Administrative Draft

Rosemount Storage Project
Initial Study/Mitigated Negative Declaration
APPENDICES

Lead Agency:

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Appendix A

Air Quality, GHG, and Energy Study

Date Palm Mixed Use Project

Air Quality, Greenhouse Gas, and Energy Impact Study

City of Cathedral City, CA

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GLOSSARY OF TERMS

AQMP	Air Quality Management Plan
CAAQS	California Ambient Air Quality Standards
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CFCs	Chlorofluorocarbons
CH_4	Methane
CNG	Compressed natural gas
CO	Carbon monoxide
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
DPM	Diesel particulate matter
GHG	Greenhouse gas
HFCs	Hydrofluorocarbons
LST	Localized Significant Thresholds
$MTCO_2e$	Metric tons of carbon dioxide equivalent
$MMTCO_2e$	Million metric tons of carbon dioxide equivalent
NAAQS	National Ambient Air Quality Standards
NOx	Nitrogen Oxides
NO_2	Nitrogen dioxide
N_2O	Nitrous oxide
O_3	Ozone
PFCs	Perfluorocarbons
PM	Particle matter
PM10	Particles that are less than 10 micrometers in diameter
PM2.5	Particles that are less than 2.5 micrometers in diameter
PMI	Point of maximum impact
PPM	Parts per million
PPB	Parts per billion
RTIP	Regional Transportation Improvement Plan
RTP	Regional Transportation Plan
SCAQMD	South Coast Air Quality Management District
SF_6	Sulfur hexafluoride
SIP	State Implementation Plan
SOx	Sulfur Oxides
SRA	Source/Receptor Area
SSAB	Salton Sea Air Basin
TAC	Toxic air contaminants
VOC	Volatile organic compounds
WRCC	Western Regional Climate Center

1.0 Introduction

1.1 Purpose of Analysis and Study Objectives

This air quality and greenhouse gas (GHG) analysis was prepared to evaluate whether the estimated criteria pollutants and GHG emissions generated from the project would cause a significant impact to the air resources in the project area. This assessment was conducted within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000, et seq.). The assessment is consistent with the methodology and emission factors endorsed by South Coast Air Quality Management District (SCAQMD), California Air Resource Board (CARB), and the United States Environmental Protection Agency (US EPA).

1.2 Project Summary

1.2.1 Site Location

The project site is located on the southeast corner of Date Palm Drive and Rosemount Road in the City of Cathedral City, as shown in Exhibit A. The site is currently zoned as Planned Community Commercial by the City of Cathedral City. The project borders multifamily residential uses to the east, commercial uses to the south, Date Palm Drive to the west with commercial uses further, and Rosemount Road to the north with vacant land further.

1.2.2 Project Description

The proposed Project includes the development of approximately seven (7) acres located in the city of Cathedral City, east of Date Palm Drive, between Rosemount Road to the north and McCallum Way to the south. The project will require a recommendation from the Planning Commission and for the City Council to take final action on an entitlement and legislative action for parcels including APN: 670-110-48, 49, 50, 51, 52, 53, & 56. The proposed project includes the below:

A Design Review and Lot Merger for the construction of a 2-story indoor mini-storage facility with a total area of 115,054 square feet at 57,527 square feet per floor. The current zoning of the site is Specific Plan No. 99-58 with the underlying zone of PCC (Planned Community Commercial) District.

A Specific Plan Amendment to create Planning Unit 4 which would allow the indoor mini-storage use and a 50,000 square foot grocery store as well as changes to the development code, new streamlined architectural standards, and updated list of permitted and conditional land uses.

The Mitigated Negative Declaration was processed at full buildout so that future entitlements would not have to obtain separate Mitigated Negative Declarations. At full buildout the project could include either of two scenarios: retail uses with a 2-story indoor mini-storage facility, or a grocery store up to 50,000 square feet, 2-story indoor mini-storage facility, and retail uses. The project is currently being proposed as a phased project and each future proposal would require its own entitlement consistent with the Mitigated Negative Declaration. The Design Review only includes the indoor mini-storage facility, underground retention basin, and a minimum of 12 spaces for on-site parking.

With regard to CEQA, the proposed Project would be developed with phased construction which includes the operation of a 2-story 115,054 square foot (sf) indoor climate-controlled mini-storage facility with 57,527 square feet per floor. The indoor mini-storage facility includes climate-controlled self-storage, retail, office, and loading areas. The CEQA Analysis includes two scenarios, scenario one would include the first phase which would be an approximate two (2) story 115,054 square feet (sf) at 57,527 sf per floor, climate controlled self-storage facility with associated retail, office, and loading areas and Phase 2 would include one (1) retail building approximately 4,725 sf in size, two (2) drive through facilities with areas of 2,413 sf and 4,617 sf respectively, and two (2) retail buildings with areas of 3,217 sf each. Scenario two would include the two (2) story 115,054 square feet (sf) at 57,527 sf per floor, climate-controlled self-storage facility with associated retail, office, and loading Units and one (1) grocery store/big box building with a maximum Unit of 50,000 sf, and a retail building with a unit of 4,725 sf. Both alternatives will have on-site landscaping, on-site parking, signage, low walls, along frontage, and underground retention for on-site water retention.

Exhibits B and C demonstrate the site plans for the project.

Construction activities within the project area will consist of site preparation, grading, building, paving, and architectural coating. Table 1 summarizes the land use description for the project Site.

Table 1: Land Use Summary

Land Use	Unit Amount	Size Metric
Scenario 1		
Unrefrigerated Warehouse-No Rail	115	Thousand Square Feet
Strip Mall	11.2	Thousand Square Feet
Fast Food Restaurant with Drive Thru	7.0	Thousand Square Feet
Parking Lot	4.8	Acres
Scenario 2		
Unrefrigerated Warehouse-No Rail	115	Thousand Square Feet
Regional Shopping Center	54.7	Thousand Square Feet
Parking Lot	4.8	Acres

1.2.3 Sensitive Receptors

Sensitive receptors are considered land uses or other types of population groups that are more sensitive to air pollution than others due to their exposure. Sensitive population groups include children, the elderly, the acutely and chronically ill, and those with cardio-respiratory diseases. For CEQA purposes, a sensitive receptor would be a location where a sensitive individual could remain for 24-hours or longer, such as residences, hospitals, and schools (etc.).

The closest existing sensitive receptors (to the site area) are multi-family residences 15 feet to the east of the project boundary.

1.3 Executive Summary of Findings and Mitigation Measures

The following is a summary of the analysis results:

Construction-Source Emissions
Project construction-source emissions would not exceed regional thresholds of significance established by the SCAQMD in either scenario. For localized emissions, the project will not exceed applicable Localized Significance Thresholds (LSTs) established by the SCAQMD.

Project construction-source emissions would not conflict with the Basin Air Quality Management Plan (AQMP) in either scenario. As discussed herein, the project will comply with all applicable SCAQMD construction-source emission reduction rules and guidelines. Project construction source emissions would not cause or substantively contribute to violation of the California Ambient Air Quality Standards (CAAQS) or National Ambient Air Quality Standards (NAAQS).

Established requirements addressing construction equipment operations, and construction material use, storage, and disposal requirements act to minimize odor impacts that may result from construction activities. Moreover, construction-source odor emissions would be temporary, short-term, and intermittent in nature and would not result in persistent impacts that would affect substantial numbers of people. Potential construction-source odor impacts are therefore considered less-than-significant.

Operational-Source Emissions
The project operational-sourced emissions would not exceed applicable regional thresholds of significance established by the SCAQMD in either scenario. Project operational-source emissions would not result in or cause a significant localized air quality impact as discussed in the Operations-Related Local Air Quality Impacts section of this report. Additionally, project-related traffic will not cause or result in CO concentrations exceeding applicable state and/or federal standards (CO “hotspots). Project operational-source emissions would therefore not adversely affect sensitive receptors within the vicinity of the project.

Project operational-source emissions would not conflict with the Basin Air Quality Management Plan (AQMP) in either scenario. The project's emissions meet SCAQMD regional thresholds and will not result in a significant cumulative impact. The project does not propose any such uses or activities that would result in potentially significant operational-source odor impacts. Potential operational-source odor impacts are therefore considered less-than significant.

Project-related GHG emissions meet the goals of the County of Riverside Climate Action Plan (CAP) Update screening tables and the goals of the City of Cathedral City CAP and are also considered to be less than significant in both scenarios. The project also complies with the goals of the CARB Scoping Plan, AB-32, and SB-32**.**

Mitigation Measures

A. Construction Measures

Adherence to SCAQMD Rule 403 is required.

No construction mitigation required.

B. Operational Measures to Reduce Greenhouse Gas Emissions

No operational mitigation required.

Exhibit A

Location Map

Exhibit B

Site Plan – Scenario 1

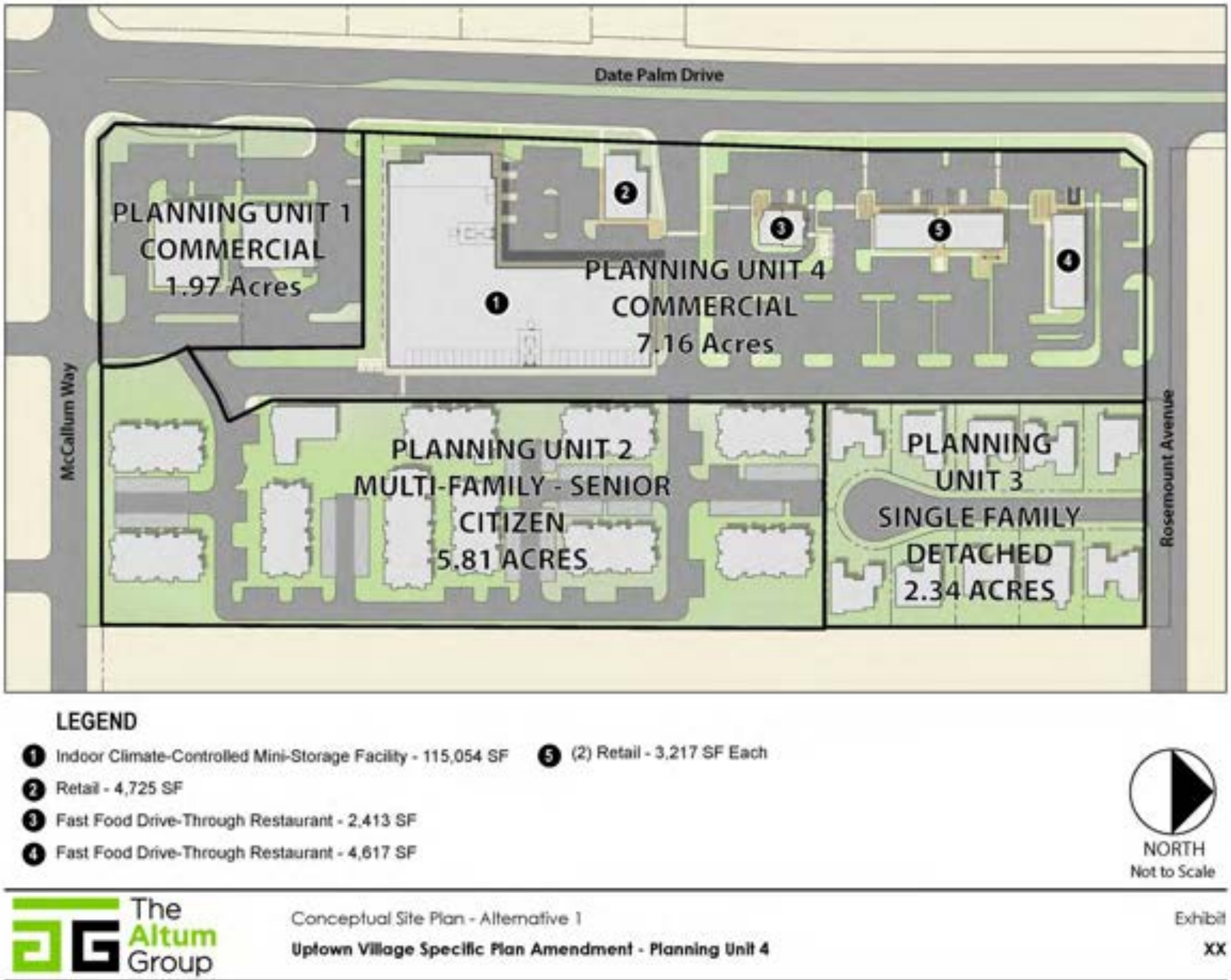
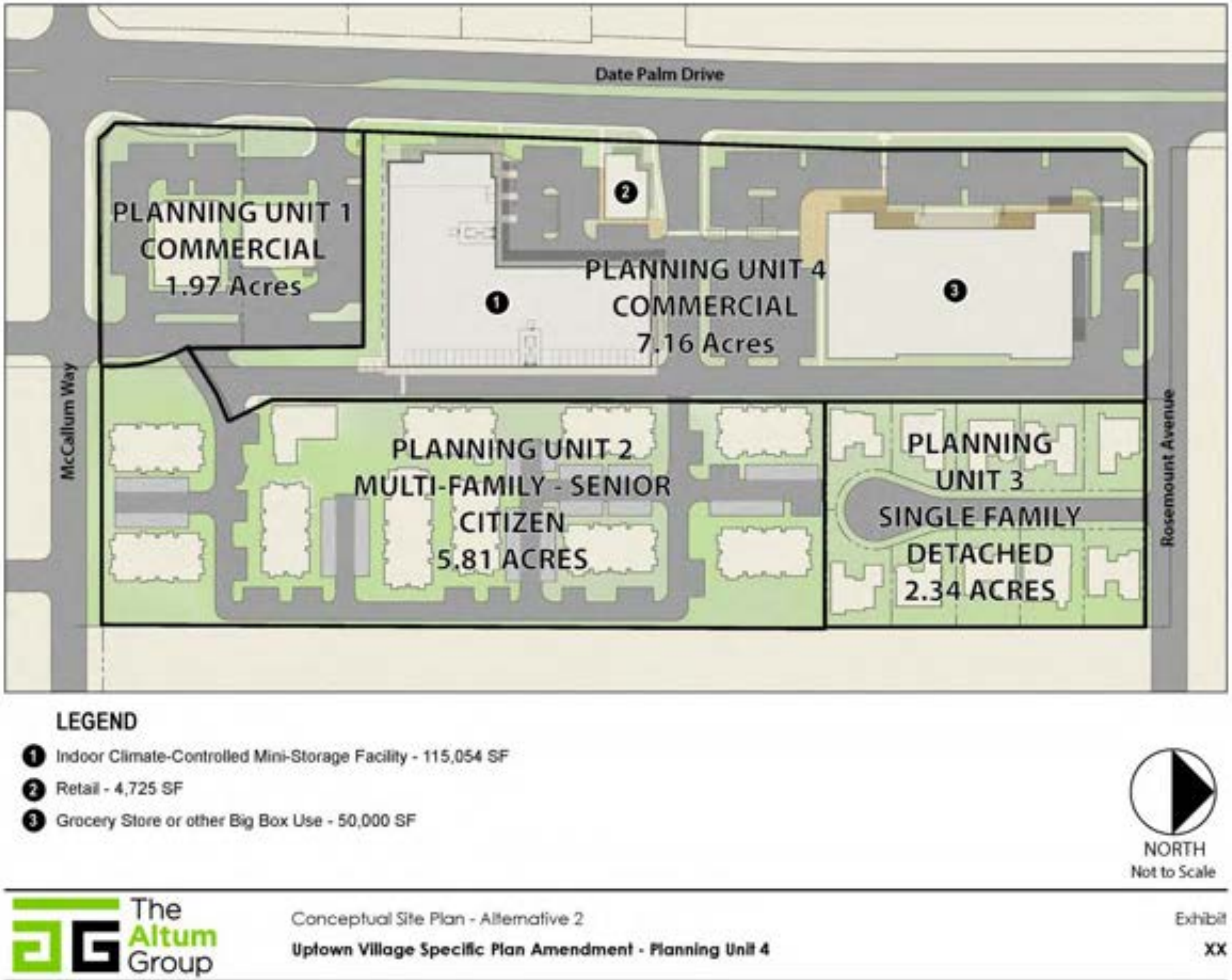


Exhibit B

Site Plan – Scenario 2



2.0 Regulatory Framework and Background

2.1 Air Quality Regulatory Setting

Air pollutants are regulated at the national, state, and air basin level; each agency has a different level of regulatory responsibility. The United States Environmental Protection Agency (EPA) regulates at the national level. The California Air Resources Board (ARB) regulates at the state level. The South Coast Air Quality Management District (SCAQMD) regulates at the air basin level.

2.1.1 National and State

The EPA is responsible for global, international, and interstate air pollution issues and policies. The EPA sets national vehicle and stationary source emission standards, oversees approval of all State Implementation Plans, provides research and guidance for air pollution programs, and sets National Air Quality Standards, also known as federal standards. There are six common air pollutants, called criteria pollutants, which were identified from the provisions of the Clean Air Act of 1970.

- Ozone
- Nitrogen Dioxide
- Lead
- Particulate Matter (PM10 and PM2.5)
- Carbon Monoxide
- Particulate Matter
- Sulfur Dioxide

The federal standards were set to protect public health, including that of sensitive individuals; thus, the standards continue to change as more medical research is available regarding the health effects of the criteria pollutants. Primary federal standards are the levels of air quality necessary, with an adequate margin of safety, to project the public health.

A State Implementation Plan (SIP) is a document prepared by each state describing existing air quality conditions and measures that will be followed to attain and maintain federal standards. The State Implementation Plan for the State of California is administered by the ARB, which has overall responsibility for statewide air quality maintenance and air pollution prevention. California's State Implementation Plan incorporates individual federal attainment plans for regional air districts—air district prepares their federal attainment plan, which are sent to ARB to be approved and incorporated into the California State Implementation Plan. Federal attainment plans include the technical foundation for understanding air quality (e.g., emission inventories and air quality monitoring), control measures and strategies, and enforcement mechanisms. See http://www.arb.ca.gov/research/aaqs/aaqs.htm for additional information on criteria pollutants and air quality standards.

The federal and state ambient air quality standards are summarized in Table 2 and can also be found at http://www.arb.ca.gov/research/aaqs/aaqs2.pdf.

Table 2: Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]		National Standards[2]		
		Concentrations[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone (O_3)	1-Hour	0.09 ppm	Ultraviolet Photometry	- -	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	0.070 ppm		0.070 ppm (147 $\mu g/m^3$)		
Respirable Particulate Matter (PM10)[8]	24-Hour	50 $\mu g/m^3$	Gravimetric or Beta Attenuation	150 μ/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 $\mu g/m^3$		- -		
Fine Particulate Matter (PM2.5)[8]	24-Hour	- -	- -	35 $\mu g/m^3$	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 $\mu g/m^3$	Gravimetric or Beta Attenuation	12 $\mu g/m^3$	15 $\mu g/m^3$	
Carbon Monoxide (CO)	1-Hour	20 ppm (23 $\mu g/m^3$)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 $\mu g/m^3$)	- -	Non-Dispersive Infrared Photometry (NDIR)
	8-Hour	9.0 ppm (10 $\mu g/m^3$)		9 ppm (10 $\mu g/m^3$)	- -	
	8-Hour (Lake Tahoe)	6 ppm (7 $\mu g/m^3$)		- -	- -	
Nitrogen Dioxide (NO_2)[9]	1-Hour	0.18 ppm (339 $\mu g/m^3$)	Gas Phase Chemiluminescence	100 ppb (188 $\mu g/m^3$)	- -	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (357 $\mu g/m^3$)		0.053 ppm (100 $\mu g/m^3$)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[10]	1-Hour	0.25 ppm (655 $\mu g/m^3$)	Ultraviolet Fluorescence	75 ppb (196 $\mu g/m^3$)	- -	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3-Hour	- -		- -	0.5 ppm (1300 mg/m^3)	
	24-Hour	0.04 ppm (105 $\mu g/m^3$)		0.14 ppm (for certain areas)[10]	- -	
	Annual Arithmetic Mean	- -		0.130ppm (for certain areas)[10]	- -	
Lead[11,12]	30 Day Average	1.5 $\mu g/m^3$	Atomic Absorption	- -		
	Calendar Qrtr	- -		1.5 $\mu g/m^3$ (for certain areas)[12]	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Average	- -		0.15 $\mu g/m^3$		
Visibility Reducing Particles[13]	8-Hour	See footnote 13	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24-Hour	25 $\mu g/m^3$	Ion Chromatography			
Hydrogen Sulfide	1-Hour	0.03 ppm (42 $\mu g/m^3$)	Ultraviolet Fluorescence			
Vinyl Chloride[11]	24-Hour	0.01 ppm (26 $\mu g/m^3$)	Gas Chromatography			

Notes:

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

2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

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

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

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

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

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

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

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

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

    Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

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

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

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

Several pollutants listed in Table 2 are not addressed in this analysis. Analysis of lead is not included in this report because the project is not anticipated to emit lead. Visibility-reducing particles are not explicitly addressed in this analysis because particulate matter is addressed. The project is not expected to generate or be exposed to vinyl chloride because proposed project uses do not utilize the chemical processes that create this pollutant and there are no such uses in the project vicinity. The proposed project is not expected to cause exposure to hydrogen sulfide because it would not generate hydrogen sulfide in any substantial quantity.

2.1.2 South Coast Air Quality Management District

The agency for air pollution control for the Salton Sea Air Basin (basin) is the South Coast Air Quality Management District (SCAQMD). SCAQMD is responsible for controlling emissions primarily from stationary sources. SCAQMD maintains air quality monitoring stations throughout the basin. SCAQMD, in coordination with the Southern California Association of Governments, is also responsible for developing, updating, and implementing the Air Quality Management Plan (AQMP) for the basin. An AQMP is a plan prepared and implemented by an air pollution district for a county or region designated as nonattainment of the federal and/or California ambient air quality standards. The term nonattainment area is used to refer to an air basin where one or more ambient air quality standards are exceeded.

