0.0000**	**58.4774**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	116.28	23.6038	1.3949	0.0000	58.4774
Total		**23.6038**	**1.3949**	**0.0000**	**58.4774**

9.0 Operational Offroad

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Vista 1430 Decision Street Existing Baseline - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Vista 1430 Decision Street Existing Baseline

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	98.00	1000sqft	5.56	98,000.00	0
Parking Lot	327.00	Space	2.94	130,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2024
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - existing 98,000 SF R&D office building with approximately 327 parking spaces

Construction Phase - Operations only

Off-road Equipment -

Vehicle Trips - From Project Trip Generation

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	1.00
tblConstructionPhase	PhaseEndDate	2/21/2022	1/25/2022
tblLandUse	LotAcreage	2.25	5.56
tblVehicleTrips	ST_TR	1.90	8.00

Vista 1430 Decision Street Existing Baseline - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	SU_TR	1.11	8.00
tblVehicleTrips	WD_TR	11.26	8.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
2022					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Vista 1430 Decision Street Existing Baseline - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

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	0.5097	4.0000e-005	3.9000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.5900e-003	7.5900e-003	2.0000e-005	0.0000	8.0900e-003
Energy	6.0900e-003	0.0553	0.0465	3.3000e-004		4.2100e-003	4.2100e-003		4.2100e-003	4.2100e-003	0.0000	267.8049	267.8049	0.0138	2.6400e-003	268.9382
Mobile	0.3697	0.4037	3.3549	6.9100e-003	0.7350	5.4500e-003	0.7405	0.1962	5.0800e-003	0.2013	0.0000	649.1939	649.1939	0.0475	0.0299	659.2892
Waste						0.0000	0.0000		0.0000	0.0000	1.5123	0.0000	1.5123	0.0894	0.0000	3.7466
Water						0.0000	0.0000		0.0000	0.0000	15.2872	153.6769	168.9641	1.5795	0.0382	219.8399
Total	**0.8854**	**0.4590**	**3.4052**	**7.2400e-003**	**0.7350**	**9.6700e-003**	**0.7447**	**0.1962**	**9.3000e-003**	**0.2055**	**16.7995**	**1,070.6833**	**1,087.4828**	**1.7302**	**0.0708**	**1,151.8220**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.5097	4.0000e-005	3.9000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.5900e-003	7.5900e-003	2.0000e-005	0.0000	8.0900e-003
Energy	6.0900e-003	0.0553	0.0465	3.3000e-004		4.2100e-003	4.2100e-003		4.2100e-003	4.2100e-003	0.0000	267.8049	267.8049	0.0138	2.6400e-003	268.9382
Mobile	0.3697	0.4037	3.3549	6.9100e-003	0.7350	5.4500e-003	0.7405	0.1962	5.0800e-003	0.2013	0.0000	649.1939	649.1939	0.0475	0.0299	659.2892
Waste						0.0000	0.0000		0.0000	0.0000	1.5123	0.0000	1.5123	0.0894	0.0000	3.7466
Water						0.0000	0.0000		0.0000	0.0000	15.2872	153.6769	168.9641	1.5795	0.0382	219.8399
Total	**0.8854**	**0.4590**	**3.4052**	**7.2400e-003**	**0.7350**	**9.6700e-003**	**0.7447**	**0.1962**	**9.3000e-003**	**0.2055**	**16.7995**	**1,070.6833**	**1,087.4828**	**1.7302**	**0.0708**	**1,151.8220**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**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	Demolition	Demolition	1/25/2022	1/25/2022	5	1	

Acres of Grading (Site Preparation Phase): 0

Vista 1430 Decision Street Existing Baseline - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Acres of Grading (Grading Phase): 0

Acres of Paving: 2.94

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition			0.00	0.00	10.80	7.30				

3.1 Mitigation Measures Construction

3.2 Demolition - 2022

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
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
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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
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
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.3697	0.4037	3.3549	6.9100e-003	0.7350	5.4500e-003	0.7405	0.1962	5.0800e-003	0.2013	0.0000	649.1939	649.1939	0.0475	0.0299	659.2892
Unmitigated	0.3697	0.4037	3.3549	6.9100e-003	0.7350	5.4500e-003	0.7405	0.1962	5.0800e-003	0.2013	0.0000	649.1939	649.1939	0.0475	0.0299	659.2892

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Research & Development	784.00	784.00	784.00	1,964,898	1,964,898
Total	784.00	784.00	784.00	1,964,898	1,964,898

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Research & Development	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949
Research & Development	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949

5.0 Energy Detail

Vista 1430 Decision Street Existing Baseline - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	207.5593	207.5593	0.0127	1.5400e-003	208.3346
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	207.5593	207.5593	0.0127	1.5400e-003	208.3346
NaturalGas Mitigated	6.0900e-003	0.0553	0.0465	3.3000e-004		4.2100e-003	4.2100e-003		4.2100e-003	4.2100e-003	0.0000	60.2456	60.2456	1.1500e-003	1.1000e-003	60.6036
NaturalGas Unmitigated	6.0900e-003	0.0553	0.0465	3.3000e-004		4.2100e-003	4.2100e-003		4.2100e-003	4.2100e-003	0.0000	60.2456	60.2456	1.1500e-003	1.1000e-003	60.6036

Vista 1430 Decision Street Existing Baseline - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	1.12896e+006	6.0900e-003	0.0553	0.0465	3.3000e-004		4.2100e-003	4.2100e-003		4.2100e-003	4.2100e-003	0.0000	60.2456	60.2456	1.1500e-003	1.1000e-003	60.6036
Total		**6.0900e-003**	**0.0553**	**0.0465**	**3.3000e-004**		**4.2100e-003**	**4.2100e-003**		**4.2100e-003**	**4.2100e-003**	**0.0000**	**60.2456**	**60.2456**	**1.1500e-003**	**1.1000e-003**	**60.6036**

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	1.12896e+006	6.0900e-003	0.0553	0.0465	3.3000e-004		4.2100e-003	4.2100e-003		4.2100e-003	4.2100e-003	0.0000	60.2456	60.2456	1.1500e-003	1.1000e-003	60.6036
Total		**6.0900e-003**	**0.0553**	**0.0465**	**3.3000e-004**		**4.2100e-003**	**4.2100e-003**		**4.2100e-003**	**4.2100e-003**	**0.0000**	**60.2456**	**60.2456**	**1.1500e-003**	**1.1000e-003**	**60.6036**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	45780	11.2129	6.9000e-004	8.0000e-005	11.2548
Research & Development	801640	196.3463	0.0120	1.4500e-003	197.0798
Total		**207.5593**	**0.0127**	**1.5300e-003**	**208.3346**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	45780	11.2129	6.9000e-004	8.0000e-005	11.2548
Research & Development	801640	196.3463	0.0120	1.4500e-003	197.0798
Total		**207.5593**	**0.0127**	**1.5300e-003**	**208.3346**

6.0 Area Detail

Vista 1430 Decision Street Existing Baseline - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5097	4.0000e-005	3.9000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.5900e-003	7.5900e-003	2.0000e-005	0.0000	8.0900e-003
Unmitigated	0.5097	4.0000e-005	3.9000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.5900e-003	7.5900e-003	2.0000e-005	0.0000	8.0900e-003

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	0.1181					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3912					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.6000e-004	4.0000e-005	3.9000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.5900e-003	7.5900e-003	2.0000e-005	0.0000	8.0900e-003
Total	**0.5097**	**4.0000e-005**	**3.9000e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**7.5900e-003**	**7.5900e-003**	**2.0000e-005**	**0.0000**	**8.0900e-003**

Vista 1430 Decision Street Existing Baseline - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.1181					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3912					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.6000e-004	4.0000e-005	3.9000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.5900e-003	7.5900e-003	2.0000e-005	0.0000	8.0900e-003
Total	**0.5097**	**4.0000e-005**	**3.9000e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**7.5900e-003**	**7.5900e-003**	**2.0000e-005**	**0.0000**	**8.0900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	168.9641	1.5795	0.0382	219.8399
Unmitigated	168.9641	1.5795	0.0382	219.8399

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Research & Development	48.186 / 0	168.9641	1.5795	0.0382	219.8399
Total		**168.9641**	**1.5795**	**0.0382**	**219.8399**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Research & Development	48.186 / 0	168.9641	1.5795	0.0382	219.8399
Total		**168.9641**	**1.5795**	**0.0382**	**219.8399**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.5123	0.0894	0.0000	3.7466
Unmitigated	1.5123	0.0894	0.0000	3.7466

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Research & Development	7.45	1.5123	0.0894	0.0000	3.7466
Total		**1.5123**	**0.0894**	**0.0000**	**3.7466**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Research & Development	7.45	1.5123	0.0894	0.0000	3.7466
Total		**1.5123**	**0.0894**	**0.0000**	**3.7466**

9.0 Operational Offroad

Vista 1430 Decision Street Existing Baseline - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Vista 1430 Decision Street Existing Baseline - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Vista 1430 Decision Street Existing Baseline

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	98.00	1000sqft	5.56	98,000.00	0
Parking Lot	327.00	Space	2.94	130,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2030
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	318.22	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - 60% RPS by 2030

Land Use - existing 98,000 SF R&D office building with approximately 327 parking spaces

Construction Phase - Operations only

Off-road Equipment -

Vehicle Trips - From Project Trip Generation

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	1.00
tblConstructionPhase	PhaseEndDate	2/21/2022	1/25/2022
tblLandUse	LotAcreage	2.25	5.56
tblProjectCharacteristics	CO2IntensityFactor	539.98	318.22

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	ST_TR	1.90	8.00
tblVehicleTrips	SU_TR	1.11	8.00
tblVehicleTrips	WD_TR	11.26	8.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
2022					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Vista 1430 Decision Street Existing Baseline - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

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	0.5097	3.0000e-005	3.8900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.5900e-003	7.5900e-003	2.0000e-005	0.0000	8.0800e-003
Energy	6.0900e-003	0.0553	0.0465	3.3000e-004		4.2100e-003	4.2100e-003		4.2100e-003	4.2100e-003	0.0000	182.5640	182.5640	0.0138	2.6400e-003	183.6974
Mobile	0.2986	0.2998	2.7712	5.8200e-003	0.7349	4.0600e-003	0.7389	0.1961	3.7800e-003	0.1999	0.0000	569.5526	569.5526	0.0397	0.0250	577.9997
Waste						0.0000	0.0000		0.0000	0.0000	1.5123	0.0000	1.5123	0.0894	0.0000	3.7466
Water						0.0000	0.0000		0.0000	0.0000	15.2872	90.5646	105.8518	1.5795	0.0382	156.7276
Total	**0.8143**	**0.3552**	**2.8216**	**6.1500e-003**	**0.7349**	**8.2800e-003**	**0.7431**	**0.1961**	**8.0000e-003**	**0.2041**	**16.7995**	**842.6888**	**859.4883**	**1.7225**	**0.0659**	**922.1793**

Vista 1430 Decision Street Existing Baseline - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.5097	3.0000e-005	3.8900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.5900e-003	7.5900e-003	2.0000e-005	0.0000	8.0800e-003
Energy	6.0900e-003	0.0553	0.0465	3.3000e-004		4.2100e-003	4.2100e-003		4.2100e-003	4.2100e-003	0.0000	182.5640	182.5640	0.0138	2.6400e-003	183.6974
Mobile	0.2986	0.2998	2.7712	5.8200e-003	0.7349	4.0600e-003	0.7389	0.1961	3.7800e-003	0.1999	0.0000	569.5526	569.5526	0.0397	0.0250	577.9997
Waste						0.0000	0.0000		0.0000	0.0000	1.5123	0.0000	1.5123	0.0894	0.0000	3.7466
Water						0.0000	0.0000		0.0000	0.0000	15.2872	90.5646	105.8518	1.5795	0.0382	156.7276
Total	**0.8143**	**0.3552**	**2.8216**	**6.1500e-003**	**0.7349**	**8.2800e-003**	**0.7431**	**0.1961**	**8.0000e-003**	**0.2041**	**16.7995**	**842.6888**	**859.4883**	**1.7225**	**0.0659**	**922.1793**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**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	Demolition	Demolition	1/25/2022	1/25/2022	5	1	

Acres of Grading (Site Preparation Phase): 0

Vista 1430 Decision Street Existing Baseline - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Acres of Grading (Grading Phase): 0

Acres of Paving: 2.94

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition			0.00	0.00	10.80	7.30				

3.1 Mitigation Measures Construction

3.2 Demolition - 2022

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
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
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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
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
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.2986	0.2998	2.7712	5.8200e-003	0.7349	4.0600e-003	0.7389	0.1961	3.7800e-003	0.1999	0.0000	569.5526	569.5526	0.0397	0.0250	577.9997
Unmitigated	0.2986	0.2998	2.7712	5.8200e-003	0.7349	4.0600e-003	0.7389	0.1961	3.7800e-003	0.1999	0.0000	569.5526	569.5526	0.0397	0.0250	577.9997

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Research & Development	784.00	784.00	784.00	1,964,898	1,964,898
Total	784.00	784.00	784.00	1,964,898	1,964,898

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Research & Development	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.575453	0.061728	0.171227	0.112384	0.022882	0.006522	0.009800	0.006298	0.000679	0.000623	0.027611	0.000857	0.003936
Research & Development	0.575453	0.061728	0.171227	0.112384	0.022882	0.006522	0.009800	0.006298	0.000679	0.000623	0.027611	0.000857	0.003936

5.0 Energy Detail

Vista 1430 Decision Street Existing Baseline - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	122.3184	122.3184	0.0127	1.5400e-003	123.0937
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	122.3184	122.3184	0.0127	1.5400e-003	123.0937
NaturalGas Mitigated	6.0900e-003	0.0553	0.0465	3.3000e-004		4.2100e-003	4.2100e-003		4.2100e-003	4.2100e-003	0.0000	60.2456	60.2456	1.1500e-003	1.1000e-003	60.6036
NaturalGas Unmitigated	6.0900e-003	0.0553	0.0465	3.3000e-004		4.2100e-003	4.2100e-003		4.2100e-003	4.2100e-003	0.0000	60.2456	60.2456	1.1500e-003	1.1000e-003	60.6036

Vista 1430 Decision Street Existing Baseline - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	1.12896e+006	6.0900e-003	0.0553	0.0465	3.3000e-004		4.2100e-003	4.2100e-003		4.2100e-003	4.2100e-003	0.0000	60.2456	60.2456	1.1500e-003	1.1000e-003	60.6036
Total		**6.0900e-003**	**0.0553**	**0.0465**	**3.3000e-004**		**4.2100e-003**	**4.2100e-003**		**4.2100e-003**	**4.2100e-003**	**0.0000**	**60.2456**	**60.2456**	**1.1500e-003**	**1.1000e-003**	**60.6036**

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	1.12896e+006	6.0900e-003	0.0553	0.0465	3.3000e-004		4.2100e-003	4.2100e-003		4.2100e-003	4.2100e-003	0.0000	60.2456	60.2456	1.1500e-003	1.1000e-003	60.6036
Total		**6.0900e-003**	**0.0553**	**0.0465**	**3.3000e-004**		**4.2100e-003**	**4.2100e-003**		**4.2100e-003**	**4.2100e-003**	**0.0000**	**60.2456**	**60.2456**	**1.1500e-003**	**1.1000e-003**	**60.6036**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	45780	6.6080	6.9000e-004	8.0000e-005	6.6499
Research & Development	801640	115.7105	0.0120	1.4500e-003	116.4439
Total		**122.3184**	**0.0127**	**1.5300e-003**	**123.0937**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	45780	6.6080	6.9000e-004	8.0000e-005	6.6499
Research & Development	801640	115.7105	0.0120	1.4500e-003	116.4439
Total		**122.3184**	**0.0127**	**1.5300e-003**	**123.0937**

6.0 Area Detail

Vista 1430 Decision Street Existing Baseline - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5097	3.0000e-005	3.8900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.5900e-003	7.5900e-003	2.0000e-005	0.0000	8.0800e-003
Unmitigated	0.5097	3.0000e-005	3.8900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.5900e-003	7.5900e-003	2.0000e-005	0.0000	8.0800e-003

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	0.1181					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3912					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.6000e-004	3.0000e-005	3.8900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.5900e-003	7.5900e-003	2.0000e-005	0.0000	8.0800e-003
Total	**0.5097**	**3.0000e-005**	**3.8900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**7.5900e-003**	**7.5900e-003**	**2.0000e-005**	**0.0000**	**8.0800e-003**

Vista 1430 Decision Street Existing Baseline - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.1181					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3912					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.6000e-004	3.0000e-005	3.8900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.5900e-003	7.5900e-003	2.0000e-005	0.0000	8.0800e-003
Total	**0.5097**	**3.0000e-005**	**3.8900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**7.5900e-003**	**7.5900e-003**	**2.0000e-005**	**0.0000**	**8.0800e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	105.8518	1.5795	0.0382	156.7276
Unmitigated	105.8518	1.5795	0.0382	156.7276

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Research & Development	48.186 / 0	105.8518	1.5795	0.0382	156.7276
Total		**105.8518**	**1.5795**	**0.0382**	**156.7276**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Research & Development	48.186 / 0	105.8518	1.5795	0.0382	156.7276
Total		**105.8518**	**1.5795**	**0.0382**	**156.7276**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.5123	0.0894	0.0000	3.7466
Unmitigated	1.5123	0.0894	0.0000	3.7466

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Research & Development	7.45	1.5123	0.0894	0.0000	3.7466
Total		**1.5123**	**0.0894**	**0.0000**	**3.7466**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Research & Development	7.45	1.5123	0.0894	0.0000	3.7466
Total		**1.5123**	**0.0894**	**0.0000**	**3.7466**

9.0 Operational Offroad

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Vista 1430 Decision Street Existing Baseline - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Vista 1430 Decision Street Existing Baseline

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	98.00	1000sqft	5.56	98,000.00	0
Parking Lot	327.00	Space	2.94	130,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2050
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - SDGE Net Zero by 2045

Land Use - existing 98,000 SF R&D office building with approximately 327 parking spaces