Every three (3) years the SCAQMD prepares a new AQMP, updating the previous plan and having a 20-year horizon.

On March 23, 2017 CARB approved the 2016 AQMP. The 2016 AQMP is a regional blueprint for achieving the federal air quality standards and healthful air.

The 2016 AQMP includes both stationary and mobile source strategies to ensure that rapidly approaching attainment deadlines are met, that public health is protected to the maximum extent feasible, and that the region is not faced with burdensome sanctions if the Plan is not approved or if the NAAQS are not met on time. As with every AQMP, a comprehensive analysis of emissions, meteorology, atmospheric chemistry, regional growth projections, and the impact of existing control measures is updated with the latest data and methods. The most significant air quality challenge in the Basin is to reduce nitrogen oxide (NOx) emissions sufficiently to meet the upcoming ozone standard deadlines. The primary goal of the 2016 AQMP is to meet clean air standards and protect public health, including ensuring benefits to environmental justice and disadvantaged communities. Now that the plan has been approved by CARB, it has been forwarded to the U.S. Environmental Protection Agency for its review. If approved by EPA, the plan becomes federally enforceable.

South Coast AQMD adopted the 2022 AQMP on December 2, 2022, to address the attainment of the 2015 8-hour ozone standard (70 ppb) for South Coast Air Basin and Coachella Valley. To meet this standard, the AQMP determined NOx emissions must be reduced by 67% percent more than is required by adopted rules and regulations by 2037. The control strategy for the 2022 AQMP includes aggressive new regulations and the development of incentive programs to support early deployment of advanced technologies. The two key areas for incentive programs are (1) promoting widespread deployment of available zero-emission (ZE) and low NOx technologies and (2) developing new ZE and ultra-low NOx technologies for use in cases where the technology is not currently available. South Coast AQMD will prioritize distribution of incentive funding in environmental justice areas and seek opportunities to focus benefits on the most disadvantaged communities. Cost-effectiveness and affordability will be further considered during the rulemaking or incentive program development process.

South Coast Air Quality Management District Rules

The AQMP for the basin establishes a program of rules and regulations administered by SCAQMD to obtain attainment of the state and federal standards. Some of the rules and regulations that apply to this Project include, but are not limited to, the following:

SCAQMD Rule 402 prohibits a person from discharging from any source whatsoever such quantities of air contaminants or other material which 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, or have a natural tendency to cause, injury or damage to business or property.

SCAQMD Rule 403 governs emissions of fugitive dust during construction and operation activities. Compliance with this rule is achieved through application of standard Best Management Practices, such as application of water or chemical stabilizers to disturbed soils, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 miles per hour, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph, and establishing a permanent ground cover on finished sites.

Rule 403 requires that fugitive dust be controlled with best available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. In addition, Rule 403 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off site. Applicable suppression techniques are indicated below and include but are not limited to the following:

- Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas in active for 10 days or more).
- Water active sites at least three times daily.
- Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least 2 feet of freeboard in accordance with the requirements of California Vehicle Code (CVC) section 23114.
- Pave construction access roads at least 100 feet onto the site from the main road.
- Reduce traffic speeds on all unpaved roads to 15 mph or less.
- Suspension of all grading activities when wind speeds (including instantaneous wind gusts) exceed 25 mph.
- Bumper strips or similar best management practices shall be provided where vehicles enter and exit the construction site onto paved roads or wash off trucks and any equipment leaving the site each trip.
- Replanting disturbed areas as soon as practical.
- During all construction activities, construction contractors shall sweep on-site and off-site streets if silt is carried to adjacent public thoroughfares, to reduce the amount of particulate matter on public streets.

SCAQMD Rule 1113 governs the sale, use, and manufacturing of architectural coating and limits the VOC content in paints and paint solvents. This rule regulates the VOC content of paints available during construction. Therefore, all paints and solvents used during construction and operation of project must comply with Rule 1113.

Idling Diesel Vehicle Trucks – Idling for more than 5 minutes in any one location is prohibited within California borders.

Rule 2702. The SCAQMD adopted Rule 2702 on February 6, 2009, which establishes a voluntary air quality investment program from which SCAQMD can collect funds from parties that desire certified GHG emission reductions, pool those funds, and use them to purchase or fund GHG emission reduction projects within two years, unless extended by the SCAQMD Governing Board. Priority will be given to projects that result in co-benefit emission reductions of GHG emissions and criteria or toxic air pollutants within environmental justice areas. Further, this voluntary program may compete with the cap-and-trade program identified for implementation in CARB's Scoping Plan, or a Federal cap and trade program.

2.1.3 Local

Local jurisdictions, such as the City of Cathedral City, have the authority and responsibility to reduce air pollution through its police power and decision-making authority. It is the responsibility of the District, CVAG, and the City of Cathedral City to monitor pollutant levels and regulate air pollution sources. With the installation of additional monitoring devices in the Whitewater River, the District is collecting data to establish a "naturally occurring" or "background" level for PM10 in the Coachella Valley. This data will allow a more meaningful estimate of manmade PM10 emissions.

City of Cathedral City General Plan

The City of Cathedral City updated their General Plan in July 2019. The 2019 General Plan Air Quality and Climate Stability Element contains the following goals and policies aimed at reducing air pollution:

Goal Preservation and enhancement of local and regional air quality to assure the long-term protection of the community's health and welfare.

Policy 1 The City shall be proactive in regulating local pollutant emitters and shall cooperate with Coachella Valley Association of Governments and the South Coast Air Quality Management District to assure compliance with air quality standards.

Policy 2 The City shall fully implement dust control ordinances, and coordinate and cooperate with local, regional, and federal efforts to monitor, manage, and reduce the levels of major pollutants affecting the City and region, with particular emphasis on PM10 emissions.

Policy 3 City land use planning efforts shall assure that sensitive receptors are separated from polluting point sources, to the greatest extent practicable.

Policy 4 Development proposals brought before the City shall be reviewed for their potential to adversely impact local and regional air quality, and shall be required to mitigate any significant impacts.

Policy 5 The City shall encourage and promote the use of clean alternative energy sources for transportation, heating and cooling, lighting and other power needs.

Policy 6 The City shall encourage and support the development of facilities and projects that facilitate and enhance the use of alternative modes of transportation, including pedestrian-oriented retail and activity centers, dedicated bicycle and LSEV paths and lanes, and community-wide multi-use trails.

Policy 7 The City shall promote the expanded availability of mass transit services, coordinating with Sunline Transit Authority to link residential, commercial and resort businesses, and employment centers with the City's residential neighborhoods and nearby communities.

Policy 8 The City shall continue to implement effective street sweeping and post-windstorm cleanup programs to reduce the cumulative impacts of blowsand and nuisance dust resulting from construction activities, natural processes, and other sources.

Policy 9 The City shall promote public educational programs that describe the causes of air pollution, encourage the use of alternative energy sources, and recommend methods for reducing the impacts of blowsand.

Policy 10 The City shall continue to implement and update policies, regulations, and action plans that promote climate stability and greenhouse gas emission reductions, including but not limited to the Climate Action Plan, Energy Action Plan, Greenhouse Gas Inventory and Green for Life program.

2.2 Greenhouse Gas Regulatory Setting

2.2.1 International

Many countries around the globe have made an effort to reduce GHGs since climate change is a global issue.

Intergovernmental Panel on Climate Change. In 1988, the United Nations and the World Meteorological Organization established the Intergovernmental Panel on Climate Change to assess the scientific, technical and socio-economic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation.

United Nations. The United States participates in the United Nations Framework Convention on Climate Change (UNFCCC) (signed on March 21, 1994). Under the Convention, governments gather and share information on greenhouse gas emissions, national policies, and best practices; launch national strategies for addressing greenhouse gas emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change.

The 2014 UN Climate Change Conference in Lima Peru provided a unique opportunity to engage all countries to assess how developed countries are implementing actions to reduce emissions.

Kyoto Protocol. The Kyoto Protocol is a treaty made under the UNFCCC and was the first international agreement to regulate GHG emissions. It has been estimated that if the commitments outlined in the Kyoto Protocol are met, global GHG emissions could be reduced by an estimated 5 percent from 1990 levels during the first commitment period of 2008 – 2012 (UNFCCC 1997). On December 8, 2012, the Doha Amendment to the Kyoto Protocol was adopted. The amendment includes: New commitments for Annex I Parties to the Kyoto Protocol who agreed to take on commitments in a second commitment period from 2013 – 2020; a revised list of greenhouse gases (GHG) to be reported on by Parties in the second commitment period; and Amendments to several articles of the Kyoto Protocol which specifically referenced issues pertaining to the first commitment period and which needed to be updated for the second commitment period.

2.2.2 National

Greenhouse Gas Endangerment. On December 2, 2009, the EPA announced that GHGs threaten the public health and welfare of the American people. The EPA also states that GHG emissions from on-road vehicles contribute to that threat. The decision was based on *Massachusetts v. EPA* (Supreme Court Case 05-1120) which argued that GHGs are air pollutants covered by the Clean Air Act and that the EPA has authority to regulate those emissions.

Clean Vehicles. Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light duty trucks. The law has become more stringent over time. On May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the United States. On April 1, 2010, the EPA and the Department of Transportation's National Highway Safety Administration announced a joint final rule establishing a national program that would reduce greenhouse gas emissions and improve fuel economy for new cars and trucks sold in the United States.

The first phase of the national program would apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of carbon dioxide per mile, equivalent to 35.5 miles per gallon if the automobile industry were to meet this carbon dioxide level solely through fuel economy improvements. Together, these standards would cut carbon dioxide emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016). The second phase of the national program would involve proposing new fuel economy and greenhouse gas standards for model years 2017 – 2025 by September 1, 2011.

On October 25, 2010, the EPA and the U.S. Department of Transportation proposed the first national standards to reduce greenhouse gas emissions and improve fuel efficiency of heavy-duty trucks and buses. For combination tractors, the agencies are proposing engine and vehicle standards that begin in the 2014 model year and achieve up to a 20 percent reduction in carbon dioxide emissions and fuel consumption by the 2018 model year. For heavy-duty pickup trucks and vans, the agencies are proposing separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10 percent reduction for gasoline vehicles and 15 percent reduction for diesel vehicles by 2018 model year (12 and 17 percent respectively if accounting for air conditioning leakage). Lastly, for vocational vehicles, the agencies are proposing engine and vehicle standards starting in the 2014 model year which would achieve up to a 10 percent reduction in fuel consumption and carbon dioxide emissions by 2018 model year.

Issued by NHTSA and EPA in March 2020 (published on April 30, 2020 and effective after June 29, 2020), the Safer Affordable Fuel-Efficient Vehicles Rule would maintain the Corporate Average Fuel Economy (CAFE) and CO2 standards applicable in model year 2020 for model years 2021 through 2026. The estimated CAFE and CO2 standards for model year 2020 are 43.7 mpg and 204 grams of CO2 per mile for passenger cars and 31.3 mpg and 284 grams of CO2 per mile for light trucks, projecting an overall industry average of 37 mpg, as compared to 46.7 mpg under the standards issued in 2012. This Rule also excludes CO2- equivalent emission improvements associated with air conditioning refrigerants and leakage (and, optionally, offsets for nitrous oxide and methane emissions) after model year 2020.[1]

Mandatory Reporting of Greenhouse Gases. On January 1, 2010, the EPA started requiring large emitters of heat-trapping emissions to begin collecting GHG data under a new reporting system. Under the rule, suppliers of fossil fuels or industrial greenhouse gases, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of greenhouse gas emissions are required to submit annual reports to the EPA.

Climate Adaption Plan. The EPA Plan identifies priority actions the Agency will take to incorporate considerations of climate change into its programs, policies, rules and operations to ensure they are effective under future climatic conditions. The following link provides more information on the EPA Plan: https://www.epa.gov/arc-x/planning-climate-change-adaptation

2.2.3 California

California Code of Regulations (CCR) Title 24, Part 6. CCR Title 24, Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24) were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. Although it was not originally intended to reduce GHG emissions, electricity production by fossil fuels results in GHG emissions and energy efficient buildings require less electricity. Therefore, increased energy efficiency results in decreased GHG emissions.

The Energy Commission adopted 2008 Standards on April 23, 2008 and Building Standards Commission approved them for publication on September 11, 2008. These updates became effective on August 1, 2009. 2013, 2016, and 2019 standards have been approved and became effective July 1, 2014, January 1, 2016, and January 1, 2020, respectively.

California Code of Regulations (CCR) Title 24, Part 11. All buildings for which an application for a building permit is submitted on or after January 1, 2020 must follow the 2019 standards. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas emissions. The following links provide more information on Title 24, Part 11:
https://www.dgs.ca.gov/BSC/Codes
https://www.energy.ca.gov/sites/default/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf

[1] National Highway Traffic Safety Administration (NHTSA) and U.S. Environmental Protection Agency (USEPA), 2018. Federal Register / Vol. 83, No. 165 / Friday, August 24, 2018 / Proposed Rules, The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks 2018. Available at: https://www.gpo.gov/fdsys/pkg/FR-2018-08-24/pdf/2018-16820.pdf.

California Green Building Standards On January 12, 2010, the State Building Standards Commission unanimously adopted updates to the California Green Building Standards Code, which went into effect on January 1, 2011. The Housing and Community Development (HCD) updated CALGreen through the 2015 Triennial Code Adoption Cycle, during the 2016 to 2017 fiscal year. During the 2019-2020 fiscal year, the Department of Housing and Community Development (HCD) updated CALGreen through the 2019 Triennial Code Adoption Cycle.

The Code is a comprehensive and uniform regulatory code for all residential, commercial and school buildings. CCR Title 24, Part 11: California Green Building Standards (Title 24) became effective in 2001 in response to continued efforts to reduce GHG emissions associated with energy consumption. CCR Title 24, Part 11 now require that new buildings reduce water consumption, employ building commissioning to increase building system efficiencies, divert construction waste from landfills, and install low pollutant-emitting finish materials. One focus of CCR Title 24, Part 11 is water conservation measures, which reduce GHG emissions by reducing electrical consumption associated with pumping and treating water. CCR Title 24, Part 11 has approximately 52 nonresidential mandatory measures and an additional 130 provisions for optional use. Some key mandatory measures for commercial occupancies include specified parking for clean air vehicles, a 20 percent reduction of potable water use within buildings, a 50 percent construction waste diversion from landfills, use of building finish materials that emit low levels of volatile organic compounds, and commissioning for new, nonresidential buildings over 10,000 square feet.

The 2019 CalGreen Code includes the following changes and/or additional regulations:

Single-family homes built with the 2019 standards will use about 7 percent less energy due to energy efficiency measures versus those built under the 2016 standards. Once rooftop solar electricity generation is factored in, homes built under the 2019 standards will use about 53 percent less energy than those under the 2016 standards. Nonresidential buildings will use about 30 percent less energy due mainly to lighting upgrades[2].

HCD modified the best management practices for stormwater pollution prevention adding Section 5.106.2 for projects that disturb one or more acres of land. This section requires projects that disturb one acre or more of land or less than one acre of land but are part of a larger common plan of development or sale must comply with the post-construction requirement detailed in the applicable National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities issued by the State Water Resources Control Board. The NPDES permits require post-construction runoff (post-project hydrology) to match the preconstruction runoff pre-project hydrology) with installation of post-construction stormwater management measures.

[2] https://ww2.energy.ca.gov/title24/2019standards/documents/2018_Title_24_2019_Building_Standards_FAQ.pdf

HCD added sections 5.106.4.1.3 and 5.106.4.1.5 in regards to bicycle parking. Section 5.106.4.1.3 requires new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5 percent of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility. In addition, Section 5.106.4.1.5 states that acceptable bicycle parking facility for Sections 5.106.4.1.2 through 5.106.4.1.4 shall be convenient from the street and shall meeting one of the following: (1) covered, lockable enclosures with permanently anchored racks for bicycles; (2) lockable bicycle rooms with permanently anchored racks; or (3) lockable, permanently anchored bicycle lockers.

HCD amended section 5.106.5.3.5 allowing future charging spaces to qualify as designated parking for clean air vehicles.

HCD updated section 5.303.3.3 in regards to showerhead flow rates. This update reduced the flow rate to 1.8 GPM.

HCD amended section 5.304.1 for outdoor potable water use in landscape areas and repealed sections 5.304.2 and 5.304.3. The update requires nonresidential developments to comply with a local water efficient landscape ordinance or the current California Department of Water Resource's' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent. Some updates were also made in regards to the outdoor potable water use in landscape areas for public schools and community colleges.

HCD updated Section 5.504.5.3 in regards to the use of MERV filters in mechanically ventilated buildings. This update changed the filter use from MERV 8 to MERV 13.

The California Green Building Standards Code does not prevent a local jurisdiction from adopting a more stringent code as state law provides methods for local enhancements. The Code recognizes that many jurisdictions have developed existing construction and demolition ordinances, and defers to them as the ruling guidance provided they provide a minimum 50-percent diversion requirement. The code also provides exemptions for areas not served by construction and demolition recycling infrastructure. State building code provides the minimum standard that buildings need to meet in order to be certified for occupancy. Enforcement is generally through the local building official. The following link provides more on CalGreen Building Standards:
http://www.bsc.ca.gov/Home/CALGreen.aspx

Executive Order S-3-05. California Governor issued Executive Order S-3-05, GHG Emission, in June 2005, which established the following targets:

- By 2010, California shall reduce greenhouse gas emissions to 2000 levels;
- By 2020, California shall reduce greenhouse gas emissions to 1990 levels.
- By 2050, California shall reduce greenhouse gas emissions to 80 percent below 1990 levels.

The executive order directed the secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. To comply with the Executive Order, the secretary of CalEPA created the California Climate Action Team (CAT), made up of members from various state agencies and commissions. The team released its first report in March 2006. The report proposed to achieve the targets by building on the voluntary actions of businesses, local governments, and communities and through State incentive and regulatory programs.

Executive Order S-01-07. Executive Order S-1-07 was issued in 2007 and proclaims that the transportation sector is the main source of GHG emissions in the State, since it generates more than 40 percent of the State's GHG emissions. It establishes a goal to reduce the carbon intensity of transportation fuels sold in the State by at least ten percent by 2020. This Order also directs CARB to determine whether this Low Carbon Fuel Standard (LCFS) could be adopted as a discrete early-action measure as part of the effort to meet the mandates in AB 32.

On April 23, 2009 CARB approved the proposed regulation to implement the low carbon fuel standard and began implementation on January 1, 2011. The low carbon fuel standard is anticipated to reduce GHG emissions by about 16 MMT per year by 2020. CARB approved some amendments to the LCFS in December 2011, which were implemented on January 1, 2013. In September 2015, the Board approved the re-adoption of the LCFS, which became effective on January 1, 2016, to address procedural deficiencies in the way the original regulation was adopted. In 2018, the Board approved amendments to the regulation, which included strengthening and smoothing the carbon intensity benchmarks through 2030 in-line with California's 2030 GHG emission reduction target enacted through SB 32, adding new crediting opportunities to promote zero emission vehicle adoption, alternative jet fuel, carbon capture and sequestration, and advanced technologies to achieve deep decarbonization in the transportation sector.

The LCFS is designed to encourage the use of cleaner low-carbon transportation fuels in California, encourage the production of those fuels, and therefore, reduce GHG emissions and decrease petroleum dependence in the transportation sector. Separate standards are established for gasoline and diesel fuels and the alternative fuels that can replace each. The standards are "back-loaded", with more reductions required in the last five years, than the first five years. This schedule allows for the development of advanced fuels that are lower in carbon than today's fuels and the market penetration of plug-in hybrid electric vehicles, battery electric vehicles, fuel cell vehicles, and flexible fuel vehicles. It is anticipated that compliance with the low carbon fuel standard will be based on a combination of both lower carbon fuels and more efficient vehicles.

Reformulated gasoline mixed with corn-derived ethanol at ten percent by volume and low sulfur diesel fuel represent the baseline fuels. Lower carbon fuels may be ethanol, biodiesel, renewable diesel, or blends of these fuels with gasoline or diesel as appropriate. Compressed natural gas and liquefied natural gas also may be low carbon fuels. Hydrogen and electricity, when used in fuel cells or electric vehicles are also considered as low carbon fuels for the low carbon fuel standard.

SB 97. Senate Bill 97 (SB 97) was adopted August 2007 and acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. SB 97 directed the Governor's Office of Planning and Research (OPR), which is part of the State Resource Agency, to prepare, develop, and transmit to CARB guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, by July 1, 2009. The Resources Agency was required to certify and adopt those guidelines by January 1, 2010.

Pursuant to the requirements of SB 97 as stated above, on December 30, 2009 the Natural Resources Agency adopted amendments to the state CEQA guidelines that address GHG emissions. The CEQA Guidelines Amendments changed 14 sections of the CEQA Guidelines and incorporate GHG language throughout the Guidelines. However, no GHG emissions thresholds of significance are provided and no specific mitigation measures are identified. The GHG emission reduction amendments went into effect on March 18, 2010 and are summarized below:

- Climate action plans and other greenhouse gas reduction plans can be used to determine whether a project has significant impacts, based upon its compliance with the plan.
- Local governments are encouraged to quantify the greenhouse gas emissions of proposed projects, noting that they have the freedom to select the models and methodologies that best meet their needs and circumstances. The section also recommends consideration of several qualitative factors that may be used in the determination of significance, such as the extent to which the given project complies with state, regional, or local GHG reduction plans and policies. OPR does not set or dictate specific thresholds of significance. Consistent with existing CEQA Guidelines, OPR encourages local governments to develop and publish their own thresholds of significance for GHG impacts assessment.
- When creating their own thresholds of significance, local governments may consider the thresholds of significance adopted or recommended by other public agencies, or recommended by experts.
- New amendments include guidelines for determining methods to mitigate the effects of greenhouse gas emissions in Appendix F of the CEQA Guidelines.
- OPR is clear to state that "to qualify as mitigation, specific measures from an existing plan must be identified and incorporated into the project; general compliance with a plan, by itself, is not mitigation."
- OPR's emphasizes the advantages of analyzing GHG impacts on an institutional, programmatic level. OPR therefore approves tiering of environmental analyses and highlights some benefits of such an approach.
- Environmental impact reports (EIRs) must specifically consider a project's energy use and energy efficiency potential.

AB 32. The California State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires that greenhouse gases emitted in California be reduced to 1990 levels by the year 2020. "Greenhouse gases" as defined under AB 32 include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. ARB is the state agency charged with monitoring and regulating sources of greenhouse gases. AB 32 states the following:

Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

The ARB Board approved the 1990 greenhouse gas emissions level of 427 million metric tons of carbon dioxide equivalent (MMTCO2e) on December 6, 2007 (California Air Resources Board 2007). Therefore, emissions generated in California in 2020 are required to be equal to or less than 427 MMTCO2e. Emissions in 2020 in a "business as usual" scenario are estimated to be 596 MMTCO2e.

Under AB 32, the ARB published its Final Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California. Discrete early action measures are currently underway or are enforceable by January 1, 2010. The ARB has 44 early action measures that apply to the transportation, commercial, forestry, agriculture, cement, oil and gas, fire suppression, fuels, education, energy efficiency, electricity, and waste sectors. Of these early action measures, nine are considered discrete early action measures, as they are regulatory and enforceable by January 1, 2010. The ARB estimates that the 44 recommendations are expected to result in reductions of at least 42 MMTCO2e by 2020, representing approximately 25 percent of the 2020 target.

The ARB's Climate Change Scoping Plan (Scoping Plan) contains measures designed to reduce the State's emissions to 1990 levels by the year 2020 (California Air Resources Board 2008). The Scoping Plan identifies recommended measures for multiple greenhouse gas emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors. As stated in the Scoping Plan, the key elements of the strategy for achieving the 2020 greenhouse gas target include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related greenhouse gas emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, Including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation.

In addition, the Scoping Plan differentiates between "capped" and "uncapped" strategies. "Capped" strategies are subject to the proposed cap-and-trade program. The Scoping Plan states that the inclusion of these emissions within the cap-and trade program will help ensure that the year 2020 emission targets are met despite some degree of uncertainty in the emission reduction estimates for any individual measure. Implementation of the capped strategies is calculated to achieve a sufficient amount of reductions by 2020 to achieve the emission target contained in AB 32. "Uncapped" strategies that will not be subject to the cap-and-trade emissions caps and requirements are provided as a margin of safety by accounting for additional greenhouse gas emission reductions.[4]

Senate Bill 100. Senate Bill 100 (SB 100) requires 100 percent of total retail sales of electricity in California to come from eligible renewable energy resources and zero-carbon resources by December 31, 2045. SB 100 was adopted September 2018.

The interim thresholds from prior Senate Bills and Executive Orders would also remain in effect. These include Senate Bill 1078 (SB 1078), which requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. Senate Bill 107 (SB 107) which changed the target date to 2010. Executive Order S-14-08, which was signed on November 2008 and expanded the State's Renewable Energy Standard to 33 percent renewable energy by 2020. Executive Order S-21-09 directed the CARB to adopt regulations by July 31, 2010 to enforce S-14-08. Senate Bill X1-2 codifies the 33 percent renewable energy requirement by 2020.

SB 375. Senate Bill 375 (SB 375) was adopted September 2008 and aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPO) to adopt a sustainable communities strategy (SCS) or alternate planning strategy (APS) that will prescribe land use allocation in that MPOs Regional Transportation Plan (RTP). CARB, in consultation with each MPO, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's sustainable communities strategy or alternate planning strategy for consistency with its assigned targets.

The proposed project is located within the Southern California Association of Governments (SCAG), which has authority to develop the SCS or APS. For the SCAG region, the targets set by CARB are at eight percent below 2005 per capita GHG emissions levels by 2020 and 13 percent below 2005 per capita GHG emissions levels by 2035. On April 4, 2012, SCAG adopted the 2012-2035 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS), which meets the CARB emission reduction requirements.

On September 3, 2020, SCAG's Regional Council approved and fully adopted the Connect SoCal (2020–2045 Regional Transportation Plan/Sustainable Communities Strategy), and the addendum to the Connect SoCal Program Environmental Impact Report. Connect SoCal is a long-range visioning plan that builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern. Connect SoCal outlines more than $638 billion in transportation system investments through 2045. Connect SoCal is supported by a combination of transportation and land use strategies that help the region achieve state greenhouse gas emission reduction goals and federal Clean Air Act requirements, preserve open space areas, improve public health and roadway safety, support our vital goods movement industry and utilize resources more efficiently. By integrating the Forecasted Development Pattern with a suite of financially constrained transportation investments, Connect SoCal can reach the regional target of reducing greenhouse gases, or GHGs, from autos and light-duty trucks by 8 percent per capita by 2020, and 19 percent by 2035 (compared to 2005 levels).

City and County land use policies, including General Plans, are not required to be consistent with the RTP and associated SCS or APS. However, new provisions of CEQA would incentivize, through streamlining and other provisions, qualified projects that are consistent with an approved SCS or APS and categorized as "transit priority projects."

Assembly Bill 939, Assembly Bill 341, and Senate Bill 1374. Assembly Bill 939 (AB 939) requires that each jurisdiction in California to divert at least 50 percent of its waste away from landfills, whether through waste reduction, recycling or other means. AB 341 requires at least 75 percent of generated waste be source reduced, recycled, or composted by the year 2020. Senate Bill 1374 (SB 1374) requires the California Integrated Waste Management Board to adopt a model ordinance by March 1, 2004 suitable for adoption by any local agency to require 50 to 75 percent diversion of construction and demolition of waste materials from landfills.

Executive Order S-13-08. Executive Order S-13-08 indicates that "climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California's economy, to the health and welfare of its population and to its natural resources." Pursuant to the requirements in the order, the 2009 California Climate Adaptation Strategy (California Natural Resource Agency 2009) was adopted, which is the "… first statewide, multi-sector, region-specific, and information-based climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

Executive Order B-30-15. Executive Order B-30-15, establishing a new interim statewide greenhouse gas emission reduction target to reduce greenhouse gas emissions to 40 percent below 1990 levels by 2030, was signed by Governor Brown in April 2015.

Executive Order B-29-15. Executive Order B-29-15, mandates a statewide 25% reduction in potable water usage and was signed into law on April 1, 2015.

Executive Order B-37-16. Executive Order B-37-16, continuing the State's adopted water reduction, was signed into law on May 9, 2016. The water reduction builds off the mandatory 25% reduction called for in EO B-29-15.

Executive Order N-79-20. Executive Order N-79-20 was signed into law on September 23, 2020 and mandates 100 percent of in-state sales of new passenger cars and trucks be zero-emission by 2035; 100 percent of medium- and heavy-duty vehicles in the state be zero-emission vehicles by 2045 for all operations where feasible and by 2035 for drayage trucks; and to transition to 100 percent zero-emission off-road vehicles and equipment by 2035 where feasible.

2.2.4 South Coast Air Quality Management District

The Project is within the Salton Sea Air Basin, which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). SCAQMD Regulation XXVII currently includes three rules:

- The purpose of Rule 2700 is to define terms and post global warming potentials.
- The purpose of Rule 2701, SoCal Climate Solutions Exchange, is to establish a voluntary program to encourage, quantify, and certify voluntary, high quality certified greenhouse gas emission reductions in the SCAQMD.
- Rule 2702, Greenhouse Gas Reduction Program, was adopted on February 6, 2009. The purpose of this rule is to create a Greenhouse Gas Reduction Program for greenhouse gas emission reductions in the SCAQMD. The SCAQMD will fund projects through contracts in response to requests for proposals or purchase reductions from other parties.

SCAQMD Threshold Development

The SCAQMD has established recommended significance thresholds for greenhouse gases for local lead agency consideration ("SCAQMD draft local agency threshold"). SCAQMD has published a five-tiered draft GHG threshold which includes a 10,000 metric ton of CO_2e per year for stationary/industrial sources and 3,000 metric tons of CO_2e per year significance threshold for residential/commercial projects (South Coast Air Quality Management District 2010c). Tier 3 is anticipated to be the primary tier by which the SCAQMD will determine significance for projects. The Tier 3 screening level for stationary sources is based on an emission capture rate of 90 percent for all new or modified projects. A 90-precent emission capture rate means that 90 percent of total emissions from all new or modified stationary source projects would be subject to CEQA analysis. The 90-percent capture rate GHG significance screening level in Tier 3 for stationary sources was derived using the SCAQMD's annual Emissions Reporting Program.

The current draft thresholds consist of the following tiered approach:

- Tier 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA.
- Tier 2 consists of determining whether or not the project is consistent with a greenhouse gas reduction plan. If a project is consistent with a qualifying local greenhouse gas reduction plan, it does not have significant greenhouse gas emissions.
- Tier 3 consists of screening values, which the lead agency can choose but must be consistent. A project's construction emissions are averaged over 30 years and are added to a project's

operational emissions. If a project's emissions are under one of the following screening thresholds, then the project is less than significant:

- All land use types: 3,000 MTCO2e per year
- Based on land use types: residential is 3,500 MTCO2e per year; commercial is 1,400 MTCO2e per year; and mixed use is 3,000 MTCO2e per year

- Tier 4 has the following options:
  - Option 1: Reduce emissions from business as usual by a certain percentage; this percentage is currently undefined
  - Option 2: Early implementation of applicable AB 32 Scoping Plan measures
  - Option 3: Year 2020 target for service populations (SP), which includes residents and employees: 4.8 MTCO2e/SP/year for projects and 6.6 MTCO2e/SP/year for plans;
  - Option 3, 2035 target: 3.0 MTCO2e/SP/year for projects and 4.1 MTCO2e/SP/year for plans
- Tier 5 involves mitigation offsets to achieve target significance threshold.

2.2.5 Local

County of Riverside Climate Action Plan

The County of Riverside's Climate Action Plan Update (CAP) was completed in November 2019. The CAP Update describes Riverside County's GHG emissions for the year 2017, projects how these emissions will increase into 2020, 2030, and 2050, and includes strategies to reduce emissions to a level consistent with the State of California's emissions reduction targets. The CAP Update sets a target to reduce community-wide GHG emission emissions by 15 percent from 2008 levels by 2020, 49 percent by 2030, and 83 percent by 2050.

Appendix D of the Riverside County CAP Update also states that project's that do not exceed the CAP's screening threshold of 3,000 MTCO2e per year are considered to have less than significant GHG emissions and are in compliance with the County's CAP Update. Therefore, to determine whether the project's GHG emissions are significant, this analysis uses the County of Riverside CAP Update screening threshold of 3,000 MTCO2e per year for all land use types. Projects that do not exceed emissions of 3,000 MTCO2e per year are also required to include the following efficiency measures:

- Energy efficiency matching or exceeding the Title 24 requirements in effect as of January 2017, and
- Water conservation measures that matches the California Green Building Code in effect as of January 2017.

Projects that exceed emissions of 3,000 MTCO2e per year are also required to use Screening Tables. Projects that garner at least 100 points will be consistent with the reduction quantities anticipated in the County's CAP Update. Consistent with CEQA Guidelines, such projects would be determined to have a less than significant individual and cumulative impact for GHG emissions. Those projects that do not garner 100 points using the Screening Tables will need to provide additional analysis to determine the significance of GHG emissions.

In order to meet the state-wide efficiency metric targets, the CAP must demonstrate that it can reduce community-wide emissions to 6.6 MT CO2e/SP (or 944,737 MT CO2e total based on an estimated 2020 service population of 143,142) by 2020 and 4.4 MT CO2e/SP (or 1,334,243 MT CO2e based on an estimated 2030 service population of 303,237) by 2030.

Therefore, to determine whether the project's GHG emissions are significant, this analysis uses the County of Riverside CAP Update GHG Screening Tables.

The project will be subject to the latest requirements of the California Green Building and Title 24 Energy Efficiency Standards (currently 2019) which would reduce project-related greenhouse gas emissions.

City of Cathedral City Climate Action Plan
A Climate Action Plan (CAP) was adopted by the City of Cathedral City in May of 2013. The City of Cathedral City Climate Action Plan was set in place to guide the City in decisions that lead to the largest and most cost-effective emissions reductions. This plan sets forth goals to reduce emissions to achieve the targets of AB 32. The Climate Action Plan identifies that the community will have to reach a 23.4% reduction from Year 2010 baseline emissions by the year 2020 in order to obtain the AB 32 target emissions. These CAP targets are based on a predicted population growth rate of 19 percent between 2010 and 2020. However, according to the Census Bureau[3], the population of Cathedral City was estimated to be 51,200 in April 2010 and 55,007 in July 2019; which shows a growth rate of only 7.4 percent.

The City of Cathedral City has identified 77 measures to be implemented over the course of an eight-year period, beginning in 2013, in order to achieve their emission reduction goals. The City promotes energy efficiency and conservation in all areas of community development, including transportation, development planning, and public and private sector construction and operation, as well as in the full range of residential and non-residential projects. The City supports public and private efforts to develop and operate alternative systems of solar and electric production that take advantage of local renewable resources. In addition, the Climate Action Plan discusses the ability to develop and implement a solar ready ordinance that would require all new buildings and homes to be prepared for solar install. The Climate Action Plan also promotes the use of drought tolerate desert landscaping for parks, recreational facilities and golf courses.

Therefore, to determine whether the project's GHG emissions are significant, this analysis uses the County of Riverside GHG Screening Tables.

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[3] https://www.census.gov/quickfacts/fact/table/cathedralcitycitycalifornia,US/PST045219

The project will be subject to the latest requirements of the California Green Building and Title 24 Energy Efficiency Standards (currently 2019) which would reduce project-related greenhouse gas emissions.

3.0 Setting

3.1 Existing Physical Setting

The project site is located in the City of Cathedral City within the County of Riverside, which is part of the Salton Sea Air Basin (SSAB). The middle part of Riverside County (between San Gorgonio Pass and Joshua Tree National Monument), belongs in the Salton Sea Air Basin (SSAB), along with Imperial County. The SSAB portion of Riverside County is separated from the South Coast Air Basin region by the San Jacinto Mountains and from the Mojave Desert Air Basin to the east by the Little San Bernardino Mountains.

3.1.1 Local Climate and Meteorology

During the summer, the SSAB is generally influenced by a Pacific Subtropical High Cell that sits off the coast, inhibiting cloud formation and encouraging daytime solar heating. The SSAB is rarely influenced by cold air masses moving south from Canada and Alaska, as these systems are weak and diffuse by the time they reach the desert. Most desert moisture arrives from infrequent warm, moist, and unstable air masses from the south. The SSAB averages between three and seven inches of precipitation per year.

The Coachella Valley is a geographically and meteorologically unique area wholly contained within the Salton Sea Air Basin. The region is currently impacted by significant air pollution levels caused by the transport of pollutants from coastal air basins to the west, primarily ozone, and locally generated PM10. The mountains surrounding the region isolate the Valley from coastal influences and create a hot and dry low-lying desert (see Table 3). As the desert heats up it draws cooler coastal air through the narrow San Gorgonio Pass, generating strong and sustained winds that cross the fluvial (water caused) and aeolian (wind) erosion zones in the Valley. These strong winds suspend and transport large quantities of sand and dust, reducing visibility, damaging property, and constituting a significant health threat.

The temperature and precipitation levels for the City of Palm Springs, closest monitoring station to the project site, are in Table 3. Table 3 shows that July is typically the warmest month and December is typically the coolest month. Rainfall in the project area varies considerably in both time and space. Almost all the annual rainfall comes from the fringes of mid-latitude storms from late November to early April, with summers being almost completely dry.

<Table 3, next page>

Table 3: Meteorological Summary

Month	Temperature (˚F)		Average Precipitation (inches)
	Average High	Average Low	
January	69.6	42.1	1.14
February	73.6	45.3	1.02
March	79.4	48.6	0.59
April	86.9	54	0.17
May	94.4	60.2	0.05
June	103.1	66.7	0.06
July	108.3	74.8	0.2
August	106.9	74.2	0.3
September	101.8	67.9	0.34
October	91.6	59.2	0.26
November	78.7	48.8	0.47
December	70.1	42.1	0.93
Annual Average	**88.7**	**57**	**5.53**

Notes:
[1] Source: https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?caplms+sca

3.1.2 Local Air Quality

The SCAQMD has divided the South Coast Air Basin into 38 air-monitoring areas with a designated ambient air monitoring station representative of each area. The project is within Source Receptor Area 30, Coachella Valley. SCAQMD operates the Palm Springs air monitoring station approximately 5.1 miles northwest of the project site. The Palm Springs monitoring station was used to collect monitoring data; however, these locations do not provide all ambient weather data. Therefore, additional data was pulled from the SCAQMD historical data for the Coachella Valley Area (Area 30) for both sulfur dioxide and carbon monoxide to provide the existing levels. Table 4 presents the monitored pollutant levels within the vicinity. However, it should be noted that due to the air monitoring station distance from the project site, recorded air pollution levels at the air monitoring station reflect with varying degrees of accuracy, local air quality conditions at the project site.

<Table 4, next page>

Table 4: Local Area Air Quality Levels from Palm Springs Air Monitoring Station[1]

	Year		
Pollutant (Standard)[2]	**2018**	**2019**	**2020**
Ozone:			
Maximum 1-Hour Concentration (ppm)	0.111	0.100	0.119
Days > CAAQS (0.09 ppm)	**11**	**5**	**9**
Maximum 8-Hour Concentration (ppm)	0.099	0.084	0.094
Days > NAAQS (0.07 ppm)	**56**	**34**	**49**
Days > CAAQS (0.070 ppm)	**58**	**39**	**53**
Carbon Monoxide:			
Maximum 1-Hour Concentration (ppm)	1.1	1.3	0.8
Days > NAAQS (20 ppm)	0	0	0
Maximum 8-Hour Concentration (ppm)	0.8	0.7	0.5
Days > NAAQS (9 ppm)	0	0	0
Nitrogen Dioxide:			
Maximum 1-Hour Concentration (ppm)	0.043	0.041	0.047
Days > NAAQS (0.25 ppm)	0	0	0
Sulfur Dioxide:[3]			
Maximum 1-Hour Concentration (ppm)	-	-	-
Days > CAAQS (0.25 ppm)	-	-	-
Inhalable Particulates (PM10):			
Maximum 24-Hour Concentration (ug/m^3)	422.3	75.6	129.8
Days > NAAQS (150 ug/m^3)	2	0	*
Days > CAAQS (50 ug/m^3)	0	6	*
Annual Average (ug/m^3)	22.9	20.7	23.2
Annual > NAAQS (50 ug/m^3)	No	No	No
Annual > CAAQS (20 ug/m^3)	**Yes**	**Yes**	**Yes**
Ultra-Fine Particulates (PM2.5):			
Maximum 24-Hour Concentration (ug/m^3)	30.2	15.5	23.9
Days > NAAQS (35 ug/m^3)	**0**	**0**	**0**
Annual Average (ug/m^3)	6	6	6.4
Annual > NAAQS (15 ug/m3)	No	No	No
Annual > CAAQS (12 ug/m^3)	No	No	No

[1.] Source: obtained from https://www.aqmd.gov/home/air-quality/air-quality-data-studies/historical-data-by-year and /or https://www.arb.ca.gov/adam/topfour/topfour1.php.
[2] CAAQS = California Ambient Air Quality Standard; NAAQS = National Ambient Air Quality Standard; ppm = parts per million
[3] No data available.

The monitoring data presented in Table 4 shows that ozone is the air pollutant of primary concern in the project area, which are detailed below.

Ozone

During the 2018 to 2020 monitoring period, the State 1-hour concentration standard for ozone has been exceeded between five and eleven days each year at the Palm Springs Station. The State 8-hour ozone standard has been exceeded between 39 and 58 days each year over the past three years at the Palm Springs Station. The Federal 8-hour ozone standard has been exceeded between 34 and 56 days each year over the past three years at the Palm Springs Station.

Ozone is a secondary pollutant as it is not directly emitted. Ozone is the result of chemical reactions between other pollutants, most importantly hydrocarbons and NO_2, which occur only in the presence of bright sunlight. Pollutants emitted from upwind cities react during transport downwind to produce the oxidant concentrations experienced in the area. Many areas of the SCAQMD contribute to the ozone levels experienced at the monitoring station, with the more significant areas being those directly upwind.

Carbon Monoxide
CO is another important pollutant that is due mainly to motor vehicles. During the 2018 to 2020 monitoring period, the Federal 1-hour and 8-hour concentration standards for CO were not exceeded.

Nitrogen Dioxide
During the 2018 to 2020 monitoring period, the Federal 1-hour concentration standard for Nitrogen Dioazide has not been exceeded.

Sulfur Dioxide
The Coachella Valley Area did not have SO_2 data available for the last three years.

Particulate Matter
During the 2018 to 2020 monitoring period, the Palm Springs Station recorded two days of exceedance of the Federal 24-hour PM10 concentration standard and an exceedance in the State PM10annual average standard.

During the same period, the Palm Springs Station did not record an exceedance of the Federal 24-hour standard for PM2.5.

According to the EPA, some people are much more sensitive than others to breathing fine particulate matter (PM10 and PM2.5). People with influenza, chronic respiratory and cardiovascular diseases, and the elderly may suffer worsening illness and premature death due to breathing these fine particles. People with bronchitis can expect aggravated symptoms from breathing in fine particles. Children may experience decline in lung function due to breathing in PM10 and PM2.5. Other groups considered sensitive are smokers and people who cannot breathe well through their noses. Exercising athletes are also considered sensitive because many breathe through their mouths during exercise.