Construction Phase - Operations only

Off-road Equipment -

Vehicle Trips - From Project Trip Generation

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	1.00
tblConstructionPhase	PhaseEndDate	2/21/2022	1/25/2022
tblLandUse	LotAcreage	2.25	5.56
tblProjectCharacteristics	CH4IntensityFactor	0.033	0

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblProjectCharacteristics	CO2IntensityFactor	539.98	0
tblProjectCharacteristics	N2OIntensityFactor	0.004	0
tblVehicleTrips	ST_TR	1.90	8.00
tblVehicleTrips	SU_TR	1.11	8.00
tblVehicleTrips	WD_TR	11.26	8.00

2.0 Emissions Summary

Vista 1430 Decision Street Existing Baseline - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2022					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
2022					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)

Vista 1430 Decision Street Existing Baseline - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

		Highest		

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	0.5097	3.0000e-005	3.8800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.5900e-003	7.5900e-003	2.0000e-005	0.0000	8.0800e-003
Energy	6.0900e-003	0.0553	0.0465	3.3000e-004		4.2100e-003	4.2100e-003		4.2100e-003	4.2100e-003	0.0000	60.2456	60.2456	1.1500e-003	1.1000e-003	60.6036
Mobile	0.2291	0.2436	2.3659	5.0500e-003	0.7351	2.4300e-003	0.7375	0.1962	2.2700e-003	0.1985	0.0000	514.6671	514.6671	0.0337	0.0226	522.2545
Waste						0.0000	0.0000		0.0000	0.0000	1.5123	0.0000	1.5123	0.0894	0.0000	3.7466
Water						0.0000	0.0000		0.0000	0.0000	15.2872	0.0000	15.2872	1.5701	0.0371	65.5889
Total	**0.7448**	**0.2990**	**2.4162**	**5.3800e-003**	**0.7351**	**6.6500e-003**	**0.7417**	**0.1962**	**6.4900e-003**	**0.2027**	**16.7995**	**574.9203**	**591.7198**	**1.6944**	**0.0608**	**652.2018**

Vista 1430 Decision Street Existing Baseline - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.5097	3.0000e-005	3.8800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.5900e-003	7.5900e-003	2.0000e-005	0.0000	8.0800e-003
Energy	6.0900e-003	0.0553	0.0465	3.3000e-004		4.2100e-003	4.2100e-003		4.2100e-003	4.2100e-003	0.0000	60.2456	60.2456	1.1500e-003	1.1000e-003	60.6036
Mobile	0.2291	0.2436	2.3659	5.0500e-003	0.7351	2.4300e-003	0.7375	0.1962	2.2700e-003	0.1985	0.0000	514.6671	514.6671	0.0337	0.0226	522.2545
Waste						0.0000	0.0000		0.0000	0.0000	1.5123	0.0000	1.5123	0.0894	0.0000	3.7466
Water						0.0000	0.0000		0.0000	0.0000	15.2872	0.0000	15.2872	1.5701	0.0371	65.5889
Total	**0.7448**	**0.2990**	**2.4162**	**5.3800e-003**	**0.7351**	**6.6500e-003**	**0.7417**	**0.1962**	**6.4900e-003**	**0.2027**	**16.7995**	**574.9203**	**591.7198**	**1.6944**	**0.0608**	**652.2018**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**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	Demolition	Demolition	1/25/2022	1/25/2022	5	1	

Acres of Grading (Site Preparation Phase): 0

Vista 1430 Decision Street Existing Baseline - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Acres of Grading (Grading Phase): 0

Acres of Paving: 2.94

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition			0.00	0.00	10.80	7.30				

3.1 Mitigation Measures Construction

3.2 Demolition - 2022

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
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
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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
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
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.2291	0.2436	2.3659	5.0500e-003	0.7351	2.4300e-003	0.7375	0.1962	2.2700e-003	0.1985	0.0000	514.6671	514.6671	0.0337	0.0226	522.2545
Unmitigated	0.2291	0.2436	2.3659	5.0500e-003	0.7351	2.4300e-003	0.7375	0.1962	2.2700e-003	0.1985	0.0000	514.6671	514.6671	0.0337	0.0226	522.2545

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Research & Development	784.00	784.00	784.00	1,964,898	1,964,898
Total	784.00	784.00	784.00	1,964,898	1,964,898

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Research & Development	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.584721	0.061219	0.165591	0.108994	0.022611	0.007030	0.011356	0.006685	0.000606	0.000664	0.026637	0.000823	0.003063
Research & Development	0.584721	0.061219	0.165591	0.108994	0.022611	0.007030	0.011356	0.006685	0.000606	0.000664	0.026637	0.000823	0.003063

5.0 Energy Detail

Vista 1430 Decision Street Existing Baseline - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	6.0900e-003	0.0553	0.0465	3.3000e-004		4.2100e-003	4.2100e-003		4.2100e-003	4.2100e-003	0.0000	60.2456	60.2456	1.1500e-003	1.1000e-003	60.6036
NaturalGas Unmitigated	6.0900e-003	0.0553	0.0465	3.3000e-004		4.2100e-003	4.2100e-003		4.2100e-003	4.2100e-003	0.0000	60.2456	60.2456	1.1500e-003	1.1000e-003	60.6036

Vista 1430 Decision Street Existing Baseline - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	1.12896e+006	6.0900e-003	0.0553	0.0465	3.3000e-004		4.2100e-003	4.2100e-003		4.2100e-003	4.2100e-003	0.0000	60.2456	60.2456	1.1500e-003	1.1000e-003	60.6036
Total		**6.0900e-003**	**0.0553**	**0.0465**	**3.3000e-004**		**4.2100e-003**	**4.2100e-003**		**4.2100e-003**	**4.2100e-003**	**0.0000**	**60.2456**	**60.2456**	**1.1500e-003**	**1.1000e-003**	**60.6036**

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	1.12896e+006	6.0900e-003	0.0553	0.0465	3.3000e-004		4.2100e-003	4.2100e-003		4.2100e-003	4.2100e-003	0.0000	60.2456	60.2456	1.1500e-003	1.1000e-003	60.6036
Total		**6.0900e-003**	**0.0553**	**0.0465**	**3.3000e-004**		**4.2100e-003**	**4.2100e-003**		**4.2100e-003**	**4.2100e-003**	**0.0000**	**60.2456**	**60.2456**	**1.1500e-003**	**1.1000e-003**	**60.6036**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	45780	0.0000	0.0000	0.0000	0.0000
Research & Development	801640	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	45780	0.0000	0.0000	0.0000	0.0000
Research & Development	801640	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

Vista 1430 Decision Street Existing Baseline - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5097	3.0000e-005	3.8800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.5900e-003	7.5900e-003	2.0000e-005	0.0000	8.0800e-003
Unmitigated	0.5097	3.0000e-005	3.8800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.5900e-003	7.5900e-003	2.0000e-005	0.0000	8.0800e-003

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	0.1181					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3912					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.6000e-004	3.0000e-005	3.8800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.5900e-003	7.5900e-003	2.0000e-005	0.0000	8.0800e-003
Total	**0.5097**	**3.0000e-005**	**3.8800e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**7.5900e-003**	**7.5900e-003**	**2.0000e-005**	**0.0000**	**8.0800e-003**

Vista 1430 Decision Street Existing Baseline - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.1181					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3912					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.6000e-004	3.0000e-005	3.8800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.5900e-003	7.5900e-003	2.0000e-005	0.0000	8.0800e-003
Total	**0.5097**	**3.0000e-005**	**3.8800e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**7.5900e-003**	**7.5900e-003**	**2.0000e-005**	**0.0000**	**8.0800e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	15.2872	1.5701	0.0371	65.5889
Unmitigated	15.2872	1.5701	0.0371	65.5889

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Research & Development	48.186 / 0	15.2872	1.5701	0.0371	65.5889
Total		**15.2872**	**1.5701**	**0.0371**	**65.5889**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Research & Development	48.186 / 0	15.2872	1.5701	0.0371	65.5889
Total		**15.2872**	**1.5701**	**0.0371**	**65.5889**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.5123	0.0894	0.0000	3.7466
Unmitigated	1.5123	0.0894	0.0000	3.7466

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Research & Development	7.45	1.5123	0.0894	0.0000	3.7466
Total		**1.5123**	**0.0894**	**0.0000**	**3.7466**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Research & Development	7.45	1.5123	0.0894	0.0000	3.7466
Total		**1.5123**	**0.0894**	**0.0000**	**3.7466**

9.0 Operational Offroad

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

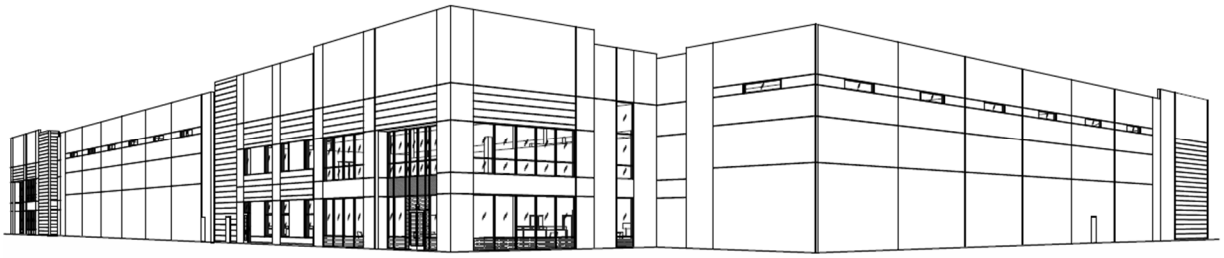
Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

1430 Decision Street Project, City of Vista
Noise Technical Report



Submitted to:

City of Vista
Planning Division
200 Civic Center Drive
Vista, CA 92084

Prepared by:

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January 2022

TABLE OF CONTENTS

1430 DECISION STREET PROJECT, CITY OF VISTA NOISE TECHNICAL REPORT

NOISE TECHNICAL REPORT

1430 DECISION STREET PROJECT, CITY OF VISTA

1.1 INTRODUCTION

This report presents an analysis of potential noise impacts associated with the 1430 Decision Street Project (the "Project") in the City of Vista, CA. The Project consists of the demolition of an existing two-story office (research and development) building (approximately 98,000 square feet) and the construction of an approximately 123,000 square foot industrial building on the 7.81-acre property (APN# 219-011-88). The Project would not change the General Plan Land Use Designation (Research Light Industrial [RLI]) or the Zoning Designation (Vista Business Park Specific Plan, Specific Plan Area B) for the property.

The nearest residences are approximately 2,000 feet to the east and the nearest school is approximately 3,000 feet to the north. The adjacent land uses to the property are of the same General Plan Land Use and Zoning designation, except for the parcel to the south, which has the General Plan Land Use Designation of General Commercial (GC).

Project construction would commence in June 2022 and would be completed in July 2023 (approximately 13 months). Demolition would be required to remove the existing structure onsite. Site preparation and grading activities would follow but would not require haul trucks for soil import/export (cut/fill would be balanced). Building construction would follow and would comprise most of the construction period. Paving and architectural coating phases would be the final construction phases.

This report presents an overview of existing noise conditions at the Project site, an overview of noise background information, noise regulatory setting, and an analysis of potential noise impacts of the Project. Land use noise compatibility is not addressed in this report because the Project would replace an existing use and it would be consistent with the General Plan Land Use Designation and Zoning Designation of the property and the surrounding area. All noise impacts were found to be **less than significant**.

1.2 SETTING

1.2.1 NOISE SETTING

Noise Descriptors

Sound is mechanical energy transmitted by pressure waves through a medium such as air. Noise is defined as unwanted sound. Sound pressure level has become the most common descriptor used to characterize the "loudness" of an ambient sound level. Sound pressure level is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing, and 120 to 140 dB corresponding to the threshold of pain. Decibels are measured using different scales, and it has been found that A- weighting of sound levels best reflects the human ear's reduced sensitivity to low frequencies, and correlates well with human perceptions of the annoying aspects of noise. The A-weighted decibel scale (dBA) is cited in most noise criteria. All references to decibels (dB) in this report will be A-weighted unless noted otherwise.

Several time-averaged scales represent noise environments and consequences of human activities. The most commonly used noise descriptors are the equivalent A–weighted sound level over a given time period (Leq)[1]; average day–night 24-hour average sound level (Ldn)[2] with a nighttime increase of 10 dB to account for sensitivity to noise during the nighttime; and community noise equivalent level (CNEL)[3], also a 24-hour average that includes both an evening and a nighttime sensitivity weighting.

Noise Attenuation

Stationary point sources of noise, including construction equipment, attenuate (lessen) at a rate of 6 to 7.5 dB per doubling of distance from the source, depending on ground absorption. Soft sites attenuate at 7.5 dB per doubling because they have an absorptive ground surface such as soft dirt, grass, or scattered bushes and trees. Hard sites have reflective surfaces (e.g., parking lots or smooth bodies of water) and therefore have less attenuation (6.0 dB per doubling). A street or roadway with moving vehicles (known as a "line" source), would typically attenuate at a lower rate, approximately 3 to 4.5 dB each time the distance doubles from the source, which also depends on ground absorption (CalTrans, 1998). Physical barriers located between a noise source and the noise receptor, such as berms or sound walls, will increase the attenuation that occurs by distance alone.

1 The Equivalent Sound Level (Leq) is a single value of a constant sound level for the same measurement period duration, which has sound energy equal to the time–varying sound energy in the measurement period.

2 Ldn is the day–night average sound level that is equal to the 24-hour A-weighted equivalent sound level with a 10-decibel penalty applied to night between 10:00 p.m. and 7:00 a.m.

3 CNEL is the average A-weighted noise level during a 24-hour day, obtained by addition of 5 decibels in the evening from 7:00 to 10:00 p.m., and an addition of a 10–decibel penalty in the night between 10:00 p.m. and 7:00 a.m.

1.2.2 REGULATORY SETTING

City of Vista Noise Ordinance (Municipal Code, Chapter 8.32, Noise Control)

Sections 8.32.010 through 8.32.060 of the City of Vista Municipal Code pertain to City noise requirements and enforcement of violations. The City has adopted the County of San Diego Noise Ordinance for the purpose of controlling excessive noise levels, including noise from construction activities.

Table NOI-1, *Applicable Exterior Property Line Noise Limits,* lists the applicable exterior property line noise limits. This table is specific to the City of Vista and replaces the table in Section 36.404 of the County noise ordinance. It is unlawful for any person to cause or allow the creation of any noise to the extent that the one-hour average sound level at any point on or beyond the boundaries of the property exceeds these limits. The sound level limit at a location on a boundary between two zones is the arithmetic mean of the respective limits for the two zones.

TABLE NOI-1 APPLICABLE EXTERIOR PROPERTY LINE NOISE LIMITS

Zone	Time	Applicable Limit One-hour Average Sound Level (dBA)
A-1, E-1, O, OSR R-1B, MHP	7:00 a.m. – 10:00 p. m. 10:00 p.m. – 7:00 a. m.	50 45
R-M	7:00 a.m. – 10:00 p.m. 10:00 p.m. – 7:00 a.m.	55 50
C-1, C-2, O-3, C-T, OP, M-U and Downtown Specific Plan	7:00 a.m. – 10:00 p.m. 10:00 p.m. – 7:00 a.m.	60 55
M-1, I-P, all areas of the Vista Business Park Specific Plan and Specific Plan 14	Any time	70

Source: City of Vista Municipal Code Section 8.32.40

A-1 = Agricultural; C-1 = Commercial; C-2 = Commercial; C-T = Commercial Transient; E-1 = Estate; I-P = Industrial; MHP = Mobile Home Park; M-U = Mixed Use; O = Open Space; O-3 = Office Park; OP = Office Professional; OSR = Open Space Residential; R-1B = Residence; R-M = Multi-Residential

As discussed above, the Project site is within the Vista Business Park Specific Plan. Therefore, the applicable property line noise limit is 70 dB (One-hour average at any time).

The adopted County of San Diego Noise Ordinance also stipulates controlling construction noise. San Diego County Code Sections 36.408 and 36.409, Construction Equipment, state that, except for emergency work, it shall be unlawful for any person to operate or cause to be operated, construction equipment:

a. Between 7:00 p.m. and 7:00 a.m.

b. On Sunday or a holiday. For the purposes of this section, a holiday means January 1, the last Monday in May, July 4, the first Monday in September, December 25, and any day appointed by the President as a special national holiday or the Governor of the State as a special State holiday. A person may, however, operate construction equipment on a

Sunday or holiday between the hours of 10:00 a.m. and 5:00 p.m. at the person's residence or for the purpose of construction of a residence for himself or herself, provided that the operation of construction equipment is not carried out for financial consideration or other consideration of any kind and does not violate the limits in Sections 36.409 and 36.410.

c. Except for emergency work, it shall be unlawful for any person to operate construction equipment or cause construction equipment to be operated, that exceeds an average sound level of 75 dBA for an 8-hour period, between 7:00 a.m. and 7:00 p.m., when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is being received.

Section 36.410 of the County ordinance provides additional limitation on construction equipment beyond Section 36.404 pertaining to impulsive noise. Except for emergency work or work on a public road project, no person shall produce or cause to be produced an impulsive noise that exceeds the maximum sound level shown in **Table NOI-2***, Maximum Sound Levels (Impulsive)*, when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is received, for 25 percent of the minutes in the measurement period.

TABLE NOI-2 MAXIMUM SOUND LEVELS (IMPULSIVE)

Occupied Property Use	Decibels (dBA) L_{MAX}
Agricultural, commercial, or industrial use	85

Source: County of San Diego Municipal Code Section 36.410

1.2.3 PROJECT SITE

As discussed above, the adjacent land uses to the property are of the same General Plan Land Use and Zoning Designation, except for the parcel to the south, which has the General Plan Land Use designation of General Commercial (GC). According to the City's General Plan Noise Element Existing and Future Noise Contours, the Project site is currently exposed to traffic noise of up to 65 dB, CNEL from Business Park Drive to the west and could be exposed to traffic noise of up to 70 dB, CNEL from Business Park Drive to the west in the future (City of Vista, 2011).

1.2.4 SENSITIVE RECEPTORS

The City of Vista General Plan identifies noise-sensitive land uses as residential neighborhoods, picnic areas, recreation areas, playgrounds, active sports areas, golf courses, parks, residences, motels, hotels, schools, churches, libraries, and hospitals. The nearest sensitive receptors are residences approximately 2,000 feet to the east. The nearest school is approximately 3,000 feet to the north.

1.3 THRESHOLDS OF SIGNIFICANCE

The significance of potential impacts was determined based on State CEQA Guidelines, Appendix G. Using Appendix G evaluation thresholds, the Project would be considered to have significant noise impacts if it results in:

A. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;

- Construction activity would be considered significant for nearby residences if it exceeds an 8-hour average exterior noise level of 75 dB, or a maximum impulsive noise level of 82 dB, Lmax on an occupied property. The ordinance prohibits construction and building work between the hours of 7:00 p.m. and 7:00 a.m. the next day, on Sundays, or on a holiday.

- Per the COV Noise Ordinance, impacts would be significant if Project operations exceed exceeds 70 dB for any hour at the property line.

- For traffic related noise, impacts are considered significant where existing traffic noise is less than 65 dB, CNEL and implementation of a Project would result in an increase of the noise level by 5 dB, CNEL or more.

B. Generation of excessive groundborne vibration or groundborne noise levels; or

    i. If Project construction vibration exceeds Caltrans structural damage thresholds for structures on adjacent properties.

C. For a project located within the vicinity of a private airstrip or an airport land use plan, or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.

    i. The Project is not within the vicinity of a private airstrip or an airport land use plan or within two miles of a public airport.

1.4 IMPACT ANALYSIS

1.4.1 CONSISTENCY WITH CITY NOISE STANDARDS

Construction Noise Impacts

Project construction activities would include demolition of the existing two-story office building and construction of the Project. Project construction would approximately commence in June 2022 and would be completed in July 2023 (approximately 13 months). Construction activities would occur during the construction hours contained in the adopted County of San Diego Noise Ordinance Sections 36.408 and 36.409 between the hours of 7:00 a.m. and 7:00 p.m. Monday through Saturday. No construction is permitted on Sundays or on holidays.

Demolition and construction activities would require the use of numerous pieces of noise-generating equipment, such as excavating machinery (e.g., backhoes, excavators, front loaders, etc.) and other construction equipment (e.g., compactors, pavers, concrete mixers, trucks, etc.). The noise levels generated by construction equipment would vary greatly depending upon factors such as the type and specific model of the equipment, the operation being performed, the condition of the equipment. **Table NOI-3,** *Construction Equipment Noise Levels,* provides the noise levels at 50 feet and 240 feet (distance from the center of the Project site to the nearest property boundary) for expected construction equipment.

TABLE NOI-3 CONSTRUCTION EQUIPMENT NOISE LEVELS

Construction Equipment	L_{MAX} at 50 feet	L_{MAX} at 240 feet[1]
Backhoe	78	64
Compressor	78	64
Concrete Mixer Truck	79	65
Concrete Saws	90	76
Dozer	82	68
Dump Truck	76	62
Excavator	74	60
Flat Bed Truck	77	63
Front End Loader	76	62
Generator	80	66
Grader	81	67
Paver	85	71
Roller	80	66
Tractor	84	70
Vibratory Concrete Mixer	79	65
Welder	73	59

Source: Federal Highway Administration (FHWA) Roadway Construction Noise Model User's Guide, 2006.

Note: 1. This is the distance from the center of the Project site to the nearest property line.

Construction equipment would not all operate at the same time or location. Furthermore, construction equipment would not be in constant use during the 8-hour operating day. A dozer and an excavator may be working on the Project site simultaneously but would not be working in close proximity to one another at a given time due to the nature of their respective operations. An excavator, dozer, and dump truck were analyzed together for construction noise impacts (due to their likelihood of being used in conjunction with one another) using the Federal Highway Administration's (FHWA's) Roadway Construction Noise Model (RCNM Version 1.1) (**See Noise Appendix** for construction noise modeling). Based on these assumptions, grading operations using an excavator, dozer, and dump truck would be 63.1 dB, Leq and 67.1 dB, Lmax at 240 feet (See **Noise Appendix** for construction noise modeling). These noise levels would not exceed the COV's Noise Ordinance standard of 75 dB, Leq (8-hour standard) or a maximum impulsive noise level of 82 dB, Lmax at the nearest occupied property line. Therefore, the Project would result in a **less-than-significant impact**.

Operational Noise Impacts

Potential Noise Impacts of Loading Docks

Loading dock activities would include heavy trucks stopping (infrequent air brakes), backing into the loading docks (back up alarms), and pulling out of the loading docks (revving engines). A heavy-duty truck typically generates a noise level of approximately 75 dB, Leq at 50 feet (FHWA, 1998). Trucks would be unloaded from the inside of the building and most of the unloading noise would be contained within the building and truck trailer. Noise would occur periodically for several minutes at a time during each delivery/pickup at the Project site. The loading docks would be located on the west side of the Project and would not be in close proximity to any nearby buildings. According to the current site plan, loading dock activity could come within 130 feet of the nearest property line to the west but would mostly occur at distances greater than 130 feet. At 130 feet, periodic noise from heavy-duty trucks would attenuate to approximately 67 dB, Leq at the nearest property line. As mentioned above, use of heavy-duty trucks would only occur periodically for several minutes, therefore, it is likely that noise levels from loading dock activity would be below 67 dB, Leq (one-hour average) at the nearest property line. These noise levels would not exceed the COV's Noise Ordinance standard for exterior property line limits of 70 dB, Leq (One-hour average). Therefore, the Project would result in a **less-than-significant impact**.

Potential Traffic Impacts

A doubling of sound energy results in a 3 dB increase in sound, which means that a doubling of sound energy (e.g., doubling the volume of traffic on a road) would result in a barely perceptible change in sound level. According to the traffic study, the Project would result in a reduction of 3 average daily trips (ADT). Therefore, any changes to existing traffic noise after development of the Project would be imperceptible. Therefore, the Project would result in a **less-than-significant impact**.

Stationary Equipment Impacts

The Project would include mechanical equipment including heating, ventilating, and air conditioning equipment (HVAC) on the rooftop. Noise generated by HVAC varies significantly depending on the equipment type, capacity, location, and enclosure design. Noise levels up to 60 dBA at 15 feet are typical for HVAC equipment (Illigworth and Rodkin, Inc. 2009). Final Project design and development review would comply with the City's Exterior Property Line Noise limits outlined in Section 8.32.40 and would implement design features for mechanical equipment to not exceed the City's noise limits. Final design of the HVAC equipment would need to meet the most conservative threshold, which is the maximum nighttime (10:00 p.m.–7:00 a.m.) outdoor noise level of 45 dBA as measured at the adjacent receiving property. Further, the existing office building has HVAC, and it is unlikely that the Project's proposed HVAC would create a perceptible change in HVAC noise generated on-site. Therefore, the Project would result in a **less-than-significant impact.**

1.4.2 CONSTRUCTION VIBRATION IMPACTS

Construction activities have the potential to result in varying degrees of temporary ground vibration, depending on the specific construction equipment used and operations involved. At the highest levels of vibration, damage to structures is primarily architectural and rarely results in any structural damage. A peak particle velocity (ppv) threshold of 0.5 inches per second or less is sufficient to avoid structural damage (Caltrans, 2013). Project construction would utilize typical construction equipment and would not require activities that produce significant sources of vibration such as pile driving and/or blasting. Vibrational effects from typical construction activities are only a concern within 25 feet of existing structures (Caltrans, 2002). Construction would not occur within 25 feet of an existing off-site structure. Therefore, the Project would result in a **less-than-significant impact**.

1.4.3 AIRCRAFT NOISE IMPACTS

The Project site is subject to some distant aircraft noise, though the Project site is not within the vicinity of a public airport or private airstrip, or within an airport land use plan. The nearest airport is the McClellan-Palomar Airport, located approximately three miles to the southwest. At this distance, no effects related to airport noise would occur at the Project site. Therefore, the Project would result in a **less-than-significant impact**.

1.5 REFERENCES

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California Department of Transportation (Caltrans). 2013. *Transportation and Construction Vibration Guidance Manual, Environmental Engineering, Hazardous Waste, Air, Noise, Paleontology Office*. September.

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Federal Highway Administration (FHWA), 2017. *Roadway Construction Noise Model (RCNM Version 1.1) Available on-line, https://www.fhwa.dot.gov/environment/noise/construction_noise/rcnm/*

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Noise Appendix

Construction Noise Modeling - RCNM Noise Modeling Results

RCH GROUP
planning & environmental consulting

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 01/05/2022
Case Description: 1430 Decision Street Construction Noise Analysis

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
1430 Decision Street	Industrial	75.0	70.0	65.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Excavator	No	40		80.7	240.0	0.0
Dump Truck	No	40		76.5	240.0	0.0
Dozer	No	40		81.7	240.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Excavator	67.1	63.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dump Truck	62.8	58.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	68.0	64.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	68.0	67.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

HELIX Environmental Planning

1430 Decision Street Redevelopment Project

Cultural Resources Study

November 2022 | 04512.00023.001

Submitted to:

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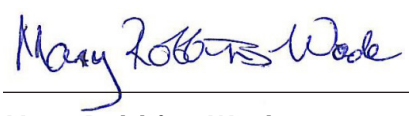

Mary Robbins-Wade
Cultural Resources Group Manager

National Archaeological Database Information

Authors:	Mary Robbins-Wade, M.A., RPA, Theodore G. Cooley, M.A., RPA, and Trevor Gittelhough, M.A., RPA
Firm:	HELIX Environmental Planning, Inc.
Client/Project:	Summit Environmental Group, Inc. / 1430 Decision Street Redevelopment Project
Report Date:	November 2022
Report Title:	Cultural Resources Study for the 1430 Decision Street Redevelopment Project, Vista, San Diego County, California
Submitted to:	City of Vista
Type of Study:	Cultural Resources Study
New Sites:	None
Updated Sites:	None
USGS Quad:	San Marcos 7.5' Quadrangle
Acreage:	Approximately 7.8 acres
Key Words:	San Diego County; Township 12 South, Range 3 West; City of Vista; Business Park Drive; Scott Street; Decision Street; pedestrian survey; cultural resource study; no resources found

TABLE OF CONTENTS

TABLE OF CONTENTS (cont.)

LIST OF APPENDICES

LIST OF FIGURES

LIST OF TABLES

ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
AMSL	above mean sea level
BP	before present
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CHRIS	California Historical Resources Information System
CRHR	California Register of Historical Resources
HELIX	Helix Environmental Planning, Inc.
NAHC	Native American Heritage Commission
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
OHP	Office of Historic Preservation
PRC	Public Resources Code
RCS	Resource Conservation and Sustainability Element
SCIC	South Coastal Information Center
TCP	Traditional Cultural Properties
TCR	Tribal Cultural Resources
USGS	U.S. Geological Survey

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EXECUTIVE SUMMARY

HELIX Environmental Planning, Inc. (HELIX) was contracted by Summit Environmental Group, Inc. to provide cultural resources services for the 1430 Decision Street Project (project) in the City of Vista, San Diego County, California. The project is a proposed approximately 7.8-acre redevelopment project of an existing two-story office building into a 120,000 square foot warehouse distribution building. A cultural resources study including a records search, Sacred Lands File search, Native American outreach, a review of historic aerial photographs and maps, and a pedestrian survey was conducted for the project area. This report details the methods and results of the cultural resources study and has been prepared to comply with the California Environmental Quality Act (CEQA) and the guidelines of the City of Vista.

The records search conducted at the South Coast Information Center Information Center on September 7, 2022 indicated that 63 previous cultural resources studies have been conducted within one mile of the project area, five of which overlap with the project area. The records search results also indicated that a total of 40 cultural resources have been previously recorded within one mile of the project area; however, no sites have been recorded within the project site itself.

A Sacred Lands File search was requested from the Native American Heritage Commission on September 2, 2022. The response, received on November 8, 2022, indicated that the Sacred Lands File search results were negative. HELIX spoke with the Tribal Historic Preservation Officer of the Rincon Band of Luiseño Indians and the Cultural Resources Director of the San Luis Rey Band of Mission Indians in October 2022 regarding the project and potential cultural resources concerns. Both tribes indicated that despite the developed nature of the project site, there is a potential for cultural material to be present, even in artificial fills.

The field investigations included a pedestrian survey of the study area by a HELIX archaeologist and a Luiseño Native American monitor on September 8, 2022. The survey did not result in the identification of any cultural material within the project area, although one small fragment of weathered marine shell was observed.

Based on the results of the current study, no cultural resources will be affected by the 1430 Decision Street Project. However, due to the cultural sensitivity of the project region and tribal recommendations, it is recommended that an archaeological and Native American monitoring program be implemented for initial ground-disturbing activities. The monitoring program would include attendance by the archaeologist and Luiseño -Native American monitor at a preconstruction meeting with the grading contractor and the presence of archaeological and Native American monitors during initial ground-disturbing activities on site. Both archaeological and Native American monitors would have the authority to temporarily halt or redirect grading and other ground-disturbing activity in the event that cultural resources are encountered. If significant cultural material is encountered, the project archaeologist will coordinate with the Monitoring Tribe, the applicant, and City staff to develop and implement appropriate avoidance, treatment, or mitigation measures.

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1.0 INTRODUCTION

HELIX Environmental Planning, Inc. (HELIX) was contracted by Summit Environmental Group, Inc. to provide cultural resources services for the 1430 Decision Street Redevelopment Project (project) in the City of Vista (City), San Diego County, California. The project is a proposed approximately 7.8-acre redevelopment of an existing building and associated features that will include the demolition of the existing structures in order to construct a new warehouse distribution building. A cultural resources study including a records search, Sacred Lands File search, a review of historic aerial photographs and maps, and a pedestrian survey was conducted for the project area. This report details the methods and results of the cultural resources study and has been prepared to comply with the California Environmental Quality Act (CEQA) and the guidelines of the City.

1.1 PROJECT LOCATION

The project is located in the City of Vista in northwestern San Diego County (Figure 1, *Regional Location*). The project is located south of State Route 78, approximately halfway between Interstate 5 and Interstate 15, within Section 7 of Township 12 South, Range 3 West, on the U.S. Geological Survey (USGS) 7.5' San Marcos quadrangle (Figure 2, *USGS Topography*). The approximately 7.8-acre project site is bordered by Scott Street to the north, Decision Street to the east, commercial development and undeveloped slopes to the south, and Business Park Drive to the west (Figure 3, *Aerial Photograph*). The project vicinity is characterized predominantly by urban, commercial, and industrial development.

1.2 PROJECT DESCRIPTION

The project proposes to demolish the existing two-story office building and associated parking lot, to be replaced with an approximately 120,000 square foot warehouse distribution building (Figure 4, *Site Plan*). The proposed building will be of tilt-up construction upon a slab-on -grade floor that is supported by shallow spread footings. Office space and mezzanines are proposed to be located in the north- and southeast corners of the building. Other proposed improvements to the project area include a parking lot, walkways, screen walls, retaining walls, and associated utilities. Grading is anticipated to include cuts and fills of up to 12 feet, which will include modifications to the existing slopes. Stabilizing walls are planned near the toe of the existing slope along Business Park Drive, Scott Street, and Decision Street, while structural retaining walls are planned along the southern and eastern limits of the proposed parking area at the toes of the existing slopes.

1.3 REGULATORY FRAMEWORK

Cultural resources are defined as buildings, sites, structures, or objects, each of which may have historical, architectural, archaeological, cultural, and/or scientific importance. Significant resources are those resources which have been found eligible to the California Register of Historical Resources (CRHR) or National Register of Historic Places (NRHP), as applicable.