3.1.3 Attainment Status

The EPA and the ARB designate air basins where ambient air quality standards are exceeded as “nonattainment” areas. If standards are met, the area is designated as an “attainment” area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered “unclassified.” National nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards. Each standard has a different definition, or ‘form’ of what constitutes attainment, based on specific air quality statistics. For example, the Federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring values exceeds the threshold per year. In contrast, the federal annual $PM_{2.5}$ standard is met if the three-year average of the annual average $PM_{2.5}$ concentration is less than or equal to the standard. Table 5 lists the attainment status for the criteria pollutants in the basin.

Table 5: Coachella Valley Portion of the Salton Sea Air Basin Attainment Status

Pollutant	Averaging Time	National Standards[1]	Attainment Date[2]	California Standards[2]
1979 1-Hour Ozone[3]	1-Hour (0.12 ppm)	Attainment	11/15/2007 (Attained 12/31/2013)	Nonattainment
	1-Hour (0.09 ppm)	-	-	Nonattainment
2015 8-Hour Ozone[4]	8-Hour (0.070 ppm)	Pending - Expect Nonattainment (Severe)	Pending	Nonattainment
2008 8-Hour Ozone[4]	8-Hour (0.075 ppm)	Nonattainment (Severe-15)	7/20/2027	-
1997 8-Hour Ozone[4]	8-Hour (0.08 ppm)	Nonattainment (Severe-15)	6/15/2019	-
CO	1-Hour (20 ppm) 8-hour (9.0 ppm)	-	-	Attainment
	1-Hour (35 ppm) 8-Hour (9 ppm)	Unclassifiable/ Attainment	N/A (attained)	-
NO_2[7]	1-hour (0.18 ppm) Annual (0.03 ppm)	-	-	Attainment
	1-Hour (100 ppb) Annual (0.053 ppm)	Unclassifiable/ Attainment	N/A (attained)	-
SO_2[8]	1-Hour (0.25 ppm) 24-Hour (0.04 ppm)	-	-	Attainment
	1-Hour (75 ppb)	Designations Pending	N/A	-
	24-Hour (0.14 ppm) Annual (0.03 ppm)	Unclassifiable/ Attainment	Unclassifiable/Attainment	
PM10[6]	24-Hour (50 µg/m^3) Annual (20 50 µg/m^3)	-	-	Nonattainment
	24-Hour (150 µg/m^3)	Nonattainment (Serious)	12/31/2006	-
PM2.5[5]	Annual (12.0 µg/m^3)	-	-	Attainment
	24-Hour (35 µg/m^3)	Unclassifiable/ Attainment	N/A (attained)	-
Lead	3-Months Rolling (0.15 µg/m^3)	Unclassifiable/ Attainment	Unclassifiable/Attainment	Attainment

Notes:

[1] Obtained from 2022 AQMP, SCAQMD, 2022. EPA often only declares Nonattainment areas; everywhere else is listed as Unclassified/Attainment or Unclassifiable.

[2] A design value below the NAAQS for data through the full year or smog season prior to the attainment date is typically required for attainment demonstration.

[3] The 1979 1-hour ozone NAAQS (0.12 ppm) was revoked, effective 6/15/05; the Southeast Desert Modified Air Quality Management Area, including the Coachella Valley, had not timely attained this standard by the 11/15/07 "severe-17" deadline, based on 2005-2007 data; on 8/25/14, U.S. EPA proposed a clean data finding based on 2011-2013 data and a determination of attainment for the former 1-hour ozone NAAQS for the Southeast Desert nonattainment area; this rule was finalized by U.S. EPA on 4/15/15, effective 5/15/15, and included preliminary 2014 data

[4] The 2008 8-hour ozone NAAQS (0.075 ppm) was revised to 0.070 ppm, effective 12/28/15 with classifications and implementation goals to be finalized by 10/1/17; the 1997 8-hour ozone NAAQS (0.08 ppm) was revoked in the 2008 ozone NAAQS implementation rule, effective 4/6/15; there are continuing obligations under the 1997 and 2008 ozone NAAQS until they are attained

[5] The annual PM2.5 standard was revised on 1/15/13, effective 3/18/13, from 15 to 12 µg/m3

[6] The annual PM10 standard was revoked, effective 12/18/06; the 24-hour PM10 NAAQS attainment deadline was 12/31/2006; the Coachella Valley Attainment Re-designation Request and PM10 Maintenance Plan was postponed by U.S. EPA pending additional monitoring and analysis in the southeastern Coachella Valley

[7] New 1-hour NO2 NAAQS became effective 8/2/10; attainment designations 1/20/12; annual NO2 NAAQS retained

[8] The 1971 Annual and 24-hour SO2 NAAQS were revoked, effective 8/23/10; however, these 1971 standards will remain in effect until one year after U.S. EPA promulgates area designations for the 2010 SO2 1-hour standard; final area designations expected by 12/31/2020 with SSAB expected to be designated Unclassifiable/Attainment

3.2 Greenhouse Gases

Constituent gases of the Earth's atmosphere, called atmospheric greenhouse gases (GHG), play a critical role in the Earth's radiation amount by trapping infrared radiation emitted from the Earth's surface, which otherwise would have escaped to space. Prominent greenhouse gases contributing to this process include carbon dioxide (CO_2), methane (CH_4), ozone, water vapor, nitrous oxide (N_2O), and chlorofluorocarbons (CFCs). This phenomenon, known as the Greenhouse Effect, is responsible for maintaining a habitable climate. Anthropogenic (caused or produced by humans) emissions of these greenhouse gases in excess of natural ambient concentrations are responsible for the enhancement of the Greenhouse Effect and have led to a trend of unnatural warming of the Earth's natural climate, known as global warming or climate change. Emissions of gases that induce global warming are attributable to human activities associated with industrial/manufacturing, agricultural, utilities, transportation, and residential land uses. Transportation is responsible for 41 percent of the State's greenhouse gas emissions, followed by electricity generation. Emissions of CO_2 and nitrous oxide (NO_2) are byproducts of fossil fuel combustion. Methane, a potent greenhouse gas, results from off-gassing associated with agricultural practices and landfills. Sinks of CO_2, where CO_2 is stored outside of the atmosphere, include uptake by vegetation and dissolution into the ocean. Table 6 provides a description of each of the greenhouse gases and their global warming potential.

Additional information is available: https://www.arb.ca.gov/cc/inventory/data/data.htm

<Table 6, next page>

Table 6: Description of Greenhouse Gases

Greenhouse Gas	Description and Physical Properties	Sources
Nitrous oxide	Nitrous oxide (N_20),also known as laughing gas is a colorless gas. It has a lifetime of 114 years. Its global warming potential is 298.	Microbial processes in soil and water, fuel combustion, and industrial processes. In addition to agricultural sources, some industrial processes (nylon production, nitric acid production) also emit N_20.
Methane	Methane (CH_4) is a flammable gas and is the main component of natural gas. It has a lifetime of 12 years. Its global warming potential is 25.	A natural source of CH_4 is from the decay of organic matter. Methane is extracted from geological deposits (natural gas fields). Other sources are from the decay of organic material in landfills, fermentation of manure, and cattle farming.
Carbon dioxide	Carbon dioxide (CO_2) is an odorless, colorless, natural greenhouse gas. Carbon dioxide's global warming potential is 1. The concentration in 2005 was 379 parts per million (ppm), which is an increase of about 1.4 ppm per year since 1960.	Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood.
Chlorofluorocarbons	CFCs are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). They are gases formed synthetically by replacing all hydrogen atoms in methane or methane with chlorine and/or fluorine atoms. Global warming potentials range from 3,800 to 8,100.	Chlorofluorocarbons were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone, therefore their production was stopped as required by the Montreal Protocol.
Hydrofluorocarbons	Hydrofluorocarbons (HFCs) are a group of greenhouse gases containing carbon, chlorine, and at least one hydrogen atom. Global warming potentials range from 140 to 11,700.	Hydrofluorocarbons are synthetic manmade chemicals used as a substitute for chlorofluorocarbons in applications such as automobile air conditioners and refrigerants.
Perfluorocarbons	Perfluorocarbons (PFCs) have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above the Earth's surface. They have a lifetime 10,000 to 50,000 years. They have a global warming potential range of 6,200 to 9,500.	Two main sources of perfluorocarbons are primary aluminum production and semiconductor manufacturing.
Sulfur hexafluoride	Sulfur hexafluoride (SF_6) is an inorganic, odorless, colorless, and nontoxic, nonflammable gas. It has a lifetime of 3,200 years. It has a high global warming potential, 23,900.	This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

Notes:

1. Sources: Intergovernmental Panel on Climate Change 2014a and Intergovernmental Panel on Climate Change 2014b. https://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html

4.0 Modeling Parameters and Assumptions

4.1 Construction

Typical emission rates from construction activities were obtained from CalEEMod Version 2022.1.1.21 CalEEMod is a computer model published by the SCAQMD for estimating air pollutant emissions. The CalEEMod program uses the EMFAC2017 computer program to calculate the emission rates specific for the southwestern portion of Riverside County for construction-related employee vehicle trips and the OFFROAD2011 computer program to calculate emission rates for heavy truck operations. EMFAC2017 and OFFROAD2011 are computer programs generated by CARB that calculates composite emission rates for vehicles. Emission rates are reported by the program in grams per trip and grams per mile or grams per running hour. Using CalEEMod, the peak daily air pollutant emissions were calculated and presented below. These emissions represent the highest level of emissions for each of the construction phases in terms of air pollutant emissions.

The analysis assesses the emissions associated with the construction of the proposed project as indicated in Table 1. The project was analyzed to be operational in 2025; therefore, construction is estimated to start no sooner than 2024. The phases of the construction activities which have been analyzed below are: 1) site preparation, 2) grading, 3) building, 4) paving, and 5) architectural coating. For details on construction modeling and construction equipment for each phase, please see Appendix A.

The project will be required to comply with existing SCAQMD rules for the reduction of fugitive dust emissions. SCAQMD Rule 403 establishes these procedures. Compliance with this rule is achieved through application of standard best management practices in construction and operation activities, such as application of water or chemical stabilizers to disturbed soils, managing haul road dust by application of water, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 mph, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph and establishing a permanent, stabilizing ground cover on finished sites. In addition, projects that disturb 50 acres or more of soil or move 5,000 cubic yards of materials per day are required to submit a Fugitive Dust Control Plan or a Large Operation Notification Form to SCAQMD. Based on the size of the project area (approximately 7 acres) and the fact that the project won't export more than 5,000 cubic yards of material a day a Fugitive Dust Control Plan or Large Operation Notification would not be required.

SCAQMD's Rule 403 minimum requirements require that the application of the best available dust control measures are used for all grading operations and include the application of water or other soil stabilizers in sufficient quantity to prevent the generation of visible dust plumes. Compliance with Rule 403 would require the use of water trucks during all phases where earth moving operations would occur. Compliance with Rule 403 is required.

4.2 Operations

Operational or long-term emissions will occur over the life of the project. Both mobile and area sources generate operational emissions. Area source emissions arise from consumer product usage, heaters that consume natural gas, gasoline-powered landscape equipment, and architectural coatings (painting). Mobile source emissions from motor vehicles are the largest single long-term source of air pollutants from the operation of the project. Small amounts of emissions would also occur from area sources such as the consumption of natural gas for heating, hearths, from landscaping emissions, and consumer product usage. The operational emissions were estimated using the latest version of CalEEMod.

Mobile Sources
Mobile sources include emissions from the additional vehicle miles generated from the proposed project. The vehicle trips associated with the proposed project are based upon the trip generation rates given in the Traffic Scoping Agreement (Integrated Engineering Group, 2023) which uses the ITE 10^{th} Trip Generation Manual.

The program then applies the emission factors for each trip which is provided by the EMFAC2017 model to determine the vehicular traffic pollutant emissions. The CalEEMod default trip lengths were used in this analysis. Please see CalEEMod output comments sections in Appendix A for details.

Area Sources
Area sources include emissions from consumer products, landscape equipment and architectural coatings. Landscape maintenance includes fuel combustion emissions from equipment such as lawn mowers, rototillers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers, as well as air compressors, generators, and pumps. As specifics were not known about the landscaping equipment fleet, CalEEMod defaults were used to estimate emissions from landscaping equipment.

Per SCAQMD Rule 1113 as amended on June 3, 2011, the architectural coatings that would be applied after January 1, 2014 will be limited to an average of 50 grams per liter or less for buildings and 100 grams per liter or less for parking lot striping; however, no changes were made to the CalEEMod architectural coating default values.

Energy Usage
2022.1.1.21 CalEEMod defaults were utilized.

4.3 Localized Construction Analysis

The SCAQMD has published a "Fact Sheet for Applying CalEEMod to Localized Significance Thresholds" (South Coast Air Quality Management District 2011b). CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily disturbance activity possible for each piece of equipment. In order to compare CalEEMod reported emissions against the localized significance threshold lookup tables, the CEQA document should contain in its project design features or its mitigation measures the following parameters:

1. The off-road equipment list (including type of equipment, horsepower, and hours of operation) assumed for the day of construction activity with maximum emissions.
2. The maximum number of acres disturbed on the peak day.
3. Any emission control devices added onto off-road equipment.
4. Specific dust suppression techniques used on the day of construction activity with maximum emissions.

The construction equipment showing the equipment associated with the maximum area of disturbance is shown in Table 7.

Table 7: Construction Equipment Assumptions[1]

Activity	Equipment	Number	Acres/8hr-day	Total Acres
Site Preparation	Rubber Tired Dozers	2	0.5	1.0
	Tractors/Loaders/Backhoes	2	0.5	1.0
Total Per Phase				**2.0**
Grading	Graders	1	0.5	0.5
	Rubber Tired Dozers	1	0.5	0.5
	Tractors/Loaders/Backhoes	3	0.5	1.5
Total Per Phase				**2.5**

Notes:
[1] Source: CalEEMod output and South Coast AQMD, Fact Sheet for Applying CalEEMod to Localized Significance Thresholds. http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf?sfvrsn=2

As shown in Table 7, the maximum number of acres disturbed in a day would be 2.5 acres during grading.

The local air quality emissions from construction were analyzed using the SCAQMD's Mass Rate Localized Significant Threshold Look-up Tables and the methodology described in Localized Significance Threshold Methodology, prepared by SCAQMD, revised July 2008. The Look-up Tables were developed by the SCAQMD in order to readily determine if the daily emissions of CO, NOx, PM10, and PM2.5 from the proposed project could result in a significant impact to the local air quality. The emission thresholds were based on the Coachella Valley source receptor area (SRA 30) and a disturbance of 2.5 acres per day at a distance of 25 meters (82 feet). As there is no threshold for a 2.5-acre disturbance, interpolation can be used between the 2-acre and 5-acre thresholds.

4.4 Localized Operational Analysis

For operational emissions, the screening tables for a disturbance area of 2.5 acres per day and a distance of 25 meters were used to determine significance. The tables were compared to the project's onsite operational emissions.

5.0 Thresholds of Significance

5.1 Air Quality Thresholds of Significance

5.1.1 CEQA Guidelines for Air Quality

The CEQA Guidelines define a significant effect on the environment as "a substantial, or potentially substantial, adverse change in the environment." To determine if a project would have a significant impact on air quality, the type, level, and impact of emissions generated by the project must be evaluated.

The following air quality significance thresholds are contained in Appendix G of the CEQA Guidelines. A significant impact would occur if the project would:

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 nonattainment under an applicable national 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.

While the final determination of whether a project is significant is within the purview of the Lead Agency pursuant to Section 15064(b) of the CEQA Guidelines, SCAQMD recommends that its quantitative air pollution thresholds be used to determine the significance of project emissions. If the Lead Agency finds that the project has the potential to exceed these air pollution thresholds, the project should be considered to have significant air quality impacts. There are daily emission thresholds for construction and operation of a proposed project in the basin.

5.1.2 Regional Significance Thresholds for Construction Emissions

The following CEQA significance thresholds for construction emissions are established for the Basin:

- 75 pounds per day (lbs/day) of VOC
- 100 lbs/day of NO_x
- 550 lbs/day of CO
- 150 lbs/day of PM_{10}
- 55 lbs/day of $PM_{2.5}$
- 150 lbs/day of SO_2

Projects in the basin with construction-related emissions that exceed any of the emission thresholds are considered to be significant under SCAQMD guidelines.

5.1.3 Regional Significance Thresholds for Operational Emissions

The daily operational emissions significance thresholds for the basin are as follows:

- 55 pounds per day (lbs/day) of VOC
- 55 lbs/day of NO_x
- 550 lbs/day of CO
- 150 lbs/day of PM_{10}
- 55 lbs/day of $PM_{2.5}$
- 150 lbs/day of SO_2

Local Microscale Concentration Standards The significance of localized project impacts under CEQA depends on whether ambient CO levels in the vicinity of the project are above or below State and federal CO standards. If ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of these standards. If ambient levels already exceed a State or federal standard, project emissions are considered significant if they increase 1-hour CO concentrations by 1.0 ppm or more or 8-hour CO concentrations by 0.45 ppm or more. The following are applicable local emission concentration standards for CO:

- California State 1-hour CO standard of 20.0 ppm
- California State 8-hour CO standard of 9.0 ppm

5.1.4 Thresholds for Localized Significance

Project-related construction air emissions may have the potential to exceed the State and Federal air quality standards in the project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the Salton Sea Air Basin. In order to assess local air quality impacts the SCAQMD has developed Localized Significant Thresholds (LSTs) to assess the project-related air emissions in the project vicinity. The SCAQMD has also provided Final Localized Significant Threshold Methodology (LST Methodology), June 2003, which details the methodology to analyze local air emission impacts. The Localized Significant Threshold Methodology found that the primary emissions of concern are NO2, CO, PM10, and PM2.5.

The emission thresholds were calculated based on the Coachella Valley source receptor area (SRA 30) and a disturbance of 4 acres per day at a distance of 25 meters (82 feet), for construction and 4 acres a day for screening of localized operational emissions. The 4-acre thresholds are interpolated from the 2-acre and 5-acre thresholds.

5.2 Greenhouse Gas Thresholds of Significance

5.2.1 CEQA Guidelines for Greenhouse Gas

CEQA Guidelines define a significant effect on the environment as “a substantial, or potentially substantial, adverse change in the environment.” To determine if a project would have a significant impact on greenhouse gases, the type, level, and impact of emissions generated by the project must be evaluated.

The following greenhouse gas significance thresholds are contained in Appendix G of the CEQA Guidelines, which were amendments adopted into the Guidelines on March 18, 2010, pursuant to SB 97. A significant impact would occur if the project would:

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

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

However, despite this, currently neither the CEQA statutes, OPR guidelines, nor the draft proposed changes to the CEQA Guidelines prescribe thresholds of significance or a particular methodology for performing an impact analysis; as with most environmental topics, significance criteria are left to the judgment and discretion of the Lead Agency. As previously discussed (Section 2.2.4 of this report), SCAQMD has drafted interim GHG thresholds and the County of Riverside CAP Update has adopted a GHG threshold and screening tables. The County of Riverside CAP Update screening tables were used in this analysis.

5.3 Toxic Air Contaminants

The threshold for toxic air contaminants (TACs) has a maximum incremental cancer risk of 10 per million and a non-cancer (acute and chronic) hazard index of 1.0 or greater. An exceedance to these values would be considered a significant impact.

6.0 Air Quality Emissions Impact

6.1 Construction Air Quality Emissions Impact

The latest version of CalEEMod was used to estimate the onsite and offsite construction emissions. The emissions incorporate Rule 402 and 403. Rule 402 and 403 (fugitive dust) are not considered mitigation measures as the project by default is required to incorporate these rules during construction.

6.1.1 Regional Construction Emissions

The construction emissions for both scenarios of the Project would not exceed the SCAQMD's daily emission thresholds at the regional level as demonstrated in Table 8, and therefore would be considered less than significant. Scenario 2 would have slightly more VOC and CO emissions compared to Scenario 1.