1.3.1 Federal

Federal regulations that would be applicable to the project if there is a federal nexus (e.g., permitting or funding from a federal agency) include the National Historic Preservation Act (NHPA) and its implementing regulations (16 United States Code 470 et seq., 36 Code of Federal Regulations [CFR]

Part 800). Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on "historic properties", that is, properties (either historic or archaeological) that are eligible for the NRHP. To be eligible for the NRHP, a historic property must be significant at the local, state, or national level under one or more of the following four criteria:

A. associated with events that have made a significant contribution to the broad patterns of our history;

B. associated with the lives of persons significant in our past;

C. embodies the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; and/or

D. has yielded or may be likely to yield, information important in prehistory or history.

1.3.2 State

The California Environmental Quality Act, Public Resources Code (PRC) 21084.1, and California Code of Regulations (CCR) Title 14 Section 15064.5, address determining the significance of impacts to archaeological and historic resources and discuss significant cultural resources as "historical resources," which are defined as:

- resource(s) listed or determined eligible by the State Historical Resources Commission for listing in the CRHR (14 CCR Section 15064.5[a][1])

- resource(s) either listed in the NRHP or in a "local register of historical resources" or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the PRC, unless "the preponderance of evidence demonstrates that it is not historically or culturally significant" (14 CCR Section 15064.5[a][2])

- resources determined by the Lead Agency to meet the criteria for listing on the CRHR (14 CCR Section 15064.5[a][3])

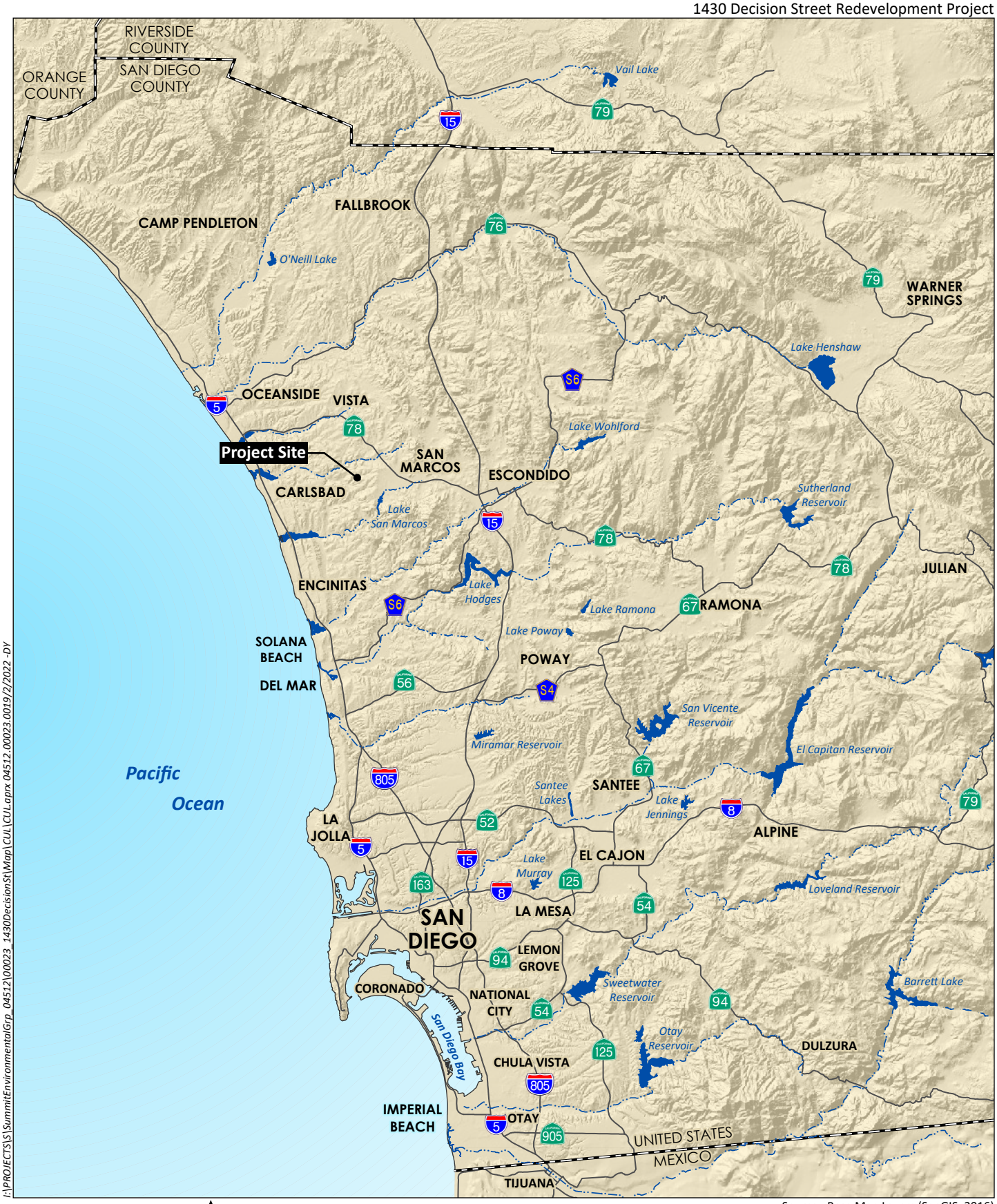
For listing in the CRHR, a historical resource must be significant at the local, state, or national level under one or more of the following four criteria:

1. It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States;

2. It is associated with the lives of persons important to local, California, or national history;

3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values;

4. It has yielded or has the potential to yield information important to the prehistory or history of the local area, California, or the nation.



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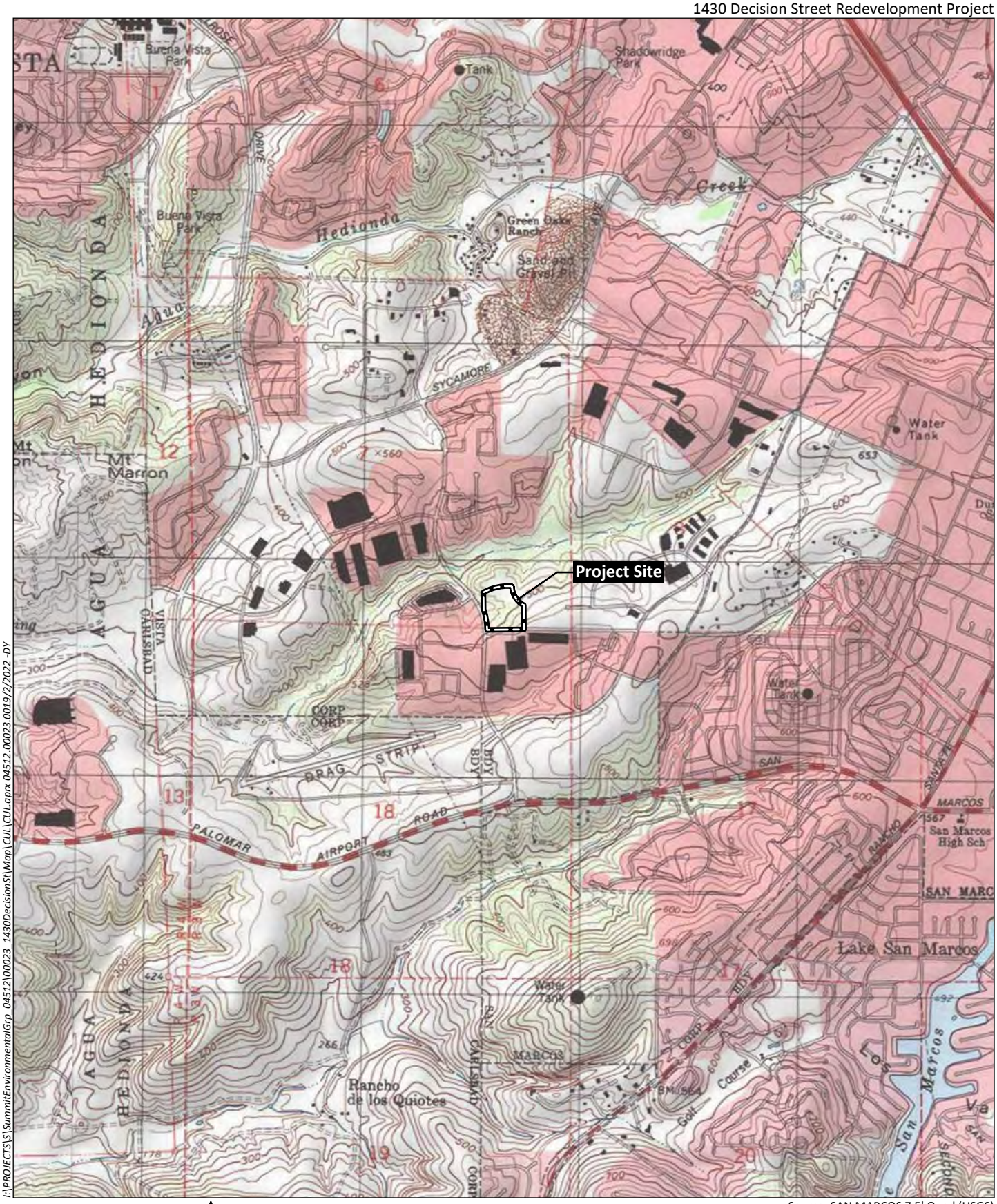
0 8 Miles

Source: Base Map Layers (SanGIS, 2016)

HELIX Environmental Planning

Regional Location

Figure 1



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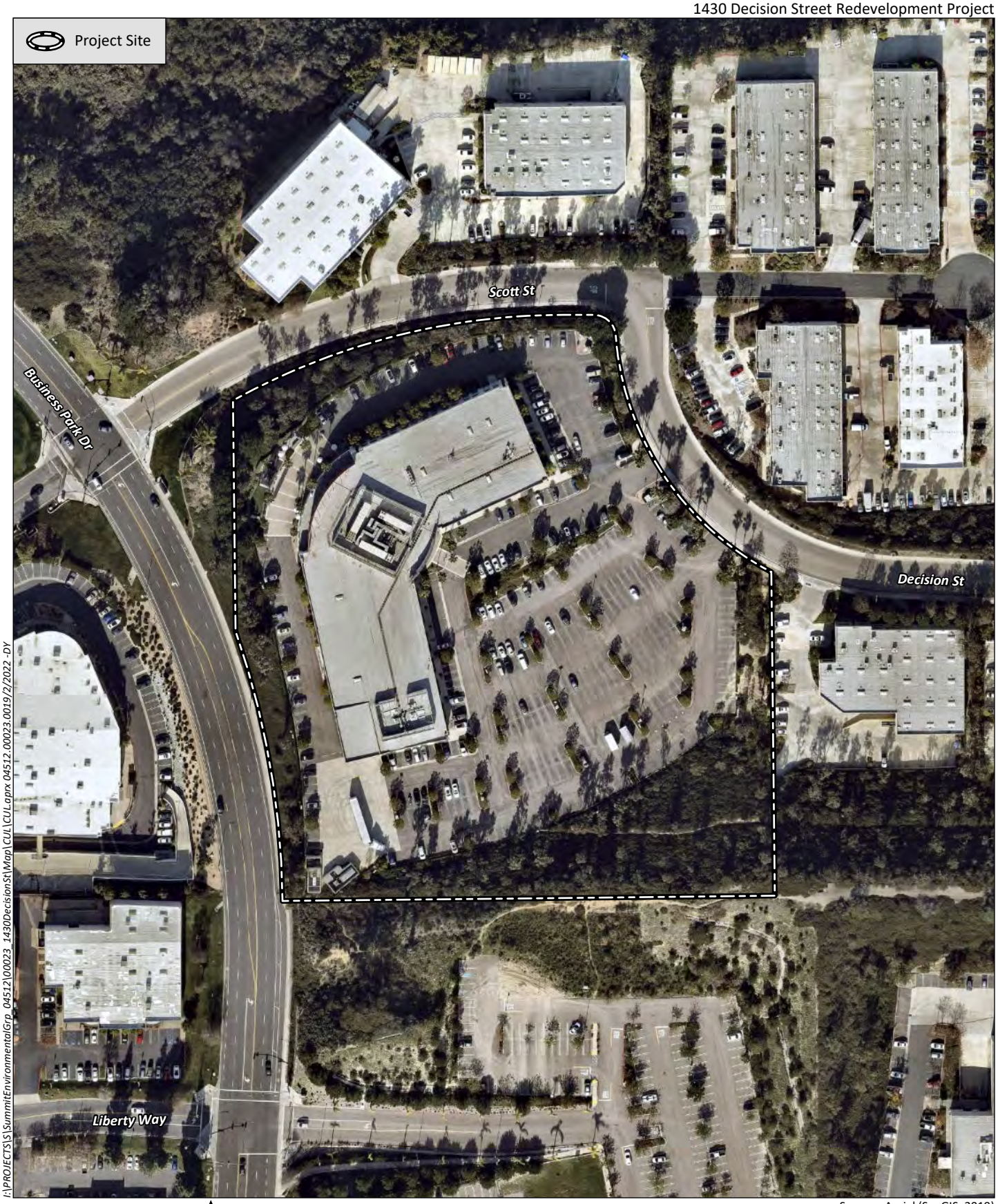
0 2,000 Feet

Source: SAN MARCOS 7.5' Quad (USGS)

HELIX Environmental Planning

USGS Topography

Figure 2



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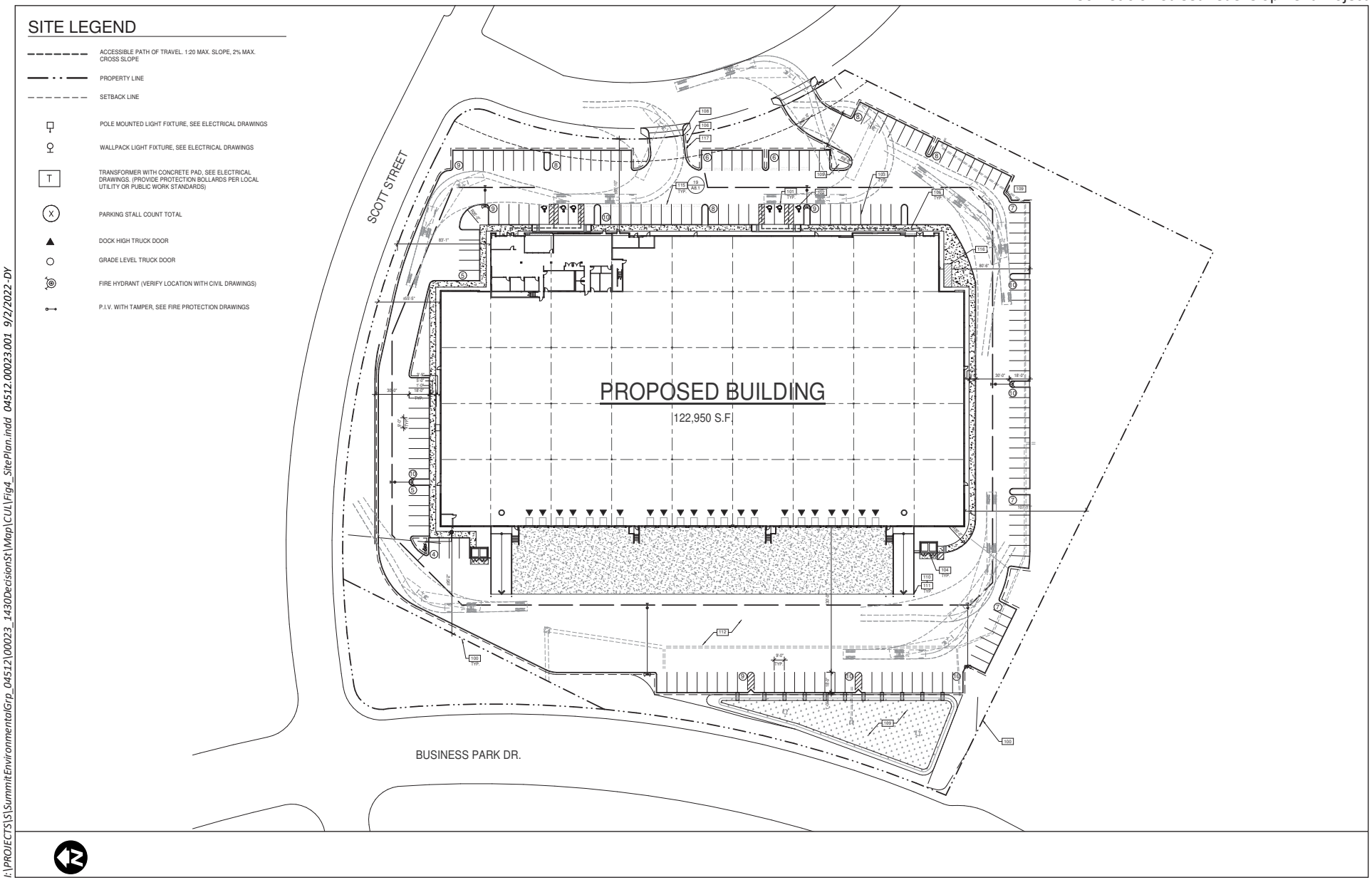
0 150 Feet

Source: Aerial (SanGIS, 2019)

HELIX Environmental Planning

Aerial Photograph

Figure 3



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HELIX Environmental Planning

Site Plan

Figure 4

Under 14 CCR Section 15064.5(a)(4), a resource may also be considered a "historical resource" for the purposes of CEQA at the discretion of the lead agency.

1.3.3 Integrity

All resources that are eligible for listing in the NRHP or CRHR must have integrity, which is the authenticity of a historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance. Resources, therefore, must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association. In an archaeological deposit, integrity is assessed with reference to the preservation of material constituents and their culturally and historically meaningful spatial relationships. A resource must also be judged with reference to the particular criteria under which it is proposed for nomination. Under Section 106 of the NHPA, actions that alter any of the characteristics that qualify a property for eligibility for listing in the NRHP "in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association" (36 CFR 800.5[a]) constitute an adverse effect to the historic property.

1.3.4 City of Vista General Plan

The Resource Conservation and Sustainability (RCS) Element of the Vista General Plan 2030 includes the following goals related to cultural resources:

- RCS Goal 11: Continue to preserve and protect places, buildings, and objects that embody the City's social, cultural, commercial, architectural, and agricultural history.

- RCS Goal 12: Acknowledge, preserve, and protect the City's Native American Heritage.

Sub-items under Goal 12 mandate coordination with the State Native American Heritage Commission (NAHC) and the San Luis Rey Band of Luiseño Mission Indians.

1.3.5 Native American Heritage Values

Federal and state laws mandate that consideration be given to the concerns of contemporary Native Americans with regard to potentially ancestral human remains, associated funerary objects, and items of cultural patrimony. Consequently, an important element in assessing the significance of the study site has been to evaluate the likelihood that these classes of items are present in areas that would be affected by the proposed project.

Potentially relevant to prehistoric archaeological sites is the category termed Traditional Cultural Properties (TCP) in discussions of cultural resource management performed under federal auspices. According to Patricia L. Parker and Thomas F. King (1998), "Traditional" in this context refers to those beliefs, customs, and practices of a living community of people that have been passed down through the generations, usually orally or through practice. The traditional cultural significance of a historic property, then, is significance derived from the role the property plays in a community's historically rooted beliefs, customs, and practices. Cultural resources can include TCPs, such as gathering areas, landmarks, and ethnographic locations, in addition to archaeological districts. Generally, a TCP may consist of a single

site, or group of associated archaeological sites (district or traditional cultural landscape), or an area of cultural/ethnographic importance.

In California, the Traditional Tribal Cultural Places Bill of 2004 requires local governments to consult with Native American Tribes during the project planning process, specifically before adopting or amending a General Plan or a Specific Plan, or when designating land as open space for the purpose of protecting Native American cultural places. The intent of this legislation is to encourage consultation and assist in the preservation of Native American places of prehistoric, archaeological, cultural, spiritual, and ceremonial importance. State Assembly Bill (AB) 52, effective July 1, 2015, introduced the Tribal Cultural Resource (TCR) as a class of cultural resource and additional considerations relating to Native American consultation into CEQA. As a general concept, a TCR is similar to the federally defined TCP; however, it incorporates consideration of local and state significance and the required mitigation under CEQA. A TCR may be considered significant if included in a local or state register of historical resources; or determined by the lead agency to be significant pursuant to criteria set forth in PRC §5024.1; or is a geographically defined cultural landscape that meets one or more of these criteria; or is a historical resource described in PRC §21084.1, a unique archaeological resource described PRC §21083.2; or is a non-unique archaeological resource if it conforms with the above criteria.