Table 8: Regional Significance – Unmitigated Construction Emissions (pounds/day)

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM10	PM2.5
Scenario 1						
Site Preparation						
On-Site[2]	2.35	23.20	20.70	0.03	6.14	3.58
Off-Site[3]	0.06	0.06	1.03	0.00	0.13	0.03
Total	**2.41**	**23.26**	**21.73**	**0.03**	**6.27**	**3.61**
Grading						
On-Site[2]	1.90	18.20	18.80	0.03	3.61	2.11
Off-Site[3]	0.12	2.54	2.10	0.01	0.81	0.19
Total	**2.02**	**20.74**	**20.90**	**0.04**	**4.42**	**2.30**
Building Construction						
On-Site[2]	1.20	11.20	13.10	0.02	0.50	0.45
Off-Site[3]	0.33	1.08	6.02	0.01	0.92	0.22
Total	**1.53**	**12.28**	**19.12**	**0.03**	**1.42**	**0.67**
Paving						
On-Site[2]	1.43	7.45	9.98	0.01	0.35	0.32
Off-Site[3]	0.08	0.08	1.43	0.00	0.20	0.05
Total	**1.51**	**7.53**	**11.41**	**0.01**	**0.55**	**0.37**
Architectural Coating						
On-Site[2]	56.33	0.88	1.14	0.00	0.03	0.03
Off-Site[3]	0.06	0.06	1.05	0.00	0.14	0.03
Total	**56.39**	**0.94**	**2.19**	**0.00**	**0.17**	**0.06**
Total of overlapping phases[4]	**59.43**	**20.75**	**32.72**	**0.04**	**2.14**	**1.10**
SCAQMD Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Thresholds	No	No	No	No	No	No
Scenario 2						
Site Preparation						
On-Site[2]	2.35	23.20	20.70	0.03	6.14	3.58
Off-Site[3]	0.06	0.06	1.03	0.00	0.13	0.03
Total	**2.41**	**23.26**	**21.73**	**0.03**	**6.27**	**3.61**

Grading						
On-Site[2]	1.90	18.20	18.80	0.03	3.61	2.11
Off-Site[3]	0.12	2.54	2.10	0.01	0.81	0.19
Total	**2.02**	**20.74**	**20.90**	**0.04**	**4.42**	**2.30**
Building Construction						
On-Site[2]	1.20	11.20	13.10	0.02	0.50	0.45
Off-Site[3]	0.40	0.61	7.24	0.01	1.11	0.28
Total	**1.60**	**11.81**	**20.34**	**0.03**	**1.61**	**0.73**
Paving						
On-Site[2]	1.43	7.45	9.98	0.01	0.35	0.32
Off-Site[3]	0.08	0.08	1.43	0.00	0.20	0.05
Total	**1.51**	**7.53**	**11.41**	**0.01**	**0.55**	**0.37**
Architectural Coating						
On-Site[2]	56.33	0.88	1.14	0.00	0.03	0.03
Off-Site[3]	0.07	0.07	1.26	0.00	0.17	0.04
Total	**56.40**	**0.95**	**2.40**	**0.00**	**0.20**	**0.07**
Total of overlapping phases[4]	**59.51**	**20.29**	**34.15**	**0.04**	**2.36**	**1.17**
SCAQMD Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Thresholds	No	No	No	No	No	No
Difference (Scenario 2 - Scenario 1)	**0.08**	**0.00**	**1.43**	**0.00**	**0.00**	**0.00**

Notes:
[1] Source: CalEEMod Version 2022.1.1.21
[2] On-site emissions from equipment operated on-site that is not operated on public roads.
[3] Off-site emissions from equipment operated on public roads.
[4] Construction, architectural coatings and paving phases may overlap.

6.1.2 Localized Construction Emissions

The data provided in Table 9 shows that none of the analyzed criteria pollutants would exceed the local emissions thresholds at the nearest sensitive receptors in either scenario. Therefore, a less than significant local air quality impact would occur from construction of the proposed project. There would be no difference in localized emissions between scenarios 1 and 2.

Table 9: Localized Significance – Construction

Phase	On-Site Pollutant Emissions (pounds/day)[1]			
	NOx	CO	PM10	PM2.5
Scenario 1				
Site Preparation	25.60	22.40	6.27	3.70
Grading	20.00	19.70	3.71	2.21
Building Construction	11.80	13.20	0.55	0.51
Paving	7.81	10.00	0.39	0.36
Architectural Coating	0.91	1.15	0.03	0.03
Total of overlapping phases	20.52	24.35	0.97	0.90
SCAQMD Threshold for 25 meters (82 feet) or less[2]	**209.83**	**1,464.50**	**8.17**	**3.83**
Exceeds Threshold?	No	No	No	No
Scenario 2				
Site Preparation	25.60	22.40	6.27	3.70
Grading	20.00	19.70	3.71	2.21
Building Construction	11.80	13.20	0.55	0.51

Paving	7.81	10.00	0.39	0.36
Architectural Coating	0.91	1.15	0.03	0.03
Total of overlapping phases	20.52	24.35	0.97	0.90
SCAQMD Threshold for 25 meters (82 feet) or less[2]	**209.83**	**1,464.50**	**8.17**	**3.83**
Exceeds Threshold?	No	No	No	No
Difference (Scenario 2 - Scenario 1)	**0.00**	**0.00**	**0.00**	**0.00**

Notes:
[1] Source: Calculated from CalEEMod and SCAQMD's Mass Rate Look-up Tables for 2.5 acres in Coachella Valley Source Receptor Area (SRA 30). Project will disturb a maximum of 2.5 acres per day (see Table 7).
[2] The nearest sensitive receptor is located 15 meters to the east; therefore, the 25-meter threshold has been used.

6.1.3 Construction-Related Human Health Impacts

Regarding health effects related to criteria pollutant emissions, the applicable significance thresholds are established for regional compliance with the state and federal ambient air quality standards, which are intended to protect public health from both acute and long-term health impacts, depending on the potential effects of the pollutant. Because regional and local emissions of criteria pollutants during construction of the project would be below the applicable thresholds, it would not contribute to long-term health impacts related to nonattainment of the ambient air quality standards. Therefore, significant adverse acute health impacts as a result of project construction are not anticipated.

6.1.4 Odors

Potential sources that may emit odors during construction activities include the application of materials such as asphalt pavement. The objectionable odors that may be produced during the construction process are of short-term in nature and the odor emissions are expected cease upon the drying or hardening of the odor producing materials. Diesel exhaust and VOCs would be emitted during construction of the project, which are objectionable to some; however, emissions would disperse rapidly from the project site and therefore should not reach an objectionable level at the nearest sensitive receptors. Due to the short-term nature and limited amounts of odor producing materials being utilized, no significant impact related to odors would occur during construction of the proposed project.

The SCAQMD recommends that odor impacts be addressed in a qualitative manner. Such an analysis shall determine whether the project would result in excessive nuisance odors, as defined under the California Code of Regulations and Section 41700 of the California Health and Safety Code, and thus would constitute a public nuisance related to air quality.

Potential sources that may emit odors during the on-going operations of the proposed project would include odor emissions from vehicle emissions. Due to the distance of the nearest receptors from the project site and through compliance with SCAQMD's Rule 402 no significant impact related to odors would occur during the on-going operations of the proposed project.

6.1.5 Construction-Related Toxic Air Contaminant Impact

The greatest potential for toxic air contaminant emissions would be related to diesel particulate emissions associated with heavy equipment operations during construction of the proposed project.

The Office of Environmental Health Hazard Assessment (OEHHA) has issued the Air Toxic Hot Spots Program Risk Assessment Guidelines and Guidance Manual for the Preparation of Health Risk Assessments, February 2015 to provide a description of the algorithms, recommended exposure variates, cancer and noncancer health values, and the air modeling protocols needed to perform a health risk assessment (HRA) under the Air Toxics Hot Spots Information and Assessment Act of 1987. Hazard identification includes identifying all substances that are evaluated for cancer risk and/or non-cancer acute, 8-hour, and chronic health impacts. In addition, identifying any multi-pathway substances that present a cancer risk or chronic non-cancer hazard via non-inhalation routes of exposure.

Given the relatively limited number of heavy-duty construction equipment and construction schedule, the proposed project would not result in a long-term substantial source of toxic air containment emissions and corresponding individual cancer risk. Furthermore, construction-based particulate matter (PM) emissions (including diesel exhaust emissions) do not exceed any local or regional thresholds. Therefore, no significant short-term toxic air contaminant impacts would occur during construction of the proposed project.

6.2 Operational Air Quality Emissions Impact

6.2.1 Regional Operational Emissions

The operations-related criteria air quality impacts created by the proposed project have been analyzed through the use of CalEEMod model. The operating emissions were based on year 2025, which is the anticipated opening year for the project per the Traffic Scoping Agreement (Integrated Engineering Group). The summer and winter emissions created by the proposed project's long-term operations were calculated and the highest emissions from either summer or winter are summarized in Table 10.

Table 10: Regional Significance - Unmitigated Operational Emissions (lbs/day)

Activity	Pollutant Emissions (pounds/day)[1]					
	VOC	NOx	CO	SO2	PM10	PM2.5
Scenario 1						
Area Sources[2]	4.17	0.05	5.79	0.00	0.01	0.01
Energy Usage[3]	0.20	3.67	3.08	0.02	0.28	0.28
Mobile Sources[4]	6.70	6.00	53.50	0.12	9.34	2.42
Total Emissions	**11.07**	**9.72**	**62.37**	**0.14**	**9.63**	**2.71**
SCAQMD Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Threshold?	No	No	No	No	No	No
Scenario 2						
Area Sources[2]	5.31	0.06	7.38	0.00	0.01	0.01
Energy Usage[3]	0.04	0.68	0.57	0.00	0.05	0.05
Mobile Sources[4]	14.00	12.50	112.00	0.24	19.50	5.06
Total Emissions	**19.35**	**13.24**	**119.95**	**0.24**	**19.56**	**5.12**
SCAQMD Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Threshold?	No	No	No	No	No	No
Difference (Scenario 2 - Scenario 1)	**8.28**	**3.52**	**57.58**	**0.10**	**9.93**	**2.41**

Notes:
[1] Source: CalEEMod Version 2022.1.1.21
[2] Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.
[3] Energy usage consists of emissions from on-site natural gas usage.
[4] Mobile sources consist of emissions from vehicles and road dust.

Table 10 provides the project's unmitigated operational emissions. Table 10 shows that both scenarios of the project do not exceed the SCAQMD daily emission threshold and regional operational emissions are considered to be less than significant. Scenario 2 would have higher emissions of all pollutants.

6.2.2 Localized Operational Emissions

Table 11 shows the calculated emissions for the proposed operational activities compared with appropriate LSTs. The LST analysis only includes on-site sources; however, the CalEEMod software outputs do not separate on-site and off-site emissions for mobile sources. For a worst-case scenario assessment, the emissions shown in Table 11 include all on-site project-related stationary sources and 10% of the project-related new mobile sources.[4] This percentage is an estimate of the amount of project-related new vehicle traffic that will occur on-site.

Table 11: Localized Significance – Unmitigated Operational Emissions

On-Site Emission Source	On-Site Pollutant Emissions (pounds/day)[1]			
	NOx	**CO**	**PM10**	**PM2.5**
Scenario 1				
Area Sources[2]	0.05	5.79	0.01	0.01
Energy Usage[3]	3.67	3.08	0.28	0.28
On-Site Vehicle Emissions[4]	0.60	5.35	0.93	0.24
Total Emissions	**4.32**	**14.22**	**1.22**	**0.53**
SCAQMD Threshold for 25 meters (82 feet)[5]	**247.5**	**1,795.5**	**3.0**	**1.5**
Exceeds Threshold?	No	No	No	No
Scenario 2				
Area Sources[2]	0.06	7.38	0.01	0.01
Energy Usage[3]	0.68	0.57	0.05	0.05
On-Site Vehicle Emissions[4]	1.25	11.20	1.95	0.51
Total Emissions	**1.99**	**19.15**	**2.01**	**0.57**
SCAQMD Threshold for 25 meters (82 feet)[5]	**247.5**	**1,795.5**	**3.0**	**1.5**
Exceeds Threshold?	No	No	No	No
Difference (Scenario 2 - Scenario 1)	**-2.33**	**4.93**	**0.79**	**0.03**

Notes:
[1] Source: Calculated from CalEEMod and SCAQMD's Mass Rate Look-up Tables for 2.5 acres in Coachella Valley Source Receptor Area (SRA 30).
[2] Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.
[3] Energy usage consists of emissions from generation of electricity and on-site natural gas usage.

[4] The project site is approximately 0.2 miles in length at its longest point; therefore the on-site mobile source emissions represent approximately 1/34th of the shortest CalEEMod default distance of 6.9 miles. Therefore, to be conservative, 1/10th the distance (dividing the mobile source emissions by 10) was used to represent the portion of the overall mobile source emissions that would occur on-site.

[4] On-site vehicular emissions based on 1/10 of the gross vehicular emissions and road dust.
[5] The nearest sensitive receptor is located 15 meters to the east; therefore, the 25 meter threshold has been used.

Table 11 indicates that the local operational emissions from both scenarios would not exceed the LST thresholds at the nearest sensitive receptors, located adjacent to the project. Therefore, the project will result in less than significant Localized Operational emissions. Scenario 2 would have higher emissions of CO and PM.

6.2.3 Operations-Related Human Health Impacts

As stated previously, regarding health effects related to criteria pollutant emissions, the applicable significance thresholds are established for regional compliance with the state and federal ambient air quality standards, which are intended to protect public health from both acute and long-term health impacts, depending on the potential effects of the pollutant. Because regional and local emissions of criteria pollutants during operation of the project would be below the applicable thresholds, it would not contribute to long-term health impacts related to nonattainment of the ambient air quality standards. Therefore, less than significant adverse acute health impacts as a result of project operation are anticipated.

6.3 CO Hot Spot Emissions

CO is the pollutant of major concern along roadways because the most notable source of CO is motor vehicles. For this reason, CO concentrations are usually indicative of the local air quality generated by a roadway network and are used as an indicator of potential local air quality impacts. Local air quality impacts can be assessed by comparing future without and with project CO levels to the State and Federal CO standards which were presented in above in Section 5.0.

To determine if the proposed project could cause emission levels in excess of the CO standards discussed above in Section 5.0, a sensitivity analysis is typically conducted to determine the potential for CO “hot spots” at a number of intersections in the general project vicinity. Because of reduced speeds and vehicle queuing, “hot spots” potentially can occur at high traffic volume intersections with a Level of Service E or worse.

Micro-scale air quality emissions have traditionally been analyzed in environmental documents where the air basin was a non-attainment area for CO. However, the SCAQMD has demonstrated in the CO attainment redesignation request to EPA that there are no “hot spots” anywhere in the air basin, even at intersections with much higher volumes, much worse congestion, and much higher background CO levels than anywhere in Riverside County. If the worst-case intersections in the air basin have no “hot spot” potential, any local impacts will be below thresholds.

Traffic analysis from Integrated Engineering Group (2023) showed that the project would generate a maximum of 3,542 average daily trips. The 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan) showed that an intersection which has a daily traffic volume of approximately 100,000 vehicles per day would not violate the CO standard. The volume of traffic at project buildout would be well below 100,000 vehicles and below the necessary volume to even get close to causing a violation of the CO standard. Therefore, no CO "hot spot" modeling was performed and less than significant long-term air quality impact is anticipated to local air quality with the on-going use of the proposed project.

6.4 Cumulative Regional Air Quality Impacts

Cumulative projects include local development as well as general growth within the project area. However, as with most development, the greatest source of emissions is from mobile sources, which travel well out of the local area. Therefore, from an air quality standpoint, the cumulative analysis would extend beyond any local projects and when wind patterns are considered, would cover an even larger area. Accordingly, the cumulative analysis for the project's air quality must be generic by nature.

The project area is out of attainment for both ozone and PM10 particulate matter. Construction and operation of cumulative projects will further degrade the local air quality, as well as the air quality of the Salton Sea Air Basin. The greatest cumulative impact on the quality of regional air cell will be the incremental addition of pollutants mainly from increased traffic from residential, commercial, and industrial development and the use of heavy equipment and trucks associated with the construction of these projects. Air quality will be temporarily degraded during construction activities that occur separately or simultaneously. However, in accordance with the SCAQMD methodology, projects that do not exceed the SCAQMD criteria or can be mitigated to less than criteria levels are not significant and do not add to the overall cumulative impact. The project does not exceed any of the thresholds of significance and therefore is considered less than significant.

6.5 Air Quality Compliance

The California Environmental Quality Act (CEQA) requires a discussion of any inconsistencies between a proposed project and applicable General Plans and Regional Plans (CEQA Guidelines Section 15125). The regional plan that applies to the proposed project includes the SCAQMD Air Quality Management Plan (AQMP). Therefore, this section discusses any potential inconsistencies of the proposed project with the AQMP.

The purpose of this discussion is to set forth the issues regarding consistency with the assumptions and objectives of the AQMP and discuss whether the proposed project would interfere with the region's ability to comply with Federal and State air quality standards. If the decision-makers determine that the proposed project is inconsistent, the lead agency may consider project modifications or inclusion of mitigation to eliminate the inconsistency.

The SCAQMD CEQA Handbook states that "New or amended General Plan Elements (including land use zoning and density amendments), Specific Plans, and significant projects must be analyzed for consistency with the AQMP." Strict consistency with all aspects of the plan is usually not required A proposed project should be considered to be consistent with the AQMP if it furthers one or more policies and does not obstruct other policies. The SCAQMD CEQA Handbook identifies two key indicators of consistency:

(1) Whether the project will result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.

(2) Whether the project will exceed the assumptions in the AQMP in 2022 or increments based on the year of project buildout and phase.

Both of these criteria are evaluated in the following sections.

A. Criterion 1 - Increase in the Frequency or Severity of Violations

Based on the air quality modeling analysis contained in this Air Analysis in Tables 8 and 9, short-term construction impacts will not result in significant impacts based on the SCAQMD regional and local thresholds of significance. This Air Analysis also found that, long-term operations impacts will not result in significant impacts based on the SCAQMD local and regional thresholds of significance, shown in Tables 10 and 11.

Therefore, the proposed project is not projected to contribute to the exceedance of any air pollutant concentration standards and is found to be consistent with the AQMP for the first criterion.

B. Criterion 2 - Exceed Assumptions in the AQMP?

Consistency with the AQMP assumptions is determined by performing an analysis of the proposed project with the assumptions in the AQMP. The emphasis of this criterion is to ensure that the analyses conducted for the proposed project are based on the same forecasts as the AQMP. Connect SoCal, the 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy prepared by SCAG, includes chapters on: SoCal today, paying our way forward, and the path to greater mobility and sustainability. These chapters currently respond directly to federal and state requirements placed on SCAG. Local governments are required to use these as the basis of their plans for purposes of consistency with applicable regional plans under CEQA. For this project, the City of Cathedral City defines the assumptions that are represented in the AQMP.

The proposed project has a current land use designation of General Commercial (CG) according to the City of Cathedral City Official General Plan and is zoned Planned Community Commercial (PCC) in the City of Cathedral City Code of Ordinances. The proposed project is to develop the site with commercial uses. Therefore, the proposed project would not result in an inconsistency with the land use designation in the City's General Plan or Code of Ordinances. Therefore, the proposed project is not anticipated to exceed the AQMP assumptions for the project site and is found to be consistent with the AQMP for the second criterion.

Based on the above, the proposed project will not result in an inconsistency with the SCAQMD AQMP. Therefore, a less than significant impact will occur.

7.0 Greenhouse Gas Impact Analysis

7.1 Construction Greenhouse Gas Emissions Impact

The greenhouse gas emissions from project construction equipment and worker vehicles are shown in Table 12. The emissions are from all phases of construction. The total construction emissions amortized over a period of 30 years are estimated at 16.93 metric tons of CO_2e per year for Scenario 1 and 18.17 metric tons of CO_2e per year for Scenario 2. Annual CalEEMod output calculations are provided in Appendix A.

Table 12: Construction Greenhouse Gas Emissions

Scenario	Emissions ($MTCO_2e$)[1]
	Onsite
Scenario 1	508.00
Scenario 2	545.00
Difference (Scenario 2 - Scenario 1)	37.00
Scenario 1 Averaged over 30 years[2]	16.93
Scenario 2 Averaged over 30 years[2]	18.17

Notes:
1. $MTCO_2e$=metric tons of carbon dioxide equivalents (includes carbon dioxide, methane and nitrous oxide).
2. The emissions are averaged over 30 years because the average is added to the operational emissions, pursuant to SCAQMD.
* CalEEMod output (Appendix A)

7.2 Operational Greenhouse Gas Emissions Impact

Operational emissions occur over the life of the project. As shown in Table 13, the project's total emissions (with incorporation of construction related GHG emissions) would be 3,004.38 metric tons of CO_2e per year in Scenario 1 and 4,476.96 metric tons of CO_2e per year in Scenario 2. These emissions exceed the County of Riverside CAP Update and SCAQMD screening threshold of 3,000 metric tons of CO_2e per year. Therefore, the project's GHG emissions impact must be compared to the County of Riverside GHG Screening Tables for both scenarios. Scenario 2 would generate 1,472.57 metric tons of CO_2e per year more than Scenario 1.

<Table 13, next page>

Table 13: Opening Year Unmitigated Project-Related Greenhouse Gas Emissions

Category	Greenhouse Gas Emissions (Metric Tons/Year)[1]					
	Bio-CO2	NonBio-CO_2	CO_2	CH_4	N_2O	CO_2e
Scenario 1						
Area Sources[2]	0.00	1.95	1.95	0.00	0.00	1.95
Energy Usage[3]	0.00	982.00	982.00	0.00	0.00	985.00
Mobile Sources[4]	0.00	1,830.00	1,830.00	0.08	0.09	1,863.00
Solid Waste[5]	17.90	0.00	17.90	1.79	0.00	62.70
Water[6]	9.38	34.40	43.78	0.96	0.02	74.80
Construction[7]	0.00	16.70	16.70	0.00	0.00	16.93
Total Emissions	27.28	2,865.05	2,892.33	2.83	0.11	**3,004.38**
County of Riverside CAP and SCAQMD Draft Screening Threshold						**3,000**
Exceeds Threshold?						**Yes**
Scenario 2						
Area Sources[2]	0.00	2.48	2.48	0.00	0.00	2.49
Energy Usage[3]	0.00	435.00	435.00	0.03	0.00	436.00
Mobile Sources[4]	0.00	3,823.00	3,823.00	0.17	0.19	3,891.00
Solid Waste[5]	14.80	0.00	14.80	1.48	0.00	51.70
Water[6]	9.73	35.70	45.43	1.00	0.02	77.60
Construction[7]	0.00	17.90	17.90	0.00	0.00	18.17
Total Emissions	24.53	4,314.08	4,338.61	2.68	0.21	**4,476.96**
County of Riverside CAP and SCAQMD Draft Screening Threshold						**3,000**
Exceeds Threshold?						**Yes**
Difference (Scenario 2 - Scenario 1)						**1,472.57**

Notes:
[1] Source: CalEEMod Version 2022.1.1.21
[2] Area sources consist of GHG emissions from consumer products, architectural coatings, and landscape equipment.
[3] Energy usage consist of GHG emissions from electricity and natural gas usage.
[4] Mobile sources consist of GHG emissions from vehicles.
[5] Solid waste includes the CO_2 and CH_4 emissions created from the solid waste placed in landfills.
[6] Water includes GHG emissions from electricity used for transport of water and processing of wastewater.
[7] Construction GHG emissions based on a 30 year amortization rate.

7.3 Greenhouse Gas Plan Consistency

The proposed project would have the potential to conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. As stated previously, the County of Riverside has adopted a Climate Action Plan; therefore, the project and its GHG emissions have been compared to the goals of the County of Riverside CAP Update.

Consistency with the County of Riverside CAP Update

Per the County's CAP Update, the County adopted its first CAP in 2015 which set a target to reduce emissions back to 1990 levels by the year 2020 as recommended in the AB 32 Scoping Plan. Furthermore, the goals and supporting measures within the County's CAP Update are proposed to reflect and ensure compliance with changes in the local and State policies and regulations such as SB 32 and California's 2017 Climate Change Scoping Plan. Therefore, compliance with the County's CAP in turn reflects consistency with the goals of the CARB Scoping Plan, Assembly Bill (AB) 32 and Senate Bill (SB) 32.

Appendix D of the Riverside County CAP Update also states that project's that do not exceed the CAP's screening threshold of 3,000 MTCO2e per year are considered to have less than significant GHG emissions and are in compliance with the County's CAP Update. According to the County's CAP Update, projects that do not exceed emissions of 3,000 MTCO2e per year are also required to include the following efficiency measures:

- Energy efficiency matching or exceeding the Title 24 requirements in effect as of January 2017, and
- Water conservation measures that matches the California Green Building Code in effect as of January 2017.

Projects that exceed emissions of 3,000 MTCO2e per year are also required to use Screening Tables. Projects that garner at least 100 points will be consistent with the reduction quantities anticipated in the County's CAP Update. Consistent with CEQA Guidelines, such projects would be determined to have a less than significant individual and cumulative impact for GHG emissions. Those projects that do not garner 100 points using the Screening Tables will need to provide additional analysis to determine the significance of GHG emissions.

As stated above, the GHG emissions generated by the proposed project would exceed the County of Riverside CAP Update screening threshold of 3,000 metric tons per year of CO2e. Therefore, a completed screening table has been included in Appendix B, which shows the project design features that would allow the project to achieve 100 points. With implementation of the stated features, the project would be consistent with the County of Riverside CAP Update and have a less than significant impact.

City of Cathedral City Climate Action Plan

The City of Cathedral City CAP was adopted in May of 2013. The City of Cathedral City CAP was set in place to guide the City in decisions that lead to the largest and most cost-effective emissions reductions. This plan sets forth goals to reduce emissions to achieve the targets of AB 32. In order to achieve these targets, the CAP presents a number of GHG emissions-reducing programs and policies that are to be implemented by the City. These emissions-reducing measures have been provided for different sectors of the community including transportation, residential buildings, commercial buildings, government incentives, renewable energy, cross-cutting initiatives, solid waste, and water. As specified in the CAP, these measures are to be implemented in a series of three phases over a course of eight years beginning in 2013. The proposed project would be expected to comply with all applicable emissions-reducing measures identified within the CAP.

Project consistency with applicable measures in the CAP has been assessed. As shown in Table 14, the project is consistent with the applicable measures identified in the CAP. In addition, the proposed project is consistent with the GHG inventory and forecast prepared for the CAP as both the existing and the projected GHG inventories were derived based on the land use designations and associated densities defined in the City's General Plan, and the proposed project is consistent with the existing General Plan land use designations. Therefore, since the proposed project is consistent with the City's General Plan and CAP, the project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. Impacts are considered to be less than significant.

Table 14: City of Cathedral City CAP Applicable Measures Project Comparison

Sector	CAP Measures to Reduce Greenhouse Gas Emissions	Project Compliance with Measure
Sphere - "Where We Live"		
Solid Waste	Solid Waste Diversion: Increase solid waste diversion rate by 55% to 68.1% by 2015 potentially through use of tiered rate structure.	Consistent. The project will be required to comply with AB 341 which includes recycling programs that reduces waste to landfills by up to 75% by 2020.
Sphere - "Where We Work"		
Commercial Buildings	Peak Demand Reduction: Collaborate with SCE and encourage 200 businesses to enroll in Energy Efficiency and Demand Response programs such as the Summer Discount Program.	Consistent. This is a city-based measure. If the project is mandated by the City to be one of the 200 businesses that are to enroll in an Energy Efficiency and Demand Response program then the project will comply as needed.
Commercial Buildings	Energy-Efficient, Commercial-Sector Lighting: Promote and leverage existing incentives for efficient lighting and educate and locally incent building owners to eliminate any remaining T-12 lamps in commercial/industrial buildings.	Consistent. The project will comply with current 2022 Title 24 requirements for installation of energy-efficient lighting.
Water	Water Efficient Landscaping Ordinance: Build on and exceed current Water Efficient Landscaping Ordinance in the commercial/industrial sector by 20% community-wide by 2020.	Consistent. The project's landscape design complies with the City's landscaping standards as well as the Mission Springs Water District's water efficient landscaping guidelines (which encourages drought tolerant groundcover).
Sphere - " How We Build"		
Commercial Buildings	"Cool Roofs": Promote the installation of reflective roofing on commercial/industrial properties in the community with recognition for first ten early adopters.	Consistent. The project will comply with current 2022 Title 24 prescriptive cool roof requirements to meet energy compliance.
Government Initiatives	Green Building Program: Promote the voluntary Green Building Program to prepare for enhanced Title 24 requirements and green building standards.	Consistent. The California Green Building Standards Code (proposed Part 11, Title 24) was adopted as part of the California Building Standards Code in the CCR. Part 11 establishes voluntary standards, that became mandatory in the 2010 edition of the Code, on planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The Proposed Project would be subject to these mandatory

Sector	CAP Measures to Reduce Greenhouse Gas Emissions	Project Compliance with Measure
		standards. The 2014 Title 24 Code contained regulations that would be 25% more efficient than the 2010 edition of the Code, and the 2016 Title 24 Code is 5% more efficient than the 2014 edition of the Code in terms of nonresidential buildings. The 2022 Title 24 Code builds on the 2016 Code.

Notes:
a. Source: City of Cathedral City Climate Action Plan (2013).

CARB Scoping Plan Consistency

The ARB Board approved a Climate Change Scoping Plan in December 2008. The Scoping Plan outlines the State's strategy to achieve the 2020 greenhouse gas emissions limit. The Scoping Plan "proposes a comprehensive set of actions designed to reduce overall greenhouse gas emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health" (California Air Resources Board 2008). The measures in the Scoping Plan have been in place since 2012.

In November 2017, CARB release the 2017 Scoping Plan. This Scoping Plan incorporates, coordinates, and leverages many existing and ongoing efforts and identifies new policies and actions to accomplish the State's climate goals, and includes a description of a suite of specific actions to meet the State's 2030 GHG limit. In addition, Chapter 4 provides a broader description of the many actions and proposals being explored across the sectors, including the natural resources sector, to achieve the State's mid and long-term climate goals.

Guided by legislative direction, the actions identified in the 2017 Scoping Plan reduce overall GHG emissions in California and deliver policy signals that will continue to drive investment and certainty in a low carbon economy. The 2017 Scoping Plan builds upon the successful framework established by the Initial Scoping Plan and First Update, while identifying new, technologically feasible, and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health, including in disadvantaged communities. The Plan includes policies to require direct GHG reductions at some of the State's largest stationary sources and mobile sources. These policies include the use of lower GHG fuels, efficiency regulations, and the Cap-and Trade Program, which constrains and reduces emissions at covered sources.

The 2022 Scoping Plan was adopted by CARB in November 2022 and expands upon earlier plans with a target of reducing GHG emissions to 85% below 1990 levels by 2045. As the latest 2022 Scoping Plan builds upon previous versions, project consistency with applicable strategies of both the 2008 and 2017 Plan are assessed in Table 15. As shown in Table 15, the project is consistent with the applicable strategies and would result in a less than significant impact.

Table 15: Project Consistency with CARB Scoping Plan Policies and Measures[1]

2008 Scoping Plan Measures to Reduce Greenhouse Gas Emissions	Project Compliance with Measure
California Light-Duty Vehicle Greenhouse Gas Standards – Implement adopted standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Energy Efficiency – Maximize energy efficiency building and appliance standards; pursue additional efficiency including new technologies, policy, and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California.	Consistent. The project will be compliant with the current Title 24 standards.
Low Carbon Fuel Standard – Develop and adopt the Low Carbon Fuel Standard.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Vehicle Efficiency Measures – Implement light-duty vehicle efficiency measures.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Medium/Heavy-Duty Vehicles – Adopt medium and heavy-duty vehicle efficiency measures.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Green Building Strategy – Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.	Consistent. The California Green Building Standards Code (proposed Part 11, Title 24) was adopted as part of the California Building Standards Code in the CCR. Part 11 establishes voluntary standards, that are mandatory in the 2019 edition of the Code, on planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The project will be subject to these mandatory standards.
High Global Warming Potential Gases – Adopt measures to reduce high global warming potential gases.	Consistent. CARB identified five measures that reduce HFC emissions from vehicular and commercial refrigeration systems; vehicles that access the project that are required to comply with the measures will comply with the strategy.
Recycling and Waste – Reduce methane emissions at landfills. Increase waste diversion, composting, and commercial recycling. Move toward zero-waste.	Consistent. The state is currently developing a regulation to reduce methane emissions from municipal solid waste landfills. The project will be required to comply with City programs, such as any City recycling and waste reduction programs, which comply, with the 75 percent reduction required by 2020 per AB 341.

Water – Continue efficiency programs and use cleaner energy sources to move and treat water.	Consistent. The project will comply with all applicable City ordinances and CAL Green requirements.
2017 Scoping Plan Recommended Actions to Reduce Greenhouse Gas Emissions	**Project Compliance with Recommended Action**
Implement Mobile Source Strategy: Further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean Car regulations.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Implement Mobile Source Strategy: At least 1.5 million zero emission and plug-in hybrid light-duty electric vehicles by 2025 and at least 4.2 million zero emission and plug-in hybrid light-duty electric vehicles by 2030.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Implement Mobile Source Strategy: Innovative Clean Transit: Transition to a suite of to-be-determined innovative clean transit options. Assumed 20 percent of new urban buses purchased beginning in 2018 will be zero emission buses with the penetration of zero-emission technology ramped up to 100 percent of new sales in 2030. Also, new natural gas buses, starting in 2018, and diesel buses, starting in 2020, meet the optional heavy-duty low-NOX standard.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Implement Mobile Source Strategy: Last Mile Delivery: New regulation that would result in the use of low NOX or cleaner engines and the deployment of increasing numbers of zero-emission trucks primarily for class 3-7 last mile delivery trucks in California. This measure assumes ZEVs comprise 2.5 percent of new Class 3–7 truck sales in local fleets starting in 2020, increasing to 10 percent in 2025 and remaining flat through 2030.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Implement SB 350 by 2030: Establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas end uses by 2030.	Consistent. The project will be compliant with the current Title 24 standards.
By 2019, develop regulations and programs to support organic waste landfill reduction goals in the SLCP and SB 1383.	Consistent. The project will be required to comply with City programs, such as any City recycling and waste reduction programs, which comply, with the 75 percent reduction required by 2020 per AB 341.
2022 Scoping Plan Recommended Actions to Reduce Greenhouse Gas Emissions	**Project Compliance with Recommended Action**
Deploy ZEVs and reduce driving demand	Consistent. The project will be in an urbanized area within a quarter mile of transit.
Coordinate supply of liquid fossil fuels with declining California fuel demand	Consistent. The project will be compliant with the current Title 24 standards.
Generate clean electricity	Consistent. The project will be compliant with the current Title 24 standards and would not interfere with clean energy generation.
Decarbonize industrial energy supply	Consistent. The project will be compliant with the current Title 24 standards and would be commercial, therefore would not interfere with

	this goal.
Decarbonize buildings	Consistent. The project will be compliant with the current Title 24 standards.
Reduce non-combustion emissions	Consistent. The project will be compliant with the current Title 24 standards.
Notes: [1] Source: CARB Scoping Plan (2008, 2017, and 2022)	

Consistency with SCAG's 2020-2045 RTP/SCS

At the regional level, the 2020-2045 RTP and Sustainable Communities Strategy represent the region's Climate Action Plan that defines strategies for reducing GHGs. In order to assess the project's potential to conflict with the RTP/SCS, this section analyzes the project's land use profile for consistency with those in the Sustainable Communities Strategy. Generally, projects are considered consistent with the provisions and general policies of applicable City and regional land use plans and regulations, such as SCAG's Sustainable Communities Strategy, if they are compatible with the general intent of the plans and would not preclude the attainment of their primary goals.

Table 16 demonstrates the project's consistency with the Actions and Strategies set forth in the 2020-2045 RTP/SCS. As shown in Table 16, the project would be consistent with the GHG reduction related actions and strategies contained in the 2020-2045 RTP/SCS.

Table 16: Project Consistency with SCAG 2020-2045 RTP/SCS[1]

Actions and Strategies	Responsible Party(ies)	Consistency Analysis
Land Use Strategies		
Reflect the changing population and demands, including combating gentrification and displacement, by increasing housing supply at a variety of affordability levels.	Local Jurisdictions	Consistent. The proposed project is a commercial development on a currently vacant site; therefore, it will not displace existing housing.
Focus new growth around transit.	Local Jurisdictions	Consistent. The proposed project is a commercial development that would be consistent with the 2020 RTP/SCS focus on growing near transit facilities.
Plan for growth around livable corridors, including growth on the Livable Corridors network.	SCAG, Local Jurisdictions	Consistent. The proposed project is a commercial development that would be consistent with the 2020 RTP/SCS focus on growing along the 2,980 miles of Livable Corridors in the region.
Provide more options for short trips through Neighborhood Mobility Areas and Complete Communities.	SCAG, Local Jurisdictions	Consistent. The proposed project would help further jobs/housing balance objectives. The proposed project is also consistent with the Complete Communities initiative that focuses on creation of mixed-use districts in growth areas.
Support local sustainability planning, including developing sustainable planning and design policies, sustainable zoning codes, and Climate Action Plans.	Local Jurisdictions	Not Applicable. This strategy calls on local governments to adopt General Plan updates, zoning codes, and Climate Action Plans to further sustainable communities. The proposed project would not interfere with such policymaking and

		would be consistent with those policy objectives.
Protect natural and farmlands, including developing conservation strategies.	SCAG, Local Jurisdictions	Consistent. The proposed project is a commercial development in an existing urban community that would help reduce demand for growth in urbanizing areas that threaten green fields and open spaces.
Transportation Strategies		
Preserve our existing transportation system.	SCAG, County Transportation Commissions, Local Jurisdictions	Not Applicable. This strategy calls on investing in the maintenance of our existing transportation system. The proposed project would not interfere with such policymaking.
Manage congestion through programs like the Congestion Management Program, Transportation Demand Management, and Transportation Systems Management strategies.	County Transportation Commissions, Local Jurisdictions	Consistent. The proposed project is a commercial development that will minimize congestion impacts on the region because of its proximity to public transit and general density of population and jobs.
Promote safety and security in the transportation system.	SCAG, County Transportation Commissions, Local Jurisdictions	Not Applicable. This strategy aims to improve the safety of the transportation system and protect users from security threats. The proposed project would not interfere with such policymaking.
Complete our transit, passenger rail, active transportation, highways and arterials, regional express lanes goods movement, and airport ground transportation systems.	SCAG, County Transportation Commissions, Local Jurisdictions	Not Applicable. This strategy calls for transportation planning partners to implement major capital and operational projects that are designed to address regional growth. The proposed project would not interfere with this larger goal of investing in the transportation system.
Technological Innovation and 21st Century Transportation		
Promote zero-emissions vehicles.	SCAG, Local Jurisdictions	Consistent. While this action/strategy is not necessarily applicable on a project-specific basis, the project will follow electric vehicle charging guidance per the City's Building Code.
Promote neighborhood electric vehicles.	SCAG, Local Jurisdictions	Consistent. While this action/strategy is not necessarily applicable on a project-specific basis, the project will follow electric vehicle charging guidance per the City's Building Code.
Implement shared mobility programs.	SCAG, Local Jurisdictions	Not Applicable. This strategy is designed to integrate new technologies for last-mile and alternative transportation programs. The proposed project would not interfere with these emerging programs.

Notes:
[1] Source: Southern California Association of Governments; 2020–2045 RTP/SCS, May 2020.

Therefore, the project will not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. Impacts are considered to be less than significant.

8.0 Energy Analysis

Information from the CalEEMod 2022.1.1.21 Daily and Annual Outputs contained in the air quality and greenhouse gas analyses above was utilized for this analysis. The CalEEMod outputs detail project related construction equipment, transportation energy demands, and facility energy demands. As shown in this Section, the project will not result in wasteful or inefficient use of energy and will therefore have a less than significant impact in regards to energy usage.

8.1 Construction Energy Demand

8.1.1 Construction Equipment Electricity Usage Estimates

Electrical service will be provided by Southern California Edison (SCE). Based on the 2017 National Construction Estimator, Richard Pray (2017)[5], the typical power cost per 1,000 square feet of building construction per month is estimated to be $2.32. Scenario 1 plans to develop the site with 133,243 square feet of new development over the course of approximately 15 months and Scenario 2 plans to develop the site with 169,779 square feet of new development over the course of approximately 15 months. Based on Table 17, the total power cost of the on-site electricity usage during the construction of the proposed project is estimated to be approximately $4,636,86 in Scenario 1 and $5,908.31 in Scenario 2. As shown in Table 17, the total electricity usage from Project construction related activities is estimated to be approximately 84,306 kWh in Scenario 1 and 107,424 kWh in Scenario 2.[6]

Table 17: Project Construction Power Cost and Electricity Usage

Scenario 1

Power Cost (per 1,000 square foot of building per month of construction)	Total Building Size (1,000 Square Foot)[1]	Construction Duration (months)	Total Project Construction Power Cost
$2.32	133.243	15	$4,636.86

Cost per kWh	Total Project Construction Electricity Usage (kWh)
$0.06	84,306

* Assumes the project will be under the GS-1 General Service rate under SCE.

[5] Pray, Richard. 2017 National Construction Estimator. Carlsbad: Craftsman Book Company, 2017.
[6] LADWP's Small Commercial & Multi-Family Service (A-1) is approximately $0.06 per kWh of electricity Southern California Edison (SCE). Rates & Pricing Choices: General Service/Industrial Rates. https://library.sce.com/content/dam/sce-doclib/public/regulatory/historical/electric/2020/schedules/general-service-&-industrial-rates/ELECTRIC_SCHEDULES_GS-1_2020.pdf

Scenario 2

Power Cost (per 1,000 square foot of building per month of construction)	Total Building Size (1,000 Square Foot)[1]	Construction Duration (months)	Total Project Construction Power Cost
$2.32	169.779	15	$5,908.31

Cost per kWh	Total Project Construction Electricity Usage (kWh)
$0.06	107,424

* Assumes the project will be under the GS-1 General Service rate under SCE.

8.1.2 Construction Equipment Fuel Estimates

Using the CalEEMod data input, the project's construction phase would consume electricity and fossil fuels as a single energy demand, that is, once construction is completed their use would cease. CARB's 2017 Emissions Factors Tables show that on average aggregate fuel consumption (gasoline and diesel fuel) would be approximately 18.5 hp-hr-gal.[7] As presented in Table 18 below, project construction activities would consume an estimated 32,044 gallons of diesel fuel. Both Scenarios are anticipated to have the same construction schedule and equipment usage.

Table 18: Construction Equipment Fuel Consumption Estimates

Phase	Number of Days	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	HP hrs/ day	Total Fuel Consumption (gal diesel fuel)[1,2]
Site Preparation	20	Rubber Tired Dozers	2	6	367	0.4	1,762	1,904
	20	Tractors/Loaders/Backhoes	2	8	84	0.37	497	538
Grading	20	Excavators	1	8	36	0.38	109	118
	20	Graders	1	8	148	0.41	485	525
	20	Rubber Tired Dozers	1	8	367	0.4	1,174	1,270
	20	Tractors/Loaders/Backhoes	3	8	84	0.37	746	806
Building Construction	230	Cranes	1	7	367	0.29	745	9,262
	230	Forklifts	3	8	82	0.2	394	4,893
	230	Generator Sets	1	8	14	0.74	83	1,030

[7] Aggregate fuel consumption rate for all equipment was estimated at 18.5 hp-hr/day (from CARB's 2017 Emissions Factors Tables and fuel consumption rate factors as shown in Table D-21 of the Moyer Guidelines: (https://www.arb.ca.gov/msprog/moyer/guidelines/2017gl/2017_gl_appendix_d.pdf).

	230	Tractors/Loaders/Backhoes	3	7	84	0.37	653	8,114
	230	Welders	1	8	46	0.45	166	2,059
Paving	20	Pavers	2	8	81	0.42	544	588
	20	Paving Equipment	2	8	89	0.36	513	554
	20	Rollers	2	8	36	0.38	219	237
Architectural Coating	25	Air Compressors	1	6	37	0.48	107	144
CONSTRUCTION FUEL DEMAND (gallons of diesel fuel)								**32,044**

Notes:
[1]Using Carl Moyer Guidelines Table D-21 Fuel consumption rate factors (bhp-hr/gal) for engines less than 750 hp.
(Source: https://www.arb.ca.gov/msprog/moyer/guidelines/2017gl/2017_gl_appendix_d.pdf)
[2]Discrepancies are due to rounding.

8.1.3 Construction Worker Fuel Estimates

It is assumed that all construction worker trips are from light duty autos (LDA) along area roadways. With respect to estimated VMT, the construction worker trips would generate an estimated 253,062 VMT in Scenario 1 and 300,884 in Scenario 2. Vehicle fuel efficiencies for construction workers were estimated in the air quality and greenhouse gas analysis using information generated using CARB's EMFAC model (see Appendix C for details). Table 19 shows that an estimated 8,176 gallons of fuel would be consumed for construction worker trips in Scenario 1 and 9,772 gallons of fuel in Scenario 2.