1.4 PERSONNEL

Mary Robbins-Wade, M.A., RPA served as principal investigator and is a co-author of this technical report; she also conducted the fieldwork with a tribal cultural monitor from the Rincon Band of Luiseño Indians (Rincon). Theodore G. Cooley, M.A., RPA, and Trevor Gittelhough, M.A., RPA, served as report co-authors as well. Ms. Robbins-Wade, Mr. Cooley, and Mx. Gittelhough meet the Secretary of the Interior's Standards and Guidelines for archaeology. Rachel Smith of the Rincon Band of Luiseño Indians participated in the field survey. Resumes for key HELIX personnel are included as Appendix A.

2.0 PROJECT SETTING

2.1 NATURAL SETTING

The project area is located within the coastal plain of western San Diego County, where the climate is characterized as semi-arid steppe, with warm, dry summers and cool, moist winters (Hall 2007; Pryde 2004). The project area is at the western edge of the coastal foothills of mountains in the Peninsular Ranges geomorphic province of southern California. The project property is situated along an unnamed tributary of Agua Hedionda Creek, which is located approximately a mile to the northwest of the property, at its closest point. The coastline of the Pacific Ocean is approximately six miles to the west. The elevation of the project area ranges from approximately 450 to 525 feet above mean sea level (AMSL).

Geologically, the project area is underlain by sedimentary bedrock consisting of siltstone and claystone of the middle Eocene age Santiago Formation and granitic bedrock of the middle Cretaceous age Bonsall Tonalite Formation (Geotechnical Professionals Inc. 2021; Kennedy and Tan 2007; Rogers 1965). Prior to relatively recent (early 2000s) construction disturbance, two natural soil series were mapped for the project site; Diablo clay of the Diablo series, 15 to 30 percent slopes, eroded; and Gaviota fine sandy loam of the Gaviota series, 9 to 30 percent slopes. The Diablo series consists of well-drained, moderately deep to deep clays derived from soft, calcareous sandstone and shale (Bowman 1973:42-43). The

Gaviota series consists of well-drained, shallow, fine sandy loams formed in material weathered from marine sandstone (Bowman 1973:50). Recent geotechnical investigations at the project site indicate that it has been substantially graded during prior construction on the site and that soils at the site now consist of thick deposits of artificial fill or of exposed claystone or granitic bedrock (Geotechnical Professionals Inc. 2021: 39).

Prehistorically, the natural vegetation in the project area and vicinity likely consisted of coastal sage scrub, riparian, and grassland communities, as well as possibly intermittent strips of the freshwater marsh community along the major drainages such as Agua Hedionda Creek. The coastal sage scrub community would have covered most of the mesas and canyons in the coastal and near-coastal areas, with interspersed areas of native grasslands. Plants common in the coastal sage scrub community include California sagebrush (*Artemisia californica*), white sage *(Salvia apiana*), flat-top buckwheat (*Eriogonum fasciculatum*), broom baccharis (*Baccharis sarothroides*), wild onion (*Allium haematochiton*), laurel sumac (*Malosma laurina*), San Diego sunflower (*Bahiopsis laciniata*), golden-yarrow (*Eriophyllum confertiflorum*), sawtooth goldenbush (*Hazardia squarrosa*), yucca (*Yucca schidigera*, *Hesperoyucca whipplei*), prickly pear cactus (*Opuntia* sp.), and scrub oak (*Quercus dumosa*). Native grasslands plants include *Stipa, Elymus, Poa, Muhlenbergia*. Prior to historic and modern activities, more well-watered drainages such as nearby Agua Hedionda Creek contained extensive stands of the riparian woodland community, with plants such as western sycamore (*Platanus racemosa*), Fremont cottonwood (*Populus fremontii*), coast live oak (*Quercus agrifolia*), willow (*Salix* sp.), cattail (*Typha latifolia*), bulrush (*Scirpus* spp.), mule fat (*Baccharis* spp.), and poison oak (*Toxicodendron diversiloba*). Plants common to fresh-water marsh include reed grass (*Phragmites australis*), marsh mallow (*Kosteletzkya virginic*), soft rush (*Juncus effusus*), pickerelweed (*Pontederia cordata*), narrow-leaved cattail (*Typha angustifolia*), and button bush (*Cephalanthus occidental*) (Beauchamp 1986; Munz 1974).

Major wildlife species found in this environment prehistorically were coyote (*Canis latrans*); mule deer (*Odocoileus hemionus*); grizzly bear (*Ursus arctos*); mountain lion (*Felis concolor*); rabbit (*Sylvilagus audubonii*); jackrabbit (*Lepus californicus*); various rodents, the most notable of which are the valley pocket gopher (*Thomomys bottae*), California ground squirrel (*Otospermophilus beecheyi*), and dusky footed woodrat (*Neotoma fuscipes*); and reptiles such as western pond turtle (*Actinemys marmorata*), southern Pacific diamondback rattlesnake (*Crotalus oreganus helleri*), gopher snake (*Pituophis melanoleucus catenifer*); and several lizard species (Burt and Grossenheider 1976; Head 1972; Stebbins 1966).

These plant communities, as well as the native plant resources supported by these habitats, would have been used by Native American populations for clothing, food, medicine, tools, decorative uses, and ceremonial purposes (Bean and Saubel 1972; Bean and Shipek 1978; Cuero 1970; Hedges and Beresford 1986; Luomala 1978; Sparkman 1908). Many of the animal species living within these vegetation communities (such as rabbits, deer, small mammals, and pond turtles, as well as birds and fish) would have been utilized by native inhabitants as well. Cottontail rabbits, jackrabbits, and rodents were very important to the prehistoric diet, and while deer were somewhat less significant for food, they were an important source of leather, bone, and antler for clothing and tools (Bean and Shipek 1978; Christenson 1990; Luomala 1978).

2.2 CULTURAL SETTING

2.2.1 Prehistoric Period

The following cultural history outlines and briefly describes the known prehistoric cultural traditions in the vicinity of the project area. The approximately 10,000 years of documented prehistory of the San Diego region has often been divided into three periods: Early Prehistoric Period (San Dieguito tradition/complex), Archaic Period (Milling Stone Horizon, Encinitas tradition, La Jolla and Pauma complexes), and Late Prehistoric Period (Cuyamaca and San Luis Rey complexes).

2.2.1.1 Early Prehistoric Period Traditions/Complexes

The time period of the first known inhabitants of California, the Paleo-Indian or Big-Game-Hunting peoples of the last Ice Age, Wallace (1955) labeled as the Early Man Horizon. The Early Prehistoric Period encompasses the Early Man Horizon within the Terminal Pleistocene (between 15,000 and 11,000 years ago) and the Early Holocene, beginning approximately 10,000 years ago (Erlandson et al. 2007:62). In the western United States, most evidence for the Paleo-Indian or Big-Game-Hunting peoples during this time period derives from finds of large, fluted spears and projectile points (Fluted-Point Tradition) in places such as Clovis and Folsom in the Great Basin and the Desert southwest (Moratto 1984:79–88), with several, mostly isolated, occurrences of fluted spear points encountered on or near the coast of California (Dillon 2002; Rondeau et al. 2007). Three of these isolated fluted points or point fragments have occurred in San Diego County, all in the mountainous or eastern areas, one northeast of Warner Springs (Kline and Kline 2007), one in Cuyamaca Pass (Dillon 2002; Rondeau et al. 2007), and one near Ocotillo Wells (Rondeau et al. 2007). Several others have occurred in proximity to the county, including one along the coast in adjacent southern Orange County (Fitzgerald and Rondeau 2012) and two in Baja California to the south (Des Lauriers 2008; Hyland and Gutierrez 1995).

While isolated fluted point or point fragments have been found in the eastern mountainous area of San Diego County, the earliest reliably dated human habitation in the San Diego area during the Early Prehistoric Period is the San Dieguito Tradition/complex. The San Dieguito Tradition, with an artifact assemblage distinct from that of the Fluted Point Tradition, but which both Wallace (1955) and Warren (1968) defined for this period, has been documented mostly in the coastal or near the coastal area of San Diego County as well as in the southeastern California deserts (Carrico et al. 1993; Rogers 1939, 1966; True and Bouey 1990; Warren 1966, 1967; Warren and True 1961), with only sparse evidence for it discovered in the coastal area north of San Diego County (e.g., Sutton and Grenda 2012). The San Dieguito Tradition is characterized by an artifact inventory consisting almost entirely of flaked stone biface and scraping tools but lacking the fluted points associated with the Fluted-Point Tradition. The subsistence system or emphasis of this tradition, while not yet entirely agreed upon, is suggested by Warren, based on an artifact assemblage of primarily hunting associated tools, as having an orientation towards a hunting, rather than a gathering, economy in contrast to the more gathering-oriented complexes that were to follow in the Archaic Period (Warren 1967, 1968, 1987; Warren et al. 2008). Other researchers have interpreted the San Dieguito subsistence system to be possibly ancestral to, or as a developmental stage for, the subsequent predominantly gathering-oriented “La Jolla/Pauma complex” (e.g., Bull 1983; Ezell 1987; Gallegos 1985, 1987, 1991; Koerper et al. 1991). Based on uncalibrated radiocarbon dates, Warren originally indicated this tradition to have begun sometime before 9,000 years ago and to have ended sometime between 8,500 and 7,500 years ago (1967, 1968:4).

The C.W. Harris Site (CA-SDI-149) is located along the San Dieguito River, approximately 8.5 miles to the south of the project area. The content of the earliest component of this site formed the basis upon which Warren and others (Rogers 1966; Warren 1966, 1967; Warren and True 1961) identified the "San Dieguito complex," and, subsequently, Warren defined it as the San Dieguito Tradition (1968). Diagnostic artifact types and categories associated with the San Dieguito Tradition include elongated bifacial knives; large leaf-shaped projectile points; scraping tools; crescentics; and in the desert, Silver Lake and Lake Mojave projectile points (Knell and Becker 2017; Rogers 1939; Vaughan 1982; Warren 1966, 1967). Recent calibrations of previously uncalibrated radiocarbon dates for the San Dieguito complex from the Harris Site that ranged from sometime before 9030 ± 350 years before present (BP) to between 8490 ± 400 and 7620 ± 380 BP (Warren 1967, 1968) indicate that the oldest of these dates may now actually be between 10,000 and 11,000 BP (Warren and Ore 2011; Warren et al. 2008). While most of the evidence for the San Dieguito Tradition has derived from sites like the Harris Site in the coastal region of San Diego County, artifacts attributed to the complex have also recently been found in the Cuyamaca Mountains area of the County, approximately 50 miles southeast of the project area (Pigniolo 2005).

2.2.1.2 Archaic Period Traditions/Complexes

The Archaic Period, in the southern coastal region, dates from circa 8600 BP to circa 1,300 years ago (Warren et al. 2008). A large number of archaeological site assemblages dating to this period have been identified at a range of coastal and inland sites. This appears to indicate that a relatively stable, sedentary hunting and gathering complex, possibly associated with one people, was present in the coastal and immediately inland areas of what is now San Diego County for more than 7,000 years. These assemblages, designated as the La Jolla/Pauma complexes, are considered part of Warren's (1968) "Encinitas Tradition" and Wallace's (1955) "Milling Stone Horizon." In general, the content of these site assemblages includes manos and metates; shell middens; terrestrial and marine mammal remains; burials; rock features; bone tools; doughnut stones; discoidals; stone balls; plummets; biface points/knives; beads made of stone, bone, or shell; and cobble-based tools at coastal sites and increased hunting equipment and quarry-based tools at inland sites. As defined by True (1958), the "Pauma complex" aspect of this culture is associated with sites located in inland areas that lack shellfish remains but are otherwise similar in content to the La Jolla complex. The Pauma complex may, therefore, simply represent a non-coastal expression of the La Jolla complex (True 1980; True and Beemer 1982).

During the latter half of the Archaic Period, beginning approximately 5500 BP, a major shift in the subsistence system of prehistoric populations in the southern coastal region appears to have occurred. Artifacts such as dart points and mortars and pestles, which are essentially absent during the Early Archaic Period, become increasingly present in site assemblages dating after circa 5500 BP. This evidence in the archaeological record is indicative of an increase in hunting activity and the gathering and processing of acorns for subsistence. Also noted by Warren (2012), was an increase in the presence of larger mammal remains in La Jolla complex faunal assemblages during the latter part of the Archaic Period. This new and subsequently increasing use of these resources represents a significant shift in the Encinitas/La Jolla/Pauma complex subsistence system in the southern coastal region (Warren et al. 2008; Warren 2012).

Although early researchers attributed a number of inland sites in the project vicinity to the Early Milling Stone Horizon and/or the La Jolla/Pauma complex (e.g., True 1980; Warren et al. 1961:10), similar to the San Dieguito complex, most of the substantiating archaeological evidence for the Encinitas tradition/La Jolla/Pauma complex (Milling Stone Horizon) in present-day San Diego County is derived from sites in

near coastal valleys, estuaries, and/or embayments that are present along the San Diego coast south of the San Luis Rey River (e.g., Cooley and Mitchell 1996; Cooley et al. 2000; Gallegos 1995:200; Pigniolo et al. 1991; Shumway et al. 1961; Smith and Moriarty 1985). In the upper-elevation foothill and inland mountain areas of San Diego County, evidence for sites associated with the Archaic Encinitas Tradition/La Jolla/Pauma complex is less common relative to the Late Prehistoric complexes that succeed them (e.g., Chace and Sutton 1990; Cooley and Barrie 2004; Raven-Jennings and Smith 1999; True 1970). McDonald (1995:14) observed that "most sites in the Laguna Mountains can be expected to date from late prehistoric or ethnohistoric occupation of the region, and Archaic Period remains, while not unknown, are relatively rare." The location of the project area, six miles from the coast, places it within the inland foothill area where sites that can be definitely dated to the Archaic Period, and that contain La Jolla or Pauma complex assemblages, are less common (Warren et al. 2008).

Between the project area and the coast, sites dating to the Archaic Period are more numerous. Nearby, to the west of the project area, for example, around Agua Hedionda Lagoon, published accounts indicate that at least six sites have been documented spanning the early to the middle Archaic Period from circa 9000 to 3500 BP (Gallegos 1991; Koerper et al. 1991; Masters and Gallegos 1997). To the southwest of the project area, around Batiquitos Lagoon, more than 20 sites have been documented spanning the early to middle Archaic Period from circa 8200 to 3500 BP (Gallegos 1991; Masters and Gallegos 1997). Investigations of a shell midden deposit at site CA-SDI-10238, at the mouth of the San Dieguito River, indicate the occupation of the site spanning the Middle to Early Archaic Period, based on radiocarbon dates from 5790±110 to 7690±60 BP (Cooley et al. 2000). A large number of radiocarbon dates from the Del Mar Site (CA-SDI-10940), also located near the mouth of the San Dieguito River, similarly span this period (Cooley 2008). The Harris Site (CA-SDI-149) and others in proximity to it along the San Dieguito River 8.5 miles southwest of the project area contain, in addition to the Early Prehistoric San Dieguito component mentioned above, stratigraphic components with La Jolla complex assemblages dating to the Archaic Period (Carrico et al. 1993; Cooley 2006; Warren and True 1961; Warren et al. 2008). As the distance from the coast increases, however, fewer sites dating to, or with definitive assemblages characteristic of, the Archaic Period have been documented. While not plentiful, some sites in foothill circumstances have been documented, such as site CA-SDI-4608 located near Poway, approximately 19 miles to the southeast of the project area and 15.3 miles from the ocean. This site has produced radiocarbon dating that places at least a portion of the assemblage within the middle Archaic Period, circa 5000 BP (Raven-Jennings and Smith 1999).

2.2.1.3 Late Prehistoric Period Complexes

The beginning of the Late Prehistoric Period is marked by evidence of a number of new tool technologies and subsistence shifts in the archaeological record. Compared to those shifts noted for the middle and late Archaic Period, those occurring at the onset of the Late Prehistoric Period were rather abrupt changes. The magnitude of these changes and the short period of time within which they took place seem to indicate a significant alteration in subsistence practices in what is now San Diego County circa 1500 to 1300 BP The changes observed include a technological shift from the use of atlatl and dart to the bow and arrow; subsistence shifts that include a reduction in shellfish gathering in some areas (possibly due to silting of the coastal lagoons); and the storage of crops, such as acorns, by Yuman- and Takic-speaking peoples. New traits, such as the production of pottery and the cremation of the dead, were also introduced during the Late Prehistoric Period.

Movements of people during the last 2,000 years can account for at least some of these changes. Yuman-speaking people had occupied the Gila/Colorado River drainages of what is now western Arizona

by 2,000 years ago (Moriarty 1968) and then continued to migrate westward. An analysis by Moriarty (1966, 1967) of materials recovered from the Spindrift site in La Jolla indicated a preceramic Yuman phase. Based on this analysis and a limited number of radiocarbon samples, Moriarty concluded that Yumans, lacking ceramic technology, penetrated into and occupied what is now the San Diego coastline circa 2,000 years ago. Subsequently, approximately 1,200 to 1,300 years ago, ceramic technology diffused into the coastal area from the eastern deserts. Although these Yuman speakers may have shared cultural traits with the people occupying what is now eastern San Diego County before 2000 BP, their influence is better documented throughout present-day San Diego County after 1300 BP, with the introduction of small projectile points, ceramics, Obsidian Butte obsidian, and the practice of cremation of the dead.

Based on early research by Meighan (1954) and True (1970), two distinct archaeological complexes have been proposed for the Late Prehistoric Period in what is now San Diego County. The Cuyamaca complex is based on an analysis by True of archaeological excavations within Cuyamaca Rancho State Park and of San Diego Museum of Man collections. Based on the results of this analysis, True (1970) was able to define a Late Prehistoric Period complex for southern San Diego County that was distinct from Meighan's (1954) San Luis Rey complex in the northern county area. The presence or absence, or differences in the relative occurrence of certain diagnostic artifacts in site assemblages provide the principal distinctions between these archaeological complexes. Cuyamaca complex sites, for example, generally contain both Cottonwood Triangular-style points and Desert Side-notched arrow points, while Desert Side-notched points are quite rare or absent in San Luis Rey complex sites (Pigniolo 2004). Other examples include Obsidian Butte obsidian, which is far more common in Cuyamaca complex sites than in San Luis Rey complex sites, and ceramics that, while present during the Late Prehistoric Period throughout what is now San Diego County, are more common in the southern or Cuyamaca complex portions of San Diego County, where they occur earlier in time and appear to be somewhat more specialized in form. Both complexes have produced a variety of vessel types, along with rattles, straight and bow-shaped pipes, and effigies. Interment of the dead at Cuyamaca complex sites is almost exclusively by cremation, often in special burial urns for interment, while archaeological evidence from San Luis Rey complex sites indicates both inhumation and cremation. A Cuyamaca complex artifact assemblage commonly contains Tizon Brown Ware pottery, various cobble-based tools (e.g., scrapers, choppers, and hammerstones), arrow shaft straighteners, pendants, manos and metates, and mortars and pestles. The arrow point assemblage often includes Desert Side-notched and Cottonwood Triangular points, with the Dos Cabezas Serrated type also sometimes occurring (McDonald and Eighmey 2008).

Based on ethnographic data, including the areas defined for the Hokan-based Yuman-speaking peoples (Diegueño/Kumeyaay) and the Takic-speaking peoples (Luiseño) at the time of contact, it is generally accepted that the Cuyamaca complex is associated with the Yuman Diegueño/Kumeyaay and the San Luis Rey complex with the Luiseño/Juaneño (Robbins-Wade 1986; True 1970; True and Waugh 1982).

In contrast to Archaic Period sites, Late Prehistoric Period sites attributable to the San Luis Rey or Cuyamaca complexes are less common in the near-coastal areas of the county. Gallegos (1995:200) states that "for San Diego County, there is temporal patterning, as the earliest sites are situated in coastal valleys and around coastal lagoons. Late Prehistoric Period sites are also found in coastal settings but are more common along river valleys and interior locations." The project area lies in an area that is marginal between the two complexes. It is also possible, now, to observe, however, that while a number of examples of Late Prehistoric Period sites that appear to be attributable exclusively to the San Luis Rey or Cuyamaca complexes have been identified for the near-coastal inland foothill areas of the county through diagnostic artifacts and/or radiocarbon dating (e.g., Chace and Hightower 1979:48; Dominici

and Corum 1985; McCown 1945), a number of sites containing evidence for both Late Prehistoric Period and Archaic Period occupations have also been documented (Carrico and Cooley 2005; Carrico et al. 1994; Cooley and Barrie 2004; Gross and Robbins-Wade 1992, 2010; McDonald et al. 1994; Raven-Jennings and Smith 1999; Willey and Dolan 2004). It appears possible, therefore, that as more archaeological data accumulates, this geographic dichotomy of site locations between the Archaic and Late Prehistoric periods within the county may be found to not be completely valid.

2.2.1.4 Native American Perspective

In addition to the point of view discussed in the culture history above, it is recognized that other perspectives exist to explain the presence of Native Americans in the region. The Native American perspective is that they have been here from the beginning, as described by their creation stories. Similarly, they do not necessarily agree with the distinction that is made between different archaeological cultures or periods, such as "La Jolla" and "San Dieguito." They instead believe that there is a continuum of ancestry from the first people to the present Native American populations of San Diego (County of San Diego 2011).

2.2.2 Ethnohistory

The project area is located in a marginal area between the traditional territories of the Yuman-speaking Kumeyaay and the Takic-speaking Luiseño populations, who inhabited the area at the time of European contact. The Kumeyaay were originally labeled Diegueño by the Spaniards, a term derived from their association with Mission San Diego de Alcalá; likewise, the Luiseño and Juaneño were given names for the Missions San Luis Rey and San Juan Capistrano. The term Diegueño was adopted by early anthropologists (e.g., Kroeber 1925) and further divided into the southern and northern Diegueño. The following is from Carrico (2008:217):

> The linguistic and language boundaries as seen by Shipek [1987] subsume the Yuman speakers into a single nomenclature, the Kumeyaay, a name applied previously to the mountain Tipai or Southern Diegueño by Lee (1937), while Almstedt (1974:1) noted that 'Ipai applied to the Northern Diegueño, with Tipai and Kumeyaay for the Southern Diegueño. However, Luomala (1978:592) has suggested that while these groups consisted of over 30 patrilineal clans, no singular tribal name was used, and she referred to the Yuman-speaking people as 'Ipai/Tipai…

Other researchers have designated the Kumeyaay people living north of the San Diego River as 'Ipai (Northern Diegueño), and those south of the river and into Baja California as Tipai (Southern Diegueño) (Hedges 1975:71–83; Langdon 1975:64–70; Luomala 1978).

The southern boundary between the territories of the Luiseño and the Northern Diegueño (Ipai Kumeyaay) was delineated by Bean and Shipek (1978) as extending from the coast east along Agua Hedionda Creek as far as the northern tip of the valley of San José and Palomar Mountain, which would place the project area within the territory of the Kumeyaay. The boundaries delineated by Sparkman (1908), Kroeber (1925), and White (1963), however, would appear to place the project area in Luiseño territory.

The Luiseño territory was subdivided and occupied by different families or bands. Family groups were known as *tunglam* or *kamalum*. Chiefs acted as religious leaders of clans and directed religious ceremonies. This position was hereditary (Sparkman 1908). Kroeber estimates that the Luiseño

population was approximately 3,000 to 4,000 (Kroeber 1925) during the Mission era. More than 80 family groups were known in the early twentieth century (Kroeber 1925). The Luiseño lived in semi-sedentary villages usually located along major drainages, in valley bottoms, and also on the coastal strand, with each family controlling gathering areas (Bean and Shipek 1978; Sparkman 1908; White 1963). True (1990) indicated that the predominant determining factor for the placement of villages and campsites was locations where water was readily and consistently available. The Luiseño followed a seasonal gathering cycle, with bands occupying a series of habitation sites within their territory (Bean and Shipek 1978; White 1963). One band could have multiple areas depending on the season, such as in the mountains or valley areas (Sparkman 1908). Each band was typically restricted to their territory for hunting and resource gathering. The Luiseño subsisted on seeds, acorns, fruits, and berries, as well as meat caught by hunting and fishing (Kroeber 1925; Sparkman 1908). The resources used depended on the seasons, as the Luiseño moved through the coastal, mountain, or desert zones (Lightfoot and Parrish 2009). While most of the major Luiseño villages known ethnohistorically were located closer to the coast along the Santa Margarita River Valley and the San Luis Rey River Valley (Bean and Shipek 1978; Kroeber 1925; White 1963), Kroeber (1925) does indicate general locations for ethnohistoric Luiseño villages in more inland areas as well.

The population of the Kumeyaay people in San Diego in 1770 was estimated by Kroeber (1925:883) to be 3,000, but Luomala (1978:596) believes it was likely double or triple that estimate, and Carrico (2018:12) indicates that it was around 20,000. The Kumeyaay were territorial, with bands that lived in semi-sedentary, politically autonomous villages or rancherias (Carrico 2008). Each village was comprised of many households, and groups of villages were part of a larger social kinship system. The basic unit of the system "appears to have been kin groups referred to by a variety of names including sib, shimulls, cimuLs, gens, and gentes. These clans were organized into exogamous groups based on patrilineal (male) descent" (Carrico 2017:9). Most rancherias were the seat of a clan, although it is thought that, aboriginally, some clans had more than one rancheria, and some rancherias contained more than one clan, often depending on the season within the year (Luomala 1978). Villages and larger campsites were generally chosen based on proximity to water, boulder outcrops, environmental protection, and availability of plants and animals (Luomala 1978; True 1990). Consequently, many of the Kumeyaay villages or rancherias were located in river valleys and along the shoreline of coastal estuaries (Carrico 2008; Kroeber 1925; Luomala 1978). They subsisted on a hunting and foraging economy, exploiting San Diego's diverse ecology throughout the year; coastal bands exploited marine resources, while inland bands might move from the desert, ripe with agave and small game, to the acorn and pine nut rich mountains in the fall (Cline 1984; Kroeber 1925; Luomala 1978).

While no named Indian villages have been ethnographically documented to have been located in immediate proximity to the project area, Carrico (1977:36) indicates that in 1769 the Spanish Portolá expedition observed an empty village along Aqua Hedionda Creek and estuary. Carrico locates this unnamed village at the east end of the Agua Hedionda estuary, approximately five miles to the west of the project area (1977:32; 2018:12). It was noted by Carrico that, as had been observed previously elsewhere on the expedition, the village inhabitants had likely temporarily left the village to look for food (1977:36). Carrico also indicates that on the following day as the Portolá expedition continued north, the presence of another village was observed along Buena Vista Creek and estuary, approximately six miles to the northwest of the project area. This latter village may be the village identified by Kroeber as *Palamai* (Kroeber 1925: Plate 57; Robbins-Wade 1986:75). Carrico (1977:36) made the following observation concerning these villages:

> If ethnographic studies by Philip S. Sparkman are correct, this village at Buena Vista, and possibly the one at Agua Hedionda, may have been Luiseño rather than Diegueño or Kumeyaay. Although recent works have delineated the boundaries between the Yuman-speaking Kumeyaay, or Diegueño, and the Shoshonean-speaking Luiseños as the San Dieguito River and the mouth of Agua Hedionda, such divisions are not clear. It is certain that as the Spaniards continued their trek on July 18, 1769, marching north from Buena Vista Creek, they were in Luiseño territory.

Robbins-Wade (1986), reporting the results of investigations conducted at an archaeological site at the Buena Vista Creek location indicates that the results reflect occupation by the Luiseño.

2.2.3 Historical Background

2.2.3.1 Spanish Period

While Juan Rodriguez Cabrillo visited San Diego briefly in 1542, followed by Sebastián Vizcaíno in 1602, the beginning of the historic period in the San Diego area is generally given as 1769. In the mid-eighteenth century, Spain had escalated its involvement in California from exploration to colonization (Weber 1992) and in that year, a Spanish expedition headed by Gaspar de Portolá and Junípero Serra established the Royal Presidio of San Diego and the Misión San Diego de Alcalá. Portolá then traveled north from San Diego seeking suitable locations to establish military presidios and religious missions in order to extend the Spanish Empire into Alta California.

Initially, both a mission and a military presidio were located on Presidio Hill overlooking the San Diego River. A small pueblo, now known as Old Town San Diego, developed below the presidio. The Mission San Diego de Alcalá was constructed in its current location five years later. In 1795 and 1797 respectively, Father Juan Mariner and Father-Presidente Fermín Lasuén would explore what is now northern San Diego and western Riverside counties in search of a location for another mission (Brigandi 1998). This would culminate in the founding of the Mission San Luis Rey de Francia in the San Luis Rey Valley in 1798. The Spanish would continue to move north through California, constructing a total of 21 missions and three more presidios, all the way up to San Francisco. These missions and presidios stood, literally and figuratively, as symbols of Spanish colonialism, importing new systems of labor, demographics, settlement, and economies to the area. Cattle ranching, animal husbandry, and agriculture were the main economic pursuits of the missions, but their primary goals were the conversion of the local populations to Christianity and the expansion of Spanish influence throughout the region.

In the 1810s, ranchos and mission outposts called *asistencias* were established, increasing the amount of Spanish contact in the region. An *asistencia* was established in Pala in 1818, known as San Antonio de Pala Asistencia in order to support the Mission San Luis Rey de Francia. The Los Flores Asistencia, located in present day Marine Corps Base Camp Pendleton, was founded in 1823 in order to support Mission San Luis Rey de Francia as well. Additionally, Rancho San Jacinto was established for cattle grazing in the San Jacinto Valley (Bean and Vane 1980; Brigandi 1999). In 1820, Father Payeras, a senior mission official, promoted the idea that the San Bernardino and Pala *asistencias* be developed into full missions in order to establish an inland mission system (Lech 2004). However, Mexico won its independence from Spain in 1821, bringing an end to the Spanish Period in California.

2.2.3.2 Mexican Period

Although Mexico gained its independence from Spain in 1821, Spanish patterns of culture and influence remained for a time. The missions continued to operate as they had in the past, and laws governing the distribution of land were also retained in the 1820s. Following secularization of the missions in 1834, large ranchos were granted to prominent and well-connected individuals, ushering in the Rancho Era, with the society making a transition from one dominated by the church and the military to a more civilian population, with people living on ranchos or in pueblos. With the numerous new ranchos in private hands, cattle ranching expanded and prevailed over agricultural activities.

These ranches put new pressures on California's native populations, as grants were made for inland areas still occupied by the Kumeyaay and Luiseño, forcing them to acculturate or relocate farther into the backcountry. In rare instances, former mission neophytes were able to organize pueblos and attempt to live within the new confines of Mexican governance and culture. The most successful of these was the Pueblo of San Pasqual, located inland along the San Dieguito River Valley, founded by Kumeyaay who were no longer able to live at the Mission San Diego de Alcalá (Carrico 2008; Farris 1994).

In order to obtain a rancho, an applicant submitted a petition containing personal information and a land description and map (*diseño*). In 1842 Juan Maria Marron was granted a 13,311-acre grant just south of present-day Carlsbad, surrounding Agua Hedionda lagoon and creek, which was known as Rancho Agua Hedionda. Just to the east of Rancho Agua Hedionda was a smaller rancho that had been granted to Jose Maria Alvarado in 1840. Known as Rancho Vallecitos de San Marcos, it was an 8,975-acre area that encompasses present day San Marcos around San Marcos Creek. The project area is directly between these two ranchos, a little less than a mile west of the western boundary of Rancho Vallecitos de San Marcos and a little less than a mile east of the eastern boundary of Rancho Agua Hedionda.

2.2.3.3 American Period

American governance began in 1848, when Mexico signed the Treaty of Guadalupe Hidalgo, ceding California to the United States at the conclusion of the Mexican–American War. A great influx of settlers to California and the San Diego region occurred during the American Period, resulting from several factors, including the discovery of gold in the state in 1848, the end of the Civil War, the availability of free land through passage of the Homestead Act, and later, the importance of San Diego County as an agricultural area supported by roads, irrigation systems, and connecting railways. The increase in American and European populations quickly overwhelmed many of the Spanish and Mexican cultural traditions, and greatly increased the rate of population decline among Native American communities.

While the American system required that the newly acquired land be surveyed prior to settlement, the Treaty of Guadalupe Hidalgo bound the United States to honor the land claims of Mexican citizens who were granted ownership of ranchos by the Mexican government. The Land Act of 1851 established a board of commissioners to review land grant claims, and land patents for the land grants were issued throughout the following years.

A patent claim for Rancho Agua Hedionda was filed with the Public Lands commission in 1852 and was granted to Juan Maria Marron in 1872 (Willey 1886). As he had died in 1853, it was left to his widow and heirs who leased the Rancho to Francis Hinton in 1860; he later bought it the same year. When Hinton

died in 1870, he left the Rancho to Robert Kelly, who upon his death 20 years later left it to the children of his older brother Matthew Kelly (Brackett 1939).

Rancho Los Vallecitos de San Marcos was sold to Lorenzo Soto in 1841 who filed a claim with the Public Land Commission in 1852, which was granted to him in 1883 (Willey 1886). Upon his death in 1863, his second wife married Tomas Alvarado who sold Rancho Los Vallecitos to Cave Johnson Couts in 1866 (Brackett 1939).

The year following the Land Act of 1852, the Treaty of Temecula was signed ending the war between American settlers and local indigenous populations. It stated that in exchange for government control of Luiseño, Cahuilla, and Serrano land, they would be provided certain other lands, horses, cattle, and other supplies (Bibb 1991; Van Horn 1974). This treaty, along with 17 others with various indigenous groups throughout California, were never ratified by the US government, but resulted in the loss of large tracts of land by the indigenous groups that signed them.

Initially southern California was divided into only two counties: Los Angeles and San Diego. In 1853, San Bernardino County was added, placing what is now Riverside County primarily within San Diego County and partially within San Bernardino County. Orange County divided from Los Angeles County in 1889, and in 1893, Riverside County was created from portions of San Diego and San Bernardino counties.

The 1880s saw “boom and bust” cycles that brought thousands of people to the area of San Diego County. By the end of the decade, many had left, although some remained to form the foundations of small communities based on dry farming, orchards, dairies, and livestock ranching. During the late nineteenth and early twentieth centuries, rural areas of San Diego County developed small agricultural communities centered on one-room schoolhouses. Such rural farming communities consisted of individuals and families tied together through geographical boundaries, a common schoolhouse, and a church. The influence of military development, beginning in 1916 and 1917 during World War I, moved much of the population away from this life, and the need to fight a two-ocean war during World War II resulted in substantial development in infrastructure and industry to support the military and accommodate soldiers, sailors, and defense industry workers.

3.0 ARCHIVAL RESEARCH AND CONTACT PROGRAM

3.1 RECORDS SEARCH

HELIX staff conducted a record search of the California Historical Resources Information System (CHRIS) at the South Coastal Information Center (SCIC) on September 7, 2022. The records search covered a one-mile radius around the project area and included the identification of previously recorded cultural resources and locations and citations for previous cultural resources studies. A review of the California Historical Resources and the state Office of Historic Preservation (OHP) historic properties directories, and Local Register was also conducted. The records search summary and map are included as Appendix B (confidential appendices, bound separately).

3.1.1 Previous Surveys

The records search results identified 63 previous cultural resource studies within the record search limits, five of which overlap with the project area (Table 1, *Previous Studies Overlapping the Project Area*). This includes a cultural resource evaluation, a cultural resource survey, a historic resource survey,

and an archaeological resource survey with a supplement. None of these reports identified resources within the project area. Two of the studies consist of a historic buildings survey covering the entire City of Vista (Marben-Laird Associates 1987) and a cultural resources evaluation that did not include fieldwork but did cover the City in its entirety for the Vista/Buena Sanitation District Sewer Master Plan Update (Rosenburg et al. 2007). The Oak Ridge Business Park survey (Cardenas 1988) covered a small portion of the project area.