Table 19: Construction Worker Fuel Consumption Estimates

Phase	Number of Days	Worker Trips/Day	Trip Length (miles)[1]	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)[2]
Scenario 1						
Site Preparation	20	10	18.5	3,700	30.95	120
Grading	20	15	18.5	5,550	30.95	179
Building Construction	230	54.8	18.5	233,174	30.95	7,534
Paving	20	15	18.5	5,550	30.95	179
Architectural Coating	25	11	18.5	5,088	30.95	164
Total Construction Worker Fuel Consumption						**8,176**
Scenario 2						
Site Preparation	20	10	18.5	3,700	30.95	120
Grading	20	15	18.5	5,550	30.95	179
Building Construction	230	65.8	18.5	279,979	30.95	9,046
Paving	20	15	18.5	5,550	30.95	179
Architectural Coating	25	13.2	18.5	6,105	30.95	197
Total Construction Worker Fuel Consumption						**9,722**
Difference (Scenario 2 - Scenario 1)						**1,545**

Notes:
[1]Assumptions for the worker trip length and vehicle miles traveled are consistent with CalEEMod 2022.1.1.21 defaults.
[2]Discrepancies are due to rounding.

8.1.4 Construction Vendor/Hauling Fuel Estimates

Tables 20 and 21 show the estimated fuel consumption for vendor and hauling during building construction and architectural coating. With respect to estimated VMT, the vendor and hauling trips would generate an estimated 51,143 VMT in Scenario 1 and 65,219 VMT in Scenario 2. For the architectural coatings it is assumed that the contractors would be responsible for bringing coatings and equipment with them in their light duty vehicles.[8] Tables 20 and 21 show that an estimated 7,405 gallons of fuel would be consumed for vendor and hauling trips in Scenario 1 and 8,931 gallon of fuel in Scenario 2.

Table 20: Construction Vendor Fuel Consumption Estimates (MHD Trucks)[1]

Phase	Number of Days	Vendor Trips/Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Scenario 1						
Site Preparation	20	0	10.2	0	9.22	0
Grading	20	0	10.2	0	9.22	0
Building Construction	230	21.8	10.2	51,143	9.22	5,547
Paving	20	0	10.2	0	9.22	0
Architectural Coating	25	0	10.2	0	9.22	0
Total Vendor Fuel Consumption						**5,547**
Scenario 2						
Site Preparation	20	0	10.2	0	9.22	0
Grading	20	0	10.2	0	9.22	0
Building Construction	230	27.8	10.2	65,219	9.22	7,074
Paving	20	0	10.2	0	9.22	0
Architectural Coating	25	0	10.2	0	9.22	0
Total Vendor Fuel Consumption						**7,074**
Difference (Scenario 2 - Scenario 1)						**1,527**

Notes:
[1] Assumptions for the vendor trip length and vehicle miles traveled are consistent with CalEEMod 2022.1.1.21 defaults.

[8] Vendors delivering construction material or hauling debris from the site during grading would use medium to heavy duty vehicles with an average fuel consumption of 9.22 mpg for medium heavy-duty trucks and 6.74 mpg for heavy heavy-duty trucks (see Appendix D for details).

Table 21: Construction Hauling Fuel Consumption Estimates (HHD Trucks)[1]

Phase	Number of Days	Hauling Trips/Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Scenario 1						
Site Preparation	20	0	20	0	6.74	0
Grading	20	31.3	20	12,520	6.74	1,858
Building Construction	230	0	20	0	6.74	0
Paving	20	0	20	0	6.74	0
Architectural Coating	25	0	20	0	6.74	0
Total Construction Hauling Fuel Consumption						**1,858**
Scenario 2						
Site Preparation	20	0	20	0	6.74	0
Grading	20	31.3	20	12,520	6.74	1,858
Building Construction	230	0	20	0	6.74	0
Paving	20	0	20	0	6.74	0
Architectural Coating	25	0	20	0	6.74	0
Total Construction Hauling Fuel Consumption						**1,858**
Difference (Scenario 2 - Scenario 1)						***0***

Notes:
[1]Assumptions for the hauling trip length and vehicle miles traveled are consistent with CalEEMod 2022.1.1.21 defaults.

8.1.5 Construction Energy Efficiency/Conservation Measures

Construction equipment used over the approximately 15-month construction phase would conform to CARB regulations and California emissions standards and is evidence of related fuel efficiencies. In addition, the CARB Airborne Toxic Control Measure limits idling times of construction vehicles to no more than five minutes, thereby minimizing unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. Furthermore, the project has been designed in compliance with California's Energy Efficiency Standards and 2022 CALGreen Standards.

Construction of the proposed commercial development would require the typical use of energy resources. There are no unusual project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities; or equipment that would not conform to current emissions standards (and related fuel efficiencies). Equipment employed in construction of the project would therefore not result in inefficient wasteful, or unnecessary consumption of fuel and a less than significant impact.

8.2 Operational Energy Demand

Energy consumption in support of or related to project operations would include transportation energy demands (energy consumed by employee and patron vehicles accessing the project site) and facilities energy demands (energy consumed by building operations and site maintenance activities).

8.2.1 Transportation Fuel Consumption

The largest source of operational energy use would be vehicle operation of customers. The site is located in an urbanized area just in close proximity to transit stops. Using the CalEEMod output, it is assumed that an average trip for autos were assumed to be 16.6 miles, light trucks were assumed to travel an average of 6.9 miles, and 3- 4-axle trucks were assumed to travel an average of 8.4 miles[9]. To show a worst-case analysis, as the proposed project is a commercial project, it was assumed that vehicles would operate 365 days per year. Table 22 shows the worst-case estimated annual fuel consumption for all classes of vehicles from autos to heavy-heavy trucks.[10] Table 22 shows that an estimated 280,596 gallons of fuel would be consumed per year for the operation of the Scenario 1 and 586,008 gallons of fuel in Scenario 2.

Table 22: Estimated Vehicle Operations Fuel Consumption

Vehicle Type	Vehicle Mix	Number of Vehicles	Average Trip (miles)[1]	Daily VMT	Average Fuel Economy (mpg)	Total Gallons per Day	Total Annual Fuel Consumption (gallons)
Scenario 1							
Light Auto	Automobile	936.7	16.6	15,549	31.82	488.64	178,354
Light Truck	Automobile	98.1	6.9	677	27.16	24.92	9,098
Light Truck	Automobile	302.3	6.9	2,086	25.6	81.49	29,744
Medium Truck	Automobile	246.9	6.9	1,704	20.81	81.88	29,886
Light Heavy Truck	2-Axle Truck	46.6	8.4	391	13.81	28.33	10,341
Light Heavy Truck 10,000 lbs +	2-Axle Truck	12.8	8.4	108	14.18	7.58	2,768
Medium Heavy Truck	3-Axle Truck	19.8	8.4	167	9.58	17.39	6,349
Heavy Heavy Truck	4-Axle Truck	32.7	8.4	275	7.14	38.51	14,057
Total		1,696	--	20,956	--	768.76	--
Total Annual Fuel Consumption							**280,596**
Scenario 2							
Light Auto	Automobile	1,956.2	16.6	32,472	31.82	1020.50	372,483
Light Truck	Automobile	204.9	6.9	1,414	27.16	52.05	19,000
Light Truck	Automobile	631.4	6.9	4,357	25.6	170.19	62,118
Medium Truck	Automobile	515.7	6.9	3,558	20.81	171.00	62,414
Light Heavy Truck	2-Axle Truck	97.3	8.4	817	13.81	59.17	21,597
Light Heavy Truck 10,000 lbs +	2-Axle Truck	26.7	8.4	225	14.18	15.84	5,781
Medium Heavy Truck	3-Axle Truck	41.4	8.4	348	9.58	36.32	13,259
Heavy Heavy Truck	4-Axle Truck	68.4	8.4	574	7.14	80.43	29,358
Total		3,542	--	43,765	--	1605.50	--
Total Annual Fuel Consumption							**586,008**

Notes:
'[1] The trip generation assessment, the project is to generate 1,696 total net new trips in Scenario 1 and 3,542 total net new trips in Scenario 2, after reduction of

[9] CalEEMod default distance for H-W (home-work) or C-W (commercial-work) is 16.6 miles; 6.9 miles for H-S (home-shop) or C-C (commercial-customer); and 8.4 miles for H-O (home-other) or C-O (commercial-other).
[10] Average fuel economy based on aggregate mileage calculated in EMFAC 2017 for opening year (2023). See Appendix D for EMFAC output.

existing uses. Default CalEEMod vehicle fleet mix utilized.
[1]Based on the size of the site and relative location, trips were assumed to be local rather than regional.

Trip generation generated by the proposed project are consistent with other similar commercial uses of similar scale and configuration as reflected in the traffic analysis (Integrated Engineering Group, 2023). That is, the proposed project does not propose uses or operations that would inherently result in excessive and wasteful vehicle trips, nor associated excess and wasteful vehicle energy consumption. Therefore, project transportation energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

8.2.2 Facility Energy Demands (Electricity and Natural Gas)

The annual natural gas and electricity demands were provided per the CalEEMod output and are provided in Table 23.

Table 23: Project Unmitigated Annual Operational Energy Demand Summary[1]

Scenario 1

Natural Gas Demand	kBTU/year
Unrefrigerated Warehouse - No Rail	2,196,632
Strip Mall	66,086
Fast Food Restaurant with Drive Thru	801,834
Total	3,064,552
Electricity Demand	**kWh/year**
Unrefrigerated Warehouse - No Rail	529,519
Strip Mall	108,894
Fast Food Restaurant with Drive Thru	246,858
Parking Lot	183,161
Total	1,068,432

Scenario 2

Natural Gas Demand	kBTU/year
Unrefrigerated Warehouse - No Rail	2,196,632
Regional Shopping Center	324,091
Total	2,520,723
Difference (Scenario 2 - Scenario 1)	-543,829
Electricity Demand	**kWh/year**
Unrefrigerated Warehouse - No Rail	529,519
Strip Mall	50,139
Parking Lot	183,161
Total	1,364,778
Difference (Scenario 2 - Scenario 1)	178,276

Notes:
[1]Taken from the CalEEMod 2022.1.1.21 annual output.

As shown in Table 23, the estimated electricity demand for the proposed project is approximately 1,068,432 kWh per year in Scenario 1 and 1,364,778 kWh per year in Scenario 2. In 2021, the nonresidential sector of the County of Riverside consumed approximately 8,257 million kWh of electricity.[11] In addition, the estimated natural gas consumption for the proposed project is approximately 3,064,552 kBTU per year in Scenario 1 and 2,520,723 kBTU per year in Scenario 2. In 2021, the nonresidential sector of the County of Riverside consumed approximately 144 million therms of gas.[12] Therefore, the increase in both electricity and natural gas demand from either scenario of the proposed project is insignificant compared to the County's 2021 demand.

8.3 Renewable Energy and Energy Efficiency Plan Consistency

Regarding federal transportation regulations, the project site is located in an already developed area. Access to/from the project site is from existing roads. These roads are already in place so the project would not interfere with, nor otherwise obstruct intermodal transportation plans or projects that may be proposed pursuant to the ISTEA because SCAG is not planning for intermodal facilities in the project area.

Regarding the State's Energy Plan and compliance with Title 24 CCR energy efficiency standards, the applicant is required to comply with the California Green Building Standard Code requirements for energy efficient buildings and appliances as well as utility energy efficiency programs implemented by the SCE and Southern California Gas Company.

Regarding the State's Renewable Energy Portfolio Standards, the project would be required to meet or exceed the energy standards established in the California Green Building Standards Code, Title 24, Part 11 (CALGreen). CalGreen Standards require that new buildings reduce water consumption, employ building commissioning to increase building system efficiencies, divert construction waste from landfills, and install low pollutant-emitting finish materials.

The project will be consistent with all relevant renewable energy and energy efficiency plans and will therefore have a less than significant impact.

[11] California Energy Commission, Electricity Consumption by County. https://ecdms.energy.ca.gov/elecbycounty.aspx
[12] California Energy Commission, Gas Consumption by County. http://ecdms.energy.ca.gov/gasbycounty.aspx

9.0 CEQA Analysis

The California Environmental Quality Act Guidelines (Appendix D) establishes thresholds for air quality, greenhouse gas, and energy impact analyses as presented below:

Air Quality

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

(a) Conflict with or obstruct implementation of the applicable air quality plan?

The regional plan that applies to the proposed Project includes the SCAQMD Air Quality Management Plan (AQMP). A proposed Project should be considered to be consistent with the AQMP if it furthers one or more policies and does not obstruct other policies. The SCAQMD CEQA Handbook identifies two key indicators of consistency:

(1) Whether the project will result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.

(2) Whether the project will exceed the assumptions in the AQMP in 2022 or increments based on the year of project buildout and phase.

This air quality analysis finds that neither short-term construction emissions nor long-term operational emissions would exceed any regional or local thresholds. The Project would also be consistent with the land use classification of Community Commercial from the City of Cathedral City General Plan, which defines the assumptions that are represented in the AQMP. Therefore, a **less than significant** impact will occur.

(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?

In accordance with the SCAQMD methodology, projects that do not exceed the SCAQMD criteria or can be mitigated to less than criteria levels are not significant and do not add to the overall cumulative impact. The Project does not exceed any of the thresholds of significance and therefore is considered **less than significant**.

(c) Expose sensitive receptors to substantial pollutant concentrations?

The Project would not exceed construction or operational localized emissions thresholds set by the SCAQMD and would therefore have a **less than significant** impact on sensitive receptors.

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

Potential sources that may emit odors during the on-going operations of the proposed Project would include odor emissions from vehicle emissions. Due to the distance of the nearest receptors from the Project Site and through compliance with SCAQMD's Rule 402 **no significant impact** related to odors would occur during the on-going operations of the proposed Project. Furthermore, the Project would **not be a significant source** of toxic air contaminants during construction or operation.

Greenhouse Gas Emissions

Would the project:

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

Combined Project emissions from construction and operation would exceed the County of Riverside CAP Update and SCAQMD screening threshold of 3,000 metric tons of CO_2e per year. Therefore, the impact has been determined through the County of Riverside GHG Screening Tables in Appendix B, which show the Project's GHG emissions impact with inclusion of the stated design features would achieve the minimum required points of 100 and be considered **less than significant**.

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

Appendix D of the Riverside County CAP Update states that Project's that do not exceed the CAP's screening threshold of 3,000 MTCO2e per year or achieve a minimum of 100 points in the County of Riverside GHG Screening Tables are considered to have less than significant GHG emissions and are in compliance with the County's CAP Update. As stated above, the proposed Project would achieve 100 points in the GHG Screening Tables with inclusion of the design features stated in Appendix B. Therefore, the Project would be consistent with the CAP and would have a **less than significant** impact.

Energy

Would the project:

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Construction of the proposed commercial development would require the typical use of energy resources. There are no unusual Project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities; or equipment that would not conform to current emissions standards (and related fuel efficiencies). Equipment employed in construction of the Project would therefore not result in inefficient wasteful, or unnecessary consumption of fuel and would have a **less than significant impact**.

Trip generation generated by the proposed Project are consistent with other similar commercial uses of similar scale and configuration as reflected in the Transportation Analysis (Integrated Engineering Group, 2023). That is, the proposed Project does not propose uses or operations that would inherently result in excessive and wasteful vehicle trips, nor associated excess and wasteful vehicle energy consumption. Therefore, Project transportation energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary. Furthermore, the increase in both electricity and natural gas demand from the proposed Project is insignificant compared to the County's 2021 demand. Therefore, the Project would have a **less than significant** impact.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Regarding federal transportation regulations, the Project Site is located in an already developed area. Access to/from the Project Site is from existing roads. These roads are already in place so the Project would not interfere with, nor otherwise obstruct intermodal transportation plans or projects that may be proposed pursuant to the ISTEA because SCAG is not planning for intermodal facilities in the Project area.

Regarding the State's Energy Plan and compliance with Title 24 CCR energy efficiency standards, the applicant is required to comply with the California Green Building Standard Code requirements for energy efficient buildings and appliances as well as utility energy efficiency programs implemented by the SCE and Southern California Gas Company.

Regarding the State's Renewable Energy Portfolio Standards, the Project would be required to meet or exceed the energy standards established in the California Green Building Standards Code, Title 24, Part 11 (CALGreen). CalGreen Standards require that new buildings reduce water consumption, employ building commissioning to increase building system efficiencies, divert construction waste from landfills, and install low pollutant-emitting finish materials.

Therefore, the Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency and would therefore have a **less than significant** impact.

10.0 References

The following references were used in the preparing this analysis.

California Air Pollution Control Officers Association
2009 Health Risk Assessments for Proposed Land Use Projects

California Air Resources Board
2008 Resolution 08-43

2008 Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act

2008 ARB Recommended Interim Risk Management Policy for Inhalation-Based Residential Cancer Risk – Frequently Asked Questions

2008 Climate Change Scoping Plan, a framework for change.

2011 Supplement to the AB 32 Scoping Plan Functional Equivalent Document

2014 First Update to the Climate Change Scoping Plan, Building on the Framework Pursuant to AB32, the California Global Warming Solutions Act of 2006. May.

2018 Historical Air Quality, Top 4 Summary

City of Cathedral City
2013 City of Cathedral City General Plan.

County of Riverside
2015 County of Riverside General Plan. December 8.

2019 County of Riverside Climate Action Plan Update. November.

Governor's Office of Planning and Research
2008 CEQA and Climate: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review

2009 CEQA Guideline Sections to be Added or Amended

Integrated Engineering Group
2023 Date Palm Drive Mixed Use Transportation Analysis. December.

Office of Environmental Health Hazard Assessment
2015 Air Toxics Hot Spots Program Risk Assessment Guidelines

South Coast Air Quality Management District
1993 CEQA Air Quality Handbook

2005 Rule 403 Fugitive Dust

2007 2007 Air Quality Management Plan

2008 Final Localized Significance Threshold Methodology, Revised

2011 Appendix A Calculation Details for CalEEMod

2012 Final 2012 Air Quality Management Plan

2016 Final 2016 Air Quality Management Plan

2022 Final 2022 Air Quality Management Plan

Appendix A:

CalEEMod Output

Date Palm Mixed Use - Alt 1 Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Date Palm Mixed Use - Alt 1
Construction Start Date	4/1/2024
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.30
Precipitation (days)	10.0
Location	33.827226852362244, -116.45770401427775
County	Riverside-Salton Sea
City	Cathedral City
Air District	South Coast AQMD
Air Basin	Salton Sea
TAZ	5673
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.21

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Unrefrigerated Warehouse-No Rail	115	1000sqft	2.64	115,054	0.00	—	—	—
Strip Mall	11.2	1000sqft	0.26	11,159	0.00	—	—	—
Fast Food Restaurant with Drive Thru	7.03	1000sqft	0.16	7,030	0.00	—	—	—
Parking Lot	4.80	Acre	4.80	0.00	44,112	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-10-A	Water Exposed Surfaces
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	56.4	23.2	21.7	0.04	1.03	13.2	14.3	0.95	6.77	7.71	—	5,357	5,357	0.15	0.37	5.48	5,477
Mit.	56.4	23.2	21.7	0.04	1.03	5.24	6.27	0.95	2.66	3.61	—	5,357	5,357	0.15	0.37	5.48	5,477
% Reduced	—	—	—	—	—	60%	56%	—	61%	53%	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.45	12.4	16.7	0.03	0.51	0.90	1.41	0.47	0.22	0.69	—	3,809	3,809	0.14	0.14	0.13	3,856

Mit.	1.45	12.4	16.7	0.03	0.51	0.90	1.41	0.47	0.22	0.69	—	3,809	3,809	0.14	0.14	0.13	3,856
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.27	7.29	9.21	0.02	0.31	1.51	1.82	0.28	0.66	0.94	—	2,008	2,008	0.07	0.08	1.00	2,034
Mit.	4.27	7.29	9.21	0.02	0.31	0.84	1.14	0.28	0.32	0.60	—	2,008	2,008	0.07	0.08	1.00	2,034
% Reduced	—	—	—	—	—	45%	37%	—	52%	36%	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.78	1.33	1.68	< 0.005	0.06	0.28	0.33	0.05	0.12	0.17	—	332	332	0.01	0.01	0.17	337
Mit.	0.78	1.33	1.68	< 0.005	0.06	0.15	0.21	0.05	0.06	0.11	—	332	332	0.01	0.01	0.17	337
% Reduced	—	—	—	—	—	45%	37%	—	52%	36%	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.41	23.2	21.7	0.04	1.03	13.2	14.3	0.95	6.77	7.71	—	5,357	5,357	0.15	0.37	5.48	5,477
2025	56.4	11.5	18.6	0.03	0.44	0.90	1.35	0.41	0.22	0.63	—	3,903	3,903	0.14	0.14	4.72	3,953
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.45	12.4	16.7	0.03	0.51	0.90	1.41	0.47	0.22	0.69	—	3,809	3,809	0.14	0.14	0.13	3,856
2025	1.37	11.5	16.3	0.03	0.44	0.90	1.35	0.41	0.22	0.63	—	3,782	3,782	0.14	0.14	0.12	3,828

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.83	7.29	9.21	0.02	0.31	1.51	1.82	0.28	0.66	0.94	—	2,008	2,008	0.07	0.08	1.00	2,034
2025	4.27	3.20	4.78	0.01	0.13	0.23	0.36	0.12	0.06	0.17	—	1,020	1,020	0.04	0.03	0.52	1,032
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.15	1.33	1.68	< 0.005	0.06	0.28	0.33	0.05	0.12	0.17	—	332	332	0.01	0.01	0.17	337
2025	0.78	0.58	0.87	< 0.005	0.02	0.04	0.07	0.02	0.01	0.03	—	169	169	0.01	0.01	0.09	171