Table 1
PREVIOUS STUDIES OVERLAPPING THE PROJECT AREA

Report No. (SD-)	Report Title	Author, Date
000315	Cultural Resources Survey: Oak Ridge Business Center Phase III Project	Cardenas, 1988
001380	Supplement to: Archaeological Survey North County Landfill, San Marcos, California	Fink, 1976
001381	Archaeological Survey North County Landfill, San Marcos, California	Fink, 1976
011228	Historic Resource Survey, A Project of the City of Vista, California	Marben-Laird Associates, 1987
011524	A Cultural Resources Evaluation for the Vista and Buena Sanitation District 2007 Sewer Master Plan Update	Rosenberg, Dorrler, and Smith, 2007

3.1.2 Previously Recorded Resources

The SCIC has a record of 40 previously recorded cultural resources within a one-mile radius of the project, but none have been recorded within the project area (Table 2, *Previously Recorded Resources within One Mile of the Project Area*). In general, the sites recorded within the one-mile search radius consist of prehistoric resources consisting of artifact scatters, two trails, and two habitation sites, as well as historic resources comprised of two homesteads, a historic orchard, a historic foundation, and a transmission line. The site nearest the project area, CA-SDI-11037, was recorded in 1988 as a small surface artifact scatter with flakes, a scraper, a core, and a biface fragment, as well as possible cobble hearths. The sites in the records search radius tend to be located in ridge fingers or on terraces overlooking drainages/canyons.

Table 2
PREVIOUSLY RECORDED RESOURCES WITHIN ONE MILE OF THE PROJECT AREA

Resource Number (P-37-)	Resource Number (CA-SDI-)	Age and Resources Present	Description	Recorder, Date
004692	4692	Prehistoric Site	Artifact scatter with three loci	Cook and Price, 1976; Wade et al., 1992
005081	5081	Prehistoric Site	Artifact scatter	Loomis, 1977
005082	5082	Prehistoric Site	Artifact scatter	Norwood, 1977
005541	5541	Prehistoric Site	Artifact scatter	Norwood, 1978
005543	5543	Prehistoric Isolate	Isolated mano	Norwood, 1978
005573	5573	Prehistoric Site	Artifact scatter and habitation site	Welch, 1977; ASM Affiliates, Inc., 2000
005783	5783	Historic Site	Historic homestead	Hatley, 1978

Resource Number (P-37-)	Resource Number (CA-SDI-)	Age and Resources Present	Description	Recorder, Date
005785	5785	Historic Site	Historic homestead	Hatley, 1978
005787	5787	Historic Site	Historic olive grove	Hatley, 1978
005792	5792	Prehistoric Site	Traditional Indian trail from Mission San Luis Rey to the Cuyamaca Mountains	Hatley, 1978
005793	5793	Historic Site	Traditional Rancho de los Quiotes to Mission San Luis Rey Trail	Hatley, 178
006934	6934	Prehistoric Site	Artifact scatter	Hatley, 1978
006935	6935	Prehistoric Isolate	Three flakes and a scraper tool	Hatley, 1978
008091	8091	Prehistoric Site	Lithic scatter	Franklin, 1980
008092	8092	Prehistoric Site	Lithic scatter	Franklin, 1980
008462	8462	Prehistoric Site	Lithic scatter	Polan, 1980
008734	8734	Prehistoric Site	Lithic and shell scatter with a bedrock milling slick	Brock and Van Horn, 1981
008735	8735	Prehistoric Site	Shell midden with fire cracked rock and debitage	Brock and Van Horn, 1981
008736	8736	Prehistoric Site	Temporary camp with artifact scatter	Winterrowd and Cardenas, 1987
009041	9041	Prehistoric Site	Artifact scatter	Norwood, 1981; Cardenas and Winterrowd, 1985
009042	9042	Prehistoric Site	Artifact scatter	Norwood, 1981
009043	9043	Prehistoric Site	Artifact scatter	Norwood, 1981
009044	9044	Prehistoric Site	Artifact scatter	Norwood, 1981
009045	9045	Prehistoric Site	Artifact scatter with possible midden deposit	Norwood, 1981
009046	9046	Prehistoric Site	Artifact scatter with possible midden	Norwood, 1981
009047	9047	Prehistoric Isolate	A group of seven isolates spread out over a large area	Norwood, 1981
009251	9251	Prehistoric Site	Lithic scatter	Brock, 1982
009582	9582	Prehistoric Site	Shell midden	Franklin, 1977
010550	10550	Prehistoric Site	Lithic scatter	Cardenas and Winterrowd, 1985
010551	10551	Prehistoric Site	Lithic scatter	Cardenas and Winterrowd, 1985
010552	10552	Prehistoric Site	Lithic scatter	Cardenas and Winterrowd, 1985
010553	10553	Prehistoric Site	Lithic scatter	Cardenas and Winterrowd, 1985
010782	10782	Prehistoric Site	Temporary camp with artifact scatter and midden	Winterrowd and Cardenas, 1987
011037	11037	Prehistoric Site	Artifact scatter with possible cobble hearths	Cardenas, 1988
011038	11038	Prehistoric Site	Artifact scatter	Cardenas, 1988
011651	11651	Historic Site	Structural foundations	Robbins-Wade, Leeper, and Gross, 1989

Resource Number (P-37-)	Resource Number (CA-SDI-)	Age and Resources Present	Description	Recorder, Date
012167	12167	Prehistoric Site	Artifact scatter	Smith, 1991
024170	16048	Prehistoric Site	Habitation site	Chang, 2001
033103	--	Prehistoric Isolate	Flakes	Davison, 2013
036511	--	Historic	Transmission Line C449	Gorman, 2014

3.2 OTHER ARCHIVAL RESEARCH

Various additional archival sources were also consulted, including historic topographic maps and aerial imagery. These include historic aerials from 1938, 1947, 1953, 1964, 1967, 1978, 1980, 1990, and 2002 (NETR Online 2022) and several historic USGS topographic maps, including the 1893 and 1901 San Luis Rey (1:62,500) and the 1948, 1968, and 1983 San Marcos (1:24,000) topographic maps. The purpose of this research was to identify past land use and the history of development in the area.

No buildings appear in the project area on any of the topographic maps referenced, however, a dirt road in the location of Business Park Drive is indicated beginning on the 1968 San Marcos map. Historic aerials show the project area as undeveloped until 2002, while south of the project area was agricultural beginning in the 1938 aerials, which also show an associated home to the southeast until 1978.

3.3 NATIVE AMERICAN CONTACT PROGRAM

HELIX contacted the Native American Heritage Commission (NAHC) on September 2, 2022 for a Sacred Lands File search and list of Native American contacts for the project area. The response, received on November 8, 2022, indicated that the Sacred Lands File search results were negative. HELIX discussed the project and the cultural sensitivity of the project vicinity with Rincon and the San Luis Rey Band of Mission Indians in order to address potential tribal cultural resource concerns. NAHC correspondence is included as Appendix C (confidential appendices, bound separately).

HELIX Principal Investigator Mary Robbins-Wade spoke with Cami Mojado, the Cultural Resources Director of the San Luis Rey Band, regarding the project on October 7, 2022. Ms. Mojado noted that the San Luis Rey Band is aware of numerous cultural resources and archaeological sites in the vicinity of the project, but the past grading of the project site decreases the potential for cultural resources to be present. Nonetheless, Ms. Mojado recommended monitoring of initial grading for the project to ascertain that cultural resources were not present. Ms. Robbins-Wade spoke with Cheryl Madrigal, Rincon Tribal Historic Preservation Officer, on October 24, 2022. Ms. Madrigal also noted the proximity of known cultural resources and the fact that a fragment of marine shell was observed during the field survey; the shell was in a disturbed context, but its presence is indicative of the presence of cultural material in the area in the past. Ms. Madrigal also noted that cultural material could be present in the artificial fill soils present within the project area. While artifacts found in fill soils lack archaeological context, they are still of importance to the Tribes. Based on this, monitoring of grading/ground-disturbing activity was recommended for the project.

4.0 SURVEY

4.1 SURVEY METHODS

A pedestrian survey of the project site was conducted on September 8, 2022, by HELIX Principal Investigator Mary Robbins-Wade and Native American monitor Rachel Smith from the Rincon Band of Luiseño Indians. Due to the steepness of the slopes, as well as landscaping and the presence of hardscape over the vast majority of the project site, parallel transects were not possible. The project area is completely developed with an existing building and parking lot. The eastern and southern slopes are mainly steep and landscaped, with patches of open ground that were walked to examine the ground surface. The western and northern edges of the project are also landscaped, and open areas were walked as much as possible to examine the ground surface. Along the western and northern project areas, the cleared area at the top the slope was walked; on the northern boundary, some other cleared areas were present that were checked as well.

4.2 RESULTS

No cultural material was observed within the archaeological survey area; however, as noted above, the project area is completely developed with a building that was constructed in 2000, and associated parking area and landscaping. One fragment of weathered marine shell was observed near a dumpster enclosure in the southwestern corner of the project area. The single fragment of shell was in an extremely disturbed context, and its original provenience is unknown; it may be related to artificial fills brought to the project site.

5.0 SUMMARY AND MANAGEMENT RECOMMENDATIONS

A study was undertaken to identify cultural resources present in the 1430 Decision Street Redevelopment Project area and to determine the effects of the project on historical resources as defined by CEQA. The cultural resources survey did not identify any cultural resources within the project area, and the Sacred Lands File search for the project was negative. Therefore, no impacts to cultural resources/historical resources are anticipated. However, both Rincon and the San Luis Rey Band indicated there is some potential for encountering cultural material, given the known resources in the vicinity.

While the project area remained relatively undeveloped until the early 2000s, it has since been highly disturbed by commercial and industrial development. Geotechnical studies of the project area undertaken in 2021, indicated that the area was graded during construction in the early 2000s, resulting in fill soils being present up to 15 feet below surface. In places with no fill, bedrock consisting of sandstone was encountered directly below asphalt and concrete with gravel base. While the surrounding slopes have been stabilized, they are somewhat natural, not manufactured.

5.1 MANAGEMENT RECOMMENDATIONS

Based on the results of the current study, no impacts to historic properties per the NHPA or historical resources per CEQA have been identified for the 1430 Decision Street Redevelopment Project. However,

both the San Luis Rey Band of Mission Indians and the Rincon Band of Luiseño Indians noted the numerous cultural resources in the project vicinity and the potential for cultural material to be present even in the fill soils underlying the existing development.

Based on these factors, it is recommended that an archaeological and Native American monitoring program be implemented for initial ground-disturbing activities for the project in order to assess whether further monitoring is warranted. The monitoring program would include attendance by the archaeologist and Luiseño Native American monitor at a pre-construction meeting with the grading contractor and the presence of archaeological and Native American monitors during ground-disturbing activities on site. Both archaeological and Native American monitors would have the authority to temporarily halt or redirect grading and other ground-disturbing activity in the event that cultural resources are encountered. If significant cultural material is encountered, the project archaeologist will coordinate with the Monitoring Tribe, the applicant, and the City of Vista staff to develop and implement appropriate avoidance, treatment, or mitigation measures.

In the unlikely event that human remains are discovered, the County Medical Examiner shall be contacted. If the remains are determined to be of Native American origin, the Most Likely Descendant, as identified by the NAHC, shall be contacted in order to determine proper treatment and disposition of the remains. All requirements of Health & Safety Code §7050.5 and PRC §5097.98 shall be followed.

Should the project limits change to incorporate new areas of proposed disturbance, an archaeological survey of these areas will be required.

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Appendix A

Resumes of Key Personnel

Mary Robbins-Wade, RPA

Cultural Resources Group Manager

HELIX Environmental Planning

Summary of Qualifications

Ms. Robbins-Wade has 41 years of extensive experience in both archaeological research and general environmental studies. She oversees the management of all archaeological, historic, and interpretive projects; prepares and administers budgets and contracts; designs research programs; supervises personnel; and writes reports. Ms. Robbins-Wade has managed or participated in hundreds of projects under the California Environmental Quality Act (CEQA), as well as numerous archaeological studies under various federal jurisdictions, addressing Section 106 compliance and National Environmental Policy Act (NEPA) issues. She has excellent relationships with local Native American communities and the Native American Heritage Commission (NAHC), as well as has supported a number of local agency clients with Native American consultation under State Bill 18 and assistance with notification and Native American outreach for Assembly Bill 52 consultation. Ms. Robbins-Wade is a Registered Professional Archaeologist (RPA) and meets the U.S. Secretary of the Interior's Professional Qualifications for prehistoric and historic archaeology.

Selected Project Experience

12 Oaks Winery Resort. Project Manager/ Principal Investigator for a cultural resources survey of approximately 650 acres for a proposed project in the County of Riverside. Oversaw background research, field survey, site record updates, Native American coordination, and report preparation. Met with Pechanga Cultural Resources staff to discuss Native American concerns. Worked with applicant and Pechanga to design the project to avoid impacts to cultural resources. Work performed for Standard Portfolio Temecula, LLC.

28th Street between Island Avenue and Clay Avenue Utilities Undergrounding Archaeological Monitoring. Project Manager/Principal Investigator for a utilities undergrounding project in a historic neighborhood of East San Diego. Responsible for project management; coordination of archaeological and Native American monitors; coordination with forensic anthropologist, Native American representative/Most Likely Descendent, and City staff regarding treatment of possible human remains; oversaw identification of artifacts and cultural features, report preparation, and resource documentation. Work performed for the City of San Diego.

Archaeological Testing F11 Project. Project Manager for a cultural resources study for a proposed mixed-use commercial and residential tower in downtown San Diego. Initial work included an archaeological records search and a historic study, including assessment of the potential for historic archaeological resources. Subsequent work included development and implementation of an archaeological testing plan, as well as construction monitoring and the assessment of historic archaeological resources encountered. Work performed for the Richman Group of Companies.

Education

Master of Arts, Anthropology, San Diego State University, California, 1990

Bachelor of Arts, Anthropology, University of California, Santa Barbara, 1981

Registrations/ Certifications

Caltrans, Professionally Qualified Staff-Equivalent Principal Investigator for prehistoric archaeology, , Bureau of Land Management Statewide Cultural Resource Use Permit (California), permit #CA-18-35, , Register of Professional Archaeologists #10294, 1991

County of San Diego, Approved CEQA Consultant for Archaeological Resources, 2007 , Orange County Approved Archaeologist, 2016

Blended Reverse Osmosis (RO) Line Project. Project Manager/ Principal Investigator for cultural resources monitoring during construction of a 24-inch recycled water pipeline in the City of Escondido. Oversaw monitoring program, including Worker Environmental Awareness Training; responsible for Native American outreach/coordination, coordination with City staff and construction crews, and general project management. Work performed for the City of Escondido.

Buena Sanitation District Green Oak Sewer Replacement Project. Project Manager/Principal Investigator for a cultural resources testing program in conjunction with a proposed sewer replacement project for the City of Vista. Oversaw background research, fieldwork, site record update, Native American coordination, and report preparation. Work performed for Harris & Associates, Inc., with the City of Vista as the lead agency.

Cactus II Feeder Transmission Pipeline IS/MND. Cultural Resources Task Lead for this project in the City of Moreno Valley. Eastern Municipal Water District proposed to construct approximately five miles of new 30-inch to 42 inch-diameter pipeline; the project would address existing system deficiencies within the City and provide supply for developing areas. Oversaw background research, field survey, and report preparation. Responsible for Native American outreach for cultural resources survey. Assisted District with Native American outreach and consultation under AB 52. Work performed under an as-needed contract for Eastern Municipal Water District.

Dale 2199C Pressure Zone Looping Pipeline Project. Cultural Resources Task Lead for this project in Moreno Valley. Eastern Municipal Water District proposed construction of a new pipeline to connect two existing pipelines in the District's 2199C Pressure Zone. The pipeline would consist of an 18-inch-diameter pipeline between Kitching Street and Alta Vista Drive that would connect to an existing 12-inch-diameter pipeline in the northern end of Kitching Street and to an existing 18-inch-diameter pipeline at the eastern end of Alta Vista Drive. The project will improve reliability and boost the Dale Pressure Zone's baseline pressure and fire flow availabilities. Four potential alignments were under consideration; three of these bisect undeveloped land to varying degrees, while the other is entirely situated within developed roadways. Oversaw background research and field survey. Responsible for Native American outreach for cultural resources survey and co-authored technical report. Work performed under an as-needed contract for Eastern Municipal Water District.

Downtown Riverside Metrolink Station Track & Platform Project. Cultural Resources Task Lead for this project involving changes to and expansion of the Downtown Riverside Metrolink Station. Overseeing records search and background information, archaeological survey, and report preparation. Responsible for coordination with Native American Heritage Commission, Riverside County Transportation Commission (RCTC), and Federal Transportation Authority (FTA) on Native American outreach. Work performed for Riverside County Transportation Commission as a subconsultant to HNTB Corporation.

Emergency Storage Pond Project. Project Manager/Principal Investigator for a cultural resources testing program in conjunction with the Escondido Recycled Water Distribution System - Phase 1. Two cultural resources sites that could not be avoided through project design were evaluated to assess site significance and significance of project impacts. Work included documentation of bedrock milling

features, mapping of features and surface artifacts, excavation of a series of shovel test pits at each site, cataloging and analysis of cultural material recovered, and report preparation. The project is located in an area that is sensitive to both the Kumeyaay and Luiseño people, requiring close coordination with Native American monitors from both groups. Work performed for the City of Escondido.

Escondido Brine Line Project. Project Manager/Principal Investigator for cultural resources monitoring during construction of approximately 2.3 miles of a 15-inch brine return pipeline in the City of Escondido. The project, which is part of the City's Agricultural Recycled Water and Potable Reuse Program, enables discharge of brine recovered from a reverse osmosis facility that is treating recycled water; it is one part of the larger proposed expansion of Escondido's recycled water distribution to serve eastern and northern agricultural land. The project is located in an area that is sensitive to both the Kumeyaay and Luiseño people, requiring close coordination with Native American monitors from both groups. Oversaw monitoring program, including Worker Environmental Awareness Training; responsible for Native American outreach/coordination, coordination with City staff and construction crews, and general project management. Work performed for the City of Escondido.

Hacienda del Mar EIR. Senior Archaeologist for a proposed commercial development project for a senior care facility in Del Mar. Assisted in the preparation of associated permit applications and an EIR. Oversaw background research, updated records search and Sacred Lands File search, monitoring of geotechnical testing, coordination with City staff on cultural resources issues, and preparation of updated report. Prior to coming to HELIX, served as Cultural Resources Task Lead for the cultural resources survey for the project, conducted as a subcontractor to HELIX. Work performed for Milan Capital Management, with the City of San Diego as the lead agency.

Lilac Hills Ranch. Project Manager/Principal Investigator of a cultural resources survey and testing program for an approximately 608-acre mixed-use development in the Valley Center area. Oversaw background research, field survey, testing, recording of archaeological sites and historic structures, and report preparation. Responsible for development of the research design and data recovery program, preparation of the preservation plan, and Native American outreach and coordination. The project also included recording historic structures, development of a research design and data recovery program for a significant archaeological site, and coordination with the Native American community and the client to develop a preservation plan for a significant cultural resource. The project changed over time, so additional survey areas were included, and a variety of off-site improvement alternatives were addressed. Work performed for Accretive Investments, Inc. with County of San Diego as the lead agency.

Moulton Niguel Water District Regional Lift Force Main Replacement. Cultural Resources Task Lead/Principal Investigator for the replacement of a regional lift station force main operated by Moulton Niguel Water District (MNWD). The project comprises an approximately 9,200 linear foot alignment within Laguna Niguel Regional Park in Orange County, in an area that is quite sensitive in terms of cultural resources. HELIX is supporting Tetra Tech throughout the preliminary design, environmental review (CEQA), and final design, including permitting with applicable state and federal regulatory agencies. The cultural resources survey will inform project design, in order to avoid or minimize potential impacts to cultural resources. Oversaw background research and constraints analysis, Native American

coordination, cultural resources survey, coordination with MNWD and Tetra Tech, and report preparation. Work performed for MNWD, as a subconsultant to Tetra Tech.

Murrieta Hot Springs Road Improvements Project. Principal Investigator/Cultural Resources Task Lead for cultural resources survey in support of an Initial Study/Mitigated Negative Declaration (IS/MND) for the widening of Murrieta Hot Springs Road in the City of Murrieta. The project would widen or restripe Murrieta Hot Springs Road between Winchester Road and Margarita Road from a 4-lane roadway to a six-lane roadway to improve traffic flow, as well as provide bike lanes in both directions along this segment. A new raised median, light poles, signage, stormwater catch basins, retaining walls, and sidewalks would also be provided on both sides of the roadway, where appropriate. The project area is in a location that is culturally sensitive to the Native American community. The cultural resources study included tribal outreach and coordination to address this cultural sensitivity.

Park Circle - Cultural Resources. Project Manager/Principal Investigator of a cultural resources survey and testing program for a proposed 65-acre residential development in the Valley Center area of San Diego County. The project is located along Moosa Creek, in an area that is culturally sensitive to the Luiseño people. Oversaw background research, historic study, field survey, testing, recording archaeological sites and historic structures, and report preparation. Responsible for Native American outreach and coordination. The cultural resources study included survey of the project area, testing of several archaeological sites, and outreach and coordination with the Native American community, as well as a historic study that addressed a mid-20th century dairy barn and a late 19th century vernacular farmhouse. Work performed for Touchstone Communities.

Peacock Hill Cultural Resources. Project Manager/Principal Investigator of a cultural resources study update for a residential development in Lakeside. Oversaw updated research, fieldwork, lab work, analysis by forensic anthropologists, report preparation, and Native American coordination. In the course of outreach and coordination with the Native American (Kumeyaay) community, possible human remains were identified, prompting additional fieldwork, as well as coordination with the Native American community and forensic anthropologists. Work performed for Peacock Hill, Inc.

Sky Canyon Sewer Environmental Consulting. Cultural Resources Task Lead for this project adjacent to the City of Murrieta in southwestern Riverside County. Eastern Municipal Water District (District) proposed to implement the Sky Canyon Sewer Main Extension Project to construct approximately 6,700 linear feet of new gravity-fed 36-inch-diameter sewer main to provide additional sewer capacity for planned development. The proposed 36-inch-diameter sewer main would extend the existing 36-inch-diameter French Valley Sewer at Winchester Road further downstream to Murrieta Hot Springs Road. Oversaw background research and field survey. Responsible for Native American outreach for cultural resources survey and co-authored technical report. Assisted District with Native American outreach and consultation under AB 52. Work performed under an as-needed contract for Eastern Municipal Water District.

Theodore G. Cooley, RPA

Senior Archaeologist

HELIX Environmental Planning

Summary of Qualifications

Mr. Cooley has over 45 years of experience in archaeological resource management. He has directed test and data recovery investigations, monitoring programs, and archaeological site surveys of large and small tracts, and has prepared reports for various cultural resource management projects. He is well-versed in National Historic Preservation Act, National Environmental Policy Act (NEPA), and California Environmental Quality Act (CEQA) regulations and processes. Mr. Cooley's experience also includes Native American consultation for monitoring of archaeological field projects, including some with human remains and reburial-related compliance issues.

Selected Project Experience

8016 Broadway Self Storage Project (2019 - Present). Senior Archaeologist for a Phase I pedestrian survey and cultural resource inventory program of the Lemon Grove Self-Storage project located in the City of Lemon Grove, San Diego County. Involvement included participation in the analysis of the results from the survey program and co-authorship of the technical report. Work performed for the Summit Environmental Group, Inc.

Briggs Road Walton Development Project (Assessor's Parcel Number 461-170-001) (2019 - Present). Senior Archaeologist for a Phase I pedestrian survey and cultural resource inventory program of the Briggs Road Residential project located in Riverside County. Involvement included participation in the analysis of the results from the survey program and co-authorship of the technical report. Work performed for the Walton International Group, LLC.

Brown Field and Montgomery Field Airport Master Plans (2019 - Present). Senior Archaeologist for Phase I cultural resource inventory and pedestrian survey programs at the Brown Field Municipal Airport and the Montgomery-Gibbs Executive Airport, in the City of San Diego, in support of updating of the Airport Master Plan and its Programmatic Environmental Impact Report. Involvement included participation in the analysis of the results from the survey programs and co-authorship of the technical reports. Work performed as a subconsultant to C&S Companies, with the City of San Diego as the lead agency.

Cubic Redevelopment Environmental Consulting (2019 - Present). Senior Archaeologist for a Phase I pedestrian survey and cultural resource inventory and assessment program in support of a 20-acre redevelopment project, located in the community of Kearny Mesa, City of San Diego. Involvement included participation in the analysis of the results from the survey program and preparation of the technical report. Work performed for Cubic Redevelopment Environmental Consulting, with the City of San Diego as lead agency.

Education

Master of Arts, Anthropology, California State University, Los Angeles, 1982

Bachelor of Arts, Anthropology, California State College, Long Beach, 1970

Registrations/ Certifications

Register of Professional Archaeologists #10621, 2019

City of San Diego, Certified Principal Investigator for Monitoring Projects

County or Riverside, Certified Cultural Resources Consultant Principal Investigator

County of Orange, Certified Cultural Resources Consultant Principal Investigator

County of San Diego, Approved Consultant for Archaeological Resources

Los Angeles, Ventura, San Luis Obispo, and Santa Barbara Approved Consultant

Theodore G. Cooley, RPA

Senior Archaeologist

French Valley 303 Project (2019 - Present). Senior Archaeologist for an archaeological construction monitoring program for the French Valley 303 Site residential development project, located in the French Valley area of unincorporated Riverside County. Involvement included participation in the analysis of the results from the monitoring program and co-authorship of the technical report. Work performed for Pulte Home Co., LLC.

Hiser Property Project (2019 - Present). Senior Archaeologist for a due diligence study prepared to summarize potential cultural resources constraints to the 9.2-acre Hiser Property development project, located in the Mission Gorge area of the City of Santee, San Diego County. The study consisted of background research including a record search and limited archival study, a field survey, and a review of the Sacred Lands File from the Native American Heritage Commission (NAHC). Involvement included participation in the analysis of the results and preparation of a summary letter report of the potential cultural resources-related constraints to the planned development. Work performed for KB Home.

Ponto Hotel Technical Studies (2019 - Present). Senior Archaeologist for a cultural resources assessment study for the Ponto Hotel development project in the City of Carlsbad, San Diego County, California. Involvement included participation in the analysis of the results from the assessment program and preparation of the technical report. Work performed for Kam Sang Company, with the City of Carlsbad as the lead agency.

R.M. Levy Water Treatment Plant Sewer Replacement (2019 - Present). Senior Archaeologist for a Phase I pedestrian survey and cultural resource inventory and assessment program in support of a water treatment plant, sewer pipeline, replacement project, located in the community of Lakeside, San Diego County. Involvement included participation in the analysis of the results from the survey program and preparation of the technical report. Work performed for HELIX Water District.

Salt Bay District Specific Plan EIR (2019 - Present). Senior Archaeologist for a Phase I pedestrian survey and cultural resource inventory program in support of the 46.6-acre Salt Bay Design District Specific Plan mixed-use wholesale/retail shopping and light industrial development project, in the cities of San Diego and Chula Vista. Involvement included participation in the analysis of the results from the survey program and co-authorship of the technical report. Work performed for M. & A. Gabaee, with the City of San Diego as lead agency.

San Jacinto Property Project (2019 - Present). Senior Archaeologist for a Phase I pedestrian survey and cultural resource inventory program of the 214 residential project located in Riverside County. Involvement included participation in the analysis

of the results from the survey program and co-authorship of the technical report. Work performed for the Walton International Group, LLC.

San Elijo Joint Powers Authority Roadway and Trail Addendum and Permitting (2019 - Present). Senior Archaeologist for Phase I cultural resource inventory, pedestrian survey, and resource testing at the San Elijo Water Reclamation Facility adjacent to San Elijo lagoon, in San Diego County, in support of the preparation by the San Elijo Joint Powers Authority of a Roadway and Trail Addendum for upgrades to the facility requiring verification of Nationwide Permit authorization from the U.S. Army Corps of Engineers (USACE). Involvement included participation in the analysis of the results from the survey and testing program and co-authorship of the technical report. Work performed as a subconsultant to Kimley-Horn & Associates, with the San Elijo Joint Powers Authority as lead agency.

Sycamore & Watson Project (2019 - Present). Senior Archaeologist for an archaeological construction monitoring program for the Sycamore & Watson residential development project, located in City of Vista, San Diego County. Involvement included participation in the analysis of the results from the monitoring program and preparation of the technical report. Work performed for Meritage Homes.

Sycamore Canyon/Goodan Ranch Public Access Plan IS/MND (2019 - 2019). Senior Archaeologist for Phase I pedestrian survey and cultural resource inventory in support of the preparation by the County of San Diego County Parks Department of a Public Access Plan for the Sycamore Canyon/Goodan Ranch Preserve located in coastal foothills of unincorporated west-central San Diego County. Involvement included participation in the analysis of the results from the survey program and co-authorship of the technical report. Work performed for the County of San Diego.

Sycuan/Sloane Canyon Trail IS/MND (2019). Senior Archaeologist for Phase I pedestrian survey and cultural resource inventory in support of the preparation by the County of San Diego County Department of a Parks and Recreation for the Sycuan/Sloane Canyon Trail project located in the coastal foothills of unincorporated southwestern San Diego County. Involvement included participation in the analysis of the results from the survey program and co-authorship of the technical report. Work performed for the County of San Diego.

The Enclave at Delpy's Corner Project (2019 - Present). Senior Archaeologist for a cultural resources monitoring and data recovery program in support of a proposed 124-unit townhome development project, in the City of Vista, San Diego County. Involvement included participation in the analysis of the prehistoric lithic artifacts and preparation of technical report sections containing the results of these analyses. Work performed for CalAtlantic Homes.

Trevor Gittelhough, RPA

Cultural Resources Assistant Project Manager

HELIX Environmental Planning

Summary of Qualifications

Trevor H. Gittelhough is an archaeological assistant project manager, specializing in underwater cultural resources, with over a decade of experience in archaeology, including both cultural resources management and academic projects. This experience includes site monitoring; surveys and excavations; laboratory sorting, cataloging, and analysis; and conservation. He has conducted environmental, paleontological, and cultural resources work throughout California, Nevada, Oregon, and Florida in support of compliance with California Environmental Quality Act (CEQA), National Environmental Policy Act (NEPA) and Sections 106 and 110 of the National Historic Preservation Act (NHPA) for public and private sector clients including a range of local, state, and federal agencies such as Southern California Edison, the United States Navy and Air Force, Caltrans, and FEMA.

He has experience in team management in the terrestrial and underwater archaeological management sectors, with expertise in implementation of mitigation and monitoring projects, report production, and coordination with Indigenous groups. Underwater and Indigenous archaeology are Mr. Gittelhough's specialties, which are enhanced by his skill and experience in sailing, diving, and prehistoric technology construction. His research interests include maritime technologies and practices, settlement patterns, trade and exchange, colonial interactions, prehistoric technologies, and anthropological/ archaeological theory. In addition, he has expertise in illustration of artifacts, stratigraphic and excavation unit profiles, site maps, GIS, remote sensing, and underwater excavation and mapping techniques.

Mr. Gittelhough's technical skills include terrestrial and submerged archaeological survey, excavation, and site testing. He has authored numerous site records and technical reports detailing the results of cultural resources work, as well as academic articles. He has also had thorough training in artifact analysis and specializes in lithic analysis and maritime conservation. His academic background includes advanced training in conservation and underwater archaeology. He has extensive training at the graduate level and earned his M.A. from East Carolina University. Mr. Gittelhough is Registered Professional Archaeologist, a member of the Society for American Archaeology (SAA), a member of the Society for Historical Archaeology (SHA), and a member of the Society for California Archaeology (SCA).

Selected Project Experience

Bouquet Canyon Road Project, Los Angeles County, CA (2021). Cultural Resource Specialist serving as lead archaeological monitor and technical report writer for this project in the City of Santa Clarita. This work included monitoring all ground-disturbing

Education

Master of Arts, Maritime Studies, East Carolina University, 2019

Bachelor of Arts, Archaeology, University of California, Santa Barbara, 2011

Registrations/ Certifications

Register of Professional Archaeologists, 2018

HAZWOPER Certification; 2018 – 2021

ESRI GIS Certification
AAUS Scientific Diver
Red Cross First AID
Red Cross CPR DAN
Divers First Aid

Professional Affiliations

Society for American Archaeology
Society for Historical Archaeology
Society for California Archaeology

activities associated with geotechnical studies, such as drilling and trenching. Monitoring was also undertaken during ground penetrating radar studies of portions of the project area.

California Crossings, Attisha Trust Parcel, San Diego County, CA (2021). Cultural Resource Specialist for a cultural resources study in support of biological mitigation measures (burrowing owl habitat creation) for the proposed Project in the County of San Diego. Prepared an archaeological resources assessment in compliance with state and federal regulations. Scope included a cultural resources records search, review of historic maps and aerials, and preparation of a technical report.

Enchanted Hills Park Project, Perris, Riverside County, CA (2021). Cultural Resource Specialist for a monitoring program during initial sitework for this project in the City of Perris, in Riverside County. Prepared monitoring letter report.

Mission Basin Groundwater Purification Facility Well Expansion and Brine Minimization Project, Oceanside, San Diego County, CA (2021). Cultural Resource Specialist for a cultural resources study in support of the proposed Project in the City of Oceanside, in northern San Diego County. Prepared a monitoring results memo for monitoring of geotechnical investigations and assisted with preparation of the cultural resources technical report in compliance with state and federal regulations. Scope included a cultural resources records search, preparation of a letter report/memo, and assistance with the technical report.

Oak Shores/Lake Morena Views MWC Consolidation Project, San Diego County, CA (2021). Cultural Resource Specialist for a cultural resources study in support of the proposed Project in eastern San Diego County. Assisted with preparation of a cultural resources technical report in compliance with state and federal regulations, as well as State Water Resources Control Board. Scope included a cultural resources records search, review of historic maps and aerials, and assistance with preparation of a technical report.

Archaeological Monitoring for the P-586 Missile Assembly Building - San Nicolas Island, Ventura County, CA (2021). Cultural Resource Specialist serving as archaeological monitor and technical report writer. This work included monitoring all ground-disturbing activities, including grubbing, grading, and trenching. Monitoring included close involvement with United States Navy personal and Tribal Members and Observers.

Shady View Residential Project Environmental Impact Report, Chino Hills, San Bernardino County, CA (2021). Cultural Resource Specialist for a cultural resources study in support of the proposed Project in the City of Chino Hills in San Bernardino County. Assisted in the preparation of the technical report in compliance with state and federal regulations. Project scope included a cultural resources records search, review of historic maps and aerials, field survey, and preparation of a technical report.

Trevor Gittelhough, RPA

Cultural Resources Assistant Project Manager

Previous Project Experience

Los Angeles County Natural History Museum Center for History and Cultural Project, Los Angeles County, CA. Assistant Project Manager for a cultural resources study in support of the proposed Project in the downtown area of the City Los Angeles. Prepared an archaeological and tribal cultural resources assessment in compliance with CEQA, specifically Assembly Bill 52. Scope included a cultural resources records search, review of historic maps and aerials, and preparation of a technical study for submittal to the Department of City Planning.

Environmental Services Support for the Villages at The Alhambra Project, Los Angeles County, CA. Assistant Project Manager for a cultural resources study in support of the proposed Project in the downtown area of the City Los Angeles. Prepared an archaeological and tribal cultural resources assessment in compliance with CEQA, specifically Assembly Bill 52. Scope included a cultural resources records search, review of historic maps and aerials, and preparation of a technical study for submittal to the Department of City Planning.

Tierra Crossing Tribal Cultural Resource and Archaeological Assessment, Los Angeles, CA. Assistant Project Manager for a cultural resources study in support of the proposed Project in the downtown area of the City Los Angeles. Prepared an archaeological and tribal cultural resources assessment in compliance with CEQA, specifically Assembly Bill 52. Scope included a cultural resources records search, review of historic maps and aerials, and preparation of a technical study for submittal to the Department of City Planning.

Tribal Cultural Resources Assessment for the 17346 Sunset Project, Los Angeles, CA. Assistant Project Manager for a cultural resources study in support of the proposed Project in the downtown area of the City Los Angeles. Prepared a tribal cultural resources assessment in compliance with CEQA, specifically Assembly Bill 52. Scope included a cultural resources records search, review of historic maps and aerials, and preparation of a technical study for submittal to the Department of City Planning.