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.41	23.2	21.7	0.04	1.03	5.24	6.27	0.95	2.66	3.61	—	5,357	5,357	0.15	0.37	5.48	5,477
2025	56.4	11.5	18.6	0.03	0.44	0.90	1.35	0.41	0.22	0.63	—	3,903	3,903	0.14	0.14	4.72	3,953
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.45	12.4	16.7	0.03	0.51	0.90	1.41	0.47	0.22	0.69	—	3,809	3,809	0.14	0.14	0.13	3,856
2025	1.37	11.5	16.3	0.03	0.44	0.90	1.35	0.41	0.22	0.63	—	3,782	3,782	0.14	0.14	0.12	3,828
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.83	7.29	9.21	0.02	0.31	0.84	1.14	0.28	0.32	0.60	—	2,008	2,008	0.07	0.08	1.00	2,034
2025	4.27	3.20	4.78	0.01	0.13	0.23	0.36	0.12	0.06	0.17	—	1,020	1,020	0.04	0.03	0.52	1,032
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.15	1.33	1.68	< 0.005	0.06	0.15	0.21	0.05	0.06	0.11	—	332	332	0.01	0.01	0.17	337
2025	0.78	0.58	0.87	< 0.005	0.02	0.04	0.07	0.02	0.01	0.03	—	169	169	0.01	0.01	0.09	171

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.1	9.26	62.4	0.14	0.37	9.25	9.63	0.37	2.35	2.71	165	18,018	18,183	17.6	0.72	50.7	18,889
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	8.69	9.66	40.7	0.12	0.36	9.25	9.61	0.36	2.35	2.70	165	16,681	16,845	17.7	0.73	12.3	17,518
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.55	9.44	47.9	0.13	0.37	9.19	9.56	0.36	2.33	2.69	165	17,209	17,374	17.6	0.72	28.3	18,057
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.74	1.72	8.75	0.02	0.07	1.68	1.74	0.07	0.43	0.49	27.3	2,849	2,876	2.92	0.12	4.68	2,990

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.70	5.54	53.5	0.12	0.08	9.25	9.34	0.08	2.35	2.42	—	11,854	11,854	0.49	0.56	39.4	12,072
Area	4.17	0.05	5.79	< 0.005	0.01	—	0.01	0.01	—	0.01	—	23.8	23.8	< 0.005	< 0.005	—	23.9
Energy	0.20	3.67	3.08	0.02	0.28	—	0.28	0.28	—	0.28	—	5,933	5,933	0.48	0.02	—	5,951
Water	—	—	—	—	—	—	—	—	—	—	56.7	208	265	5.82	0.14	—	452
Waste	—	—	—	—	—	—	—	—	—	—	108	0.00	108	10.8	0.00	—	379

Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.2	11.2
Total	11.1	9.26	62.4	0.14	0.37	9.25	9.63	0.37	2.35	2.71	165	18,018	18,183	17.6	0.72	50.7	18,889
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	5.27	6.00	37.7	0.10	0.08	9.25	9.34	0.08	2.35	2.42	—	10,540	10,540	0.53	0.57	1.02	10,725
Area	3.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.20	3.67	3.08	0.02	0.28	—	0.28	0.28	—	0.28	—	5,933	5,933	0.48	0.02	—	5,951
Water	—	—	—	—	—	—	—	—	—	—	56.7	208	265	5.82	0.14	—	452
Waste	—	—	—	—	—	—	—	—	—	—	108	0.00	108	10.8	0.00	—	379
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.2	11.2
Total	8.69	9.66	40.7	0.12	0.36	9.25	9.61	0.36	2.35	2.70	165	16,681	16,845	17.7	0.73	12.3	17,518
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	5.66	5.74	42.0	0.11	0.08	9.19	9.28	0.08	2.33	2.41	—	11,056	11,056	0.50	0.56	17.0	11,253
Area	3.69	0.02	2.86	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	11.8	11.8	< 0.005	< 0.005	—	11.8
Energy	0.20	3.67	3.08	0.02	0.28	—	0.28	0.28	—	0.28	—	5,933	5,933	0.48	0.02	—	5,951
Water	—	—	—	—	—	—	—	—	—	—	56.7	208	265	5.82	0.14	—	452
Waste	—	—	—	—	—	—	—	—	—	—	108	0.00	108	10.8	0.00	—	379
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.2	11.2
Total	9.55	9.44	47.9	0.13	0.37	9.19	9.56	0.36	2.33	2.69	165	17,209	17,374	17.6	0.72	28.3	18,057
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.03	1.05	7.66	0.02	0.02	1.68	1.69	0.01	0.43	0.44	—	1,830	1,830	0.08	0.09	2.82	1,863
Area	0.67	< 0.005	0.52	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.95	1.95	< 0.005	< 0.005	—	1.95
Energy	0.04	0.67	0.56	< 0.005	0.05	—	0.05	0.05	—	0.05	—	982	982	0.08	< 0.005	—	985
Water	—	—	—	—	—	—	—	—	—	—	9.38	34.4	43.8	0.96	0.02	—	74.8
Waste	—	—	—	—	—	—	—	—	—	—	17.9	0.00	17.9	1.79	0.00	—	62.7
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.86	1.86
Total	1.74	1.72	8.75	0.02	0.07	1.68	1.74	0.07	0.43	0.49	27.3	2,849	2,876	2.92	0.12	4.68	2,990

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.70	5.54	53.5	0.12	0.08	9.25	9.34	0.08	2.35	2.42	—	11,854	11,854	0.49	0.56	39.4	12,072
Area	4.17	0.05	5.79	< 0.005	0.01	—	0.01	0.01	—	0.01	—	23.8	23.8	< 0.005	< 0.005	—	23.9
Energy	0.20	3.67	3.08	0.02	0.28	—	0.28	0.28	—	0.28	—	5,933	5,933	0.48	0.02	—	5,951
Water	—	—	—	—	—	—	—	—	—	—	56.7	208	265	5.82	0.14	—	452
Waste	—	—	—	—	—	—	—	—	—	—	108	0.00	108	10.8	0.00	—	379
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.2	11.2
Total	11.1	9.26	62.4	0.14	0.37	9.25	9.63	0.37	2.35	2.71	165	18,018	18,183	17.6	0.72	50.7	18,889
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	5.27	6.00	37.7	0.10	0.08	9.25	9.34	0.08	2.35	2.42	—	10,540	10,540	0.53	0.57	1.02	10,725
Area	3.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.20	3.67	3.08	0.02	0.28	—	0.28	0.28	—	0.28	—	5,933	5,933	0.48	0.02	—	5,951
Water	—	—	—	—	—	—	—	—	—	—	56.7	208	265	5.82	0.14	—	452
Waste	—	—	—	—	—	—	—	—	—	—	108	0.00	108	10.8	0.00	—	379
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.2	11.2
Total	8.69	9.66	40.7	0.12	0.36	9.25	9.61	0.36	2.35	2.70	165	16,681	16,845	17.7	0.73	12.3	17,518
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	5.66	5.74	42.0	0.11	0.08	9.19	9.28	0.08	2.33	2.41	—	11,056	11,056	0.50	0.56	17.0	11,253
Area	3.69	0.02	2.86	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	11.8	11.8	< 0.005	< 0.005	—	11.8
Energy	0.20	3.67	3.08	0.02	0.28	—	0.28	0.28	—	0.28	—	5,933	5,933	0.48	0.02	—	5,951
Water	—	—	—	—	—	—	—	—	—	—	56.7	208	265	5.82	0.14	—	452

Waste	—	—	—	—	—	—	—	—	—	—	108	0.00	108	10.8	0.00	—	379
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.2	11.2
Total	9.55	9.44	47.9	0.13	0.37	9.19	9.56	0.36	2.33	2.69	165	17,209	17,374	17.6	0.72	28.3	18,057
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.03	1.05	7.66	0.02	0.02	1.68	1.69	0.01	0.43	0.44	—	1,830	1,830	0.08	0.09	2.82	1,863
Area	0.67	< 0.005	0.52	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.95	1.95	< 0.005	< 0.005	—	1.95
Energy	0.04	0.67	0.56	< 0.005	0.05	—	0.05	0.05	—	0.05	—	982	982	0.08	< 0.005	—	985
Water	—	—	—	—	—	—	—	—	—	—	9.38	34.4	43.8	0.96	0.02	—	74.8
Waste	—	—	—	—	—	—	—	—	—	—	17.9	0.00	17.9	1.79	0.00	—	62.7
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.86	1.86
Total	1.74	1.72	8.75	0.02	0.07	1.68	1.74	0.07	0.43	0.49	27.3	2,849	2,876	2.92	0.12	4.68	2,990

3. Construction Emissions Details

3.1. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.35	23.2	20.7	0.03	1.03	—	1.03	0.95	—	0.95	—	3,337	3,337	0.14	0.03	—	3,348
Dust From Material Movement	—	—	—	—	—	13.1	13.1	—	6.73	6.73	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	1.27	1.13	< 0.005	0.06	—	0.06	0.05	—	0.05	—	183	183	0.01	< 0.005	—	183
Dust From Material Movement	—	—	—	—	—	0.72	0.72	—	0.37	0.37	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.23	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	30.3	30.3	< 0.005	< 0.005	—	30.4
Dust From Material Movement	—	—	—	—	—	0.13	0.13	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	1.03	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	152	152	0.01	< 0.005	0.57	154
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.56	7.56	< 0.005	< 0.005	0.01	7.67
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.25	1.25	< 0.005	< 0.005	< 0.005	1.27
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.2. Site Preparation (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.35	23.2	20.7	0.03	1.03	—	1.03	0.95	—	0.95	—	3,337	3,337	0.14	0.03	—	3,348
Dust From Material Movement	—	—	—	—	—	5.11	5.11	—	2.63	2.63	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	1.27	1.13	< 0.005	0.06	—	0.06	0.05	—	0.05	—	183	183	0.01	< 0.005	—	183

Dust From Material Movement	—	—	—	—	—	0.28	0.28	—	0.14	0.14	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.23	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	30.3	30.3	< 0.005	< 0.005	—	30.4
Dust From Material Movement	—	—	—	—	—	0.05	0.05	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	1.03	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	152	152	0.01	< 0.005	0.57	154
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.56	7.56	< 0.005	< 0.005	0.01	7.67
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.25	1.25	< 0.005	< 0.005	< 0.005	1.27
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.90	18.2	18.8	0.03	0.84	—	0.84	0.77	—	0.77	—	2,958	2,958	0.12	0.02	—	2,969
Dust From Material Movement	—	—	—	—	—	7.10	7.10	—	3.43	3.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	1.00	1.03	< 0.005	0.05	—	0.05	0.04	—	0.04	—	162	162	0.01	< 0.005	—	163
Dust From Material Movement	—	—	—	—	—	0.39	0.39	—	0.19	0.19	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.18	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	—	26.8	26.8	< 0.005	< 0.005	—	26.9

Dust From Material Movement	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.09	1.55	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	228	228	0.01	0.01	0.85	231
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.04	2.45	0.55	0.01	0.04	0.57	0.61	0.04	0.14	0.19	—	2,170	2,170	0.02	0.34	4.63	2,277
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.3	11.3	< 0.005	< 0.005	0.02	11.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.14	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	119	119	< 0.005	0.02	0.11	125
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.88	1.88	< 0.005	< 0.005	< 0.005	1.90
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	19.7	19.7	< 0.005	< 0.005	0.02	20.6

3.4. Grading (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.90	18.2	18.8	0.03	0.84	—	0.84	0.77	—	0.77	—	2,958	2,958	0.12	0.02	—	2,969
Dust From Material Movement	—	—	—	—	—	2.77	2.77	—	1.34	1.34	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	1.00	1.03	< 0.005	0.05	—	0.05	0.04	—	0.04	—	162	162	0.01	< 0.005	—	163
Dust From Material Movement	—	—	—	—	—	0.15	0.15	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.18	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	—	26.8	26.8	< 0.005	< 0.005	—	26.9
Dust From Material Movement	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.09	1.55	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	228	228	0.01	0.01	0.85	231
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.04	2.45	0.55	0.01	0.04	0.57	0.61	0.04	0.14	0.19	—	2,170	2,170	0.02	0.34	4.63	2,277
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.3	11.3	< 0.005	< 0.005	0.02	11.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.14	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	119	119	< 0.005	0.02	0.11	125
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.88	1.88	< 0.005	< 0.005	< 0.005	1.90
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	19.7	19.7	< 0.005	< 0.005	0.02	20.6

3.5. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	4.44	5.18	0.01	0.20	—	0.20	0.18	—	0.18	—	948	948	0.04	0.01	—	951
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.81	0.95	< 0.005	0.04	—	0.04	0.03	—	0.03	—	157	157	0.01	< 0.005	—	157
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.30	0.31	5.67	0.00	0.00	0.72	0.72	0.00	0.17	0.17	—	833	833	0.03	0.03	3.10	845
Vendor	0.03	0.77	0.35	0.01	0.01	0.19	0.20	0.01	0.05	0.06	—	703	703	0.01	0.10	1.91	734
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.33	3.23	0.00	0.00	0.72	0.72	0.00	0.17	0.17	—	708	708	0.03	0.03	0.08	717
Vendor	0.02	0.82	0.35	0.01	0.01	0.19	0.20	0.01	0.05	0.06	—	703	703	0.01	0.10	0.05	733
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.10	0.12	1.59	0.00	0.00	0.28	0.28	0.00	0.07	0.07	—	299	299	0.01	0.01	0.53	303
Vendor	0.01	0.32	0.14	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02	—	278	278	< 0.005	0.04	0.32	290
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.29	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	49.5	49.5	< 0.005	< 0.005	0.09	50.2
Vendor	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	46.0	46.0	< 0.005	0.01	0.05	48.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.6. Building Construction (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	4.44	5.18	0.01	0.20	—	0.20	0.18	—	0.18	—	948	948	0.04	0.01	—	951

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.81	0.95	< 0.005	0.04	—	0.04	0.03	—	0.03	—	157	157	0.01	< 0.005	—	157
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.30	0.31	5.67	0.00	0.00	0.72	0.72	0.00	0.17	0.17	—	833	833	0.03	0.03	3.10	845
Vendor	0.03	0.77	0.35	0.01	0.01	0.19	0.20	0.01	0.05	0.06	—	703	703	0.01	0.10	1.91	734
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.33	3.23	0.00	0.00	0.72	0.72	0.00	0.17	0.17	—	708	708	0.03	0.03	0.08	717
Vendor	0.02	0.82	0.35	0.01	0.01	0.19	0.20	0.01	0.05	0.06	—	703	703	0.01	0.10	0.05	733
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.12	1.59	0.00	0.00	0.28	0.28	0.00	0.07	0.07	—	299	299	0.01	0.01	0.53	303
Vendor	0.01	0.32	0.14	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02	—	278	278	< 0.005	0.04	0.32	290
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.29	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	49.5	49.5	< 0.005	< 0.005	0.09	50.2
Vendor	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	46.0	46.0	< 0.005	0.01	0.05	48.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.27	2.47	3.09	0.01	0.10	—	0.10	0.09	—	0.09	—	568	568	0.02	< 0.005	—	570
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.45	0.56	< 0.005	0.02	—	0.02	0.02	—	0.02	—	94.0	94.0	< 0.005	< 0.005	—	94.3
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.29	0.29	5.23	0.00	0.00	0.72	0.72	0.00	0.17	0.17	—	814	814	0.03	0.03	2.82	826
Vendor	0.03	0.73	0.32	0.01	0.01	0.19	0.20	0.01	0.05	0.06	—	691	691	0.01	0.09	1.90	721
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.31	2.97	0.00	0.00	0.72	0.72	0.00	0.17	0.17	—	693	693	0.03	0.03	0.07	702
Vendor	0.02	0.78	0.33	0.01	0.01	0.19	0.20	0.01	0.05	0.06	—	692	692	0.01	0.09	0.05	720
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.07	0.88	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	175	175	0.01	0.01	0.29	178
Vendor	0.01	0.18	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	164	164	< 0.005	0.02	0.19	171
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.16	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	29.0	29.0	< 0.005	< 0.005	0.05	29.4
Vendor	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	27.1	27.1	< 0.005	< 0.005	0.03	28.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.27	2.47	3.09	0.01	0.10	—	0.10	0.09	—	0.09	—	568	568	0.02	< 0.005	—	570
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.45	0.56	< 0.005	0.02	—	0.02	0.02	—	0.02	—	94.0	94.0	< 0.005	< 0.005	—	94.3
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.29	0.29	5.23	0.00	0.00	0.72	0.72	0.00	0.17	0.17	—	814	814	0.03	0.03	2.82	826
Vendor	0.03	0.73	0.32	0.01	0.01	0.19	0.20	0.01	0.05	0.06	—	691	691	0.01	0.09	1.90	721
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.31	2.97	0.00	0.00	0.72	0.72	0.00	0.17	0.17	—	693	693	0.03	0.03	0.07	702

Vendor	0.02	0.78	0.33	0.01	0.01	0.19	0.20	0.01	0.05	0.06	—	692	692	0.01	0.09	0.05	720
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.07	0.88	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	175	175	0.01	0.01	0.29	178
Vendor	0.01	0.18	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	164	164	< 0.005	0.02	0.19	171
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.16	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	29.0	29.0	< 0.005	< 0.005	0.05	29.4
Vendor	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	27.1	27.1	< 0.005	< 0.005	0.03	28.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	0.63	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.04	0.41	0.55	< 0.005	0.02	—	0.02	0.02	—	0.02	—	82.8	82.8	< 0.005	< 0.005	—	83.1
Paving	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.7	13.7	< 0.005	< 0.005	—	13.8
Paving	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	1.43	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	223	223	0.01	0.01	0.77	226
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.1	11.1	< 0.005	< 0.005	0.02	11.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.84	1.84	< 0.005	< 0.005	< 0.005	1.86
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Paving (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	0.63	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.41	0.55	< 0.005	0.02	—	0.02	0.02	—	0.02	—	82.8	82.8	< 0.005	< 0.005	—	83.1
Paving	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.7	13.7	< 0.005	< 0.005	—	13.8
Paving	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.08	0.08	1.43	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	223	223	0.01	0.01	0.77	226
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.1	11.1	< 0.005	< 0.005	0.02	11.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.84	1.84	< 0.005	< 0.005	< 0.005	1.86
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	56.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.06	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.15	9.15	< 0.005	< 0.005	—	9.18
Architectural Coatings	3.85	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.51	1.51	< 0.005	< 0.005	—	1.52
Architectural Coatings	0.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	1.05	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	163	163	0.01	0.01	0.56	165
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.1	10.1	< 0.005	< 0.005	0.02	10.3

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.68	1.68	< 0.005	< 0.005	< 0.005	1.70
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Architectural Coating (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	56.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.06	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.15	9.15	< 0.005	< 0.005	—	9.18
Architectural Coatings	3.85	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.51	1.51	< 0.005	< 0.005	—	1.52
Architectural Coatings	0.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	1.05	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	163	163	0.01	0.01	0.56	165
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.1	10.1	< 0.005	< 0.005	0.02	10.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.68	1.68	< 0.005	< 0.005	< 0.005	1.70
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Mobile source emissions results are presented in Sections 2.6. No further detailed breakdown of emissions is available.

4.1.2. Mitigated

Mobile source emissions results are presented in Sections 2.5. No further detailed breakdown of emissions is available.

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	772	772	0.05	0.01	—	775
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	159	159	0.01	< 0.005	—	159
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	360	360	0.02	< 0.005	—	361
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	267	267	0.02	< 0.005	—	268
Total	—	—	—	—	—	—	—	—	—	—	—	1,557	1,557	0.10	0.01	—	1,563
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	772	772	0.05	0.01	—	775
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	159	159	0.01	< 0.005	—	159
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	360	360	0.02	< 0.005	—	361
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	267	267	0.02	< 0.005	—	268
Total	—	—	—	—	—	—	—	—	—	—	—	1,557	1,557	0.10	0.01	—	1,563
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	128	128	0.01	< 0.005	—	128
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	26.3	26.3	< 0.005	< 0.005	—	26.4
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	59.6	59.6	< 0.005	< 0.005	—	59.8
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	44.2	44.2	< 0.005	< 0.005	—	44.4
Total	—	—	—	—	—	—	—	—	—	—	—	258	258	0.02	< 0.005	—	259

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrigerated Warehou Rail	—	—	—	—	—	—	—	—	—	—	—	772	772	0.05	0.01	—	775
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	159	159	0.01	< 0.005	—	159
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	360	360	0.02	< 0.005	—	361
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	267	267	0.02	< 0.005	—	268
Total	—	—	—	—	—	—	—	—	—	—	—	1,557	1,557	0.10	0.01	—	1,563
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	772	772	0.05	0.01	—	775
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	159	159	0.01	< 0.005	—	159
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	360	360	0.02	< 0.005	—	361
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	267	267	0.02	< 0.005	—	268
Total	—	—	—	—	—	—	—	—	—	—	—	1,557	1,557	0.10	0.01	—	1,563
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	128	128	0.01	< 0.005	—	128
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	26.3	26.3	< 0.005	< 0.005	—	26.4

Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	59.6	59.6	< 0.005	< 0.005	—	59.8
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	44.2	44.2	< 0.005	< 0.005	—	44.4
Total	—	—	—	—	—	—	—	—	—	—	—	258	258	0.02	< 0.005	—	259

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.16	2.95	2.48	0.02	0.22	—	0.22	0.22	—	0.22	—	3,520	3,520	0.31	0.01	—	3,530
Strip Mall	< 0.005	0.07	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	84.7	84.7	0.01	< 0.005	—	85.0
Fast Food Restaurant with Drive Thru	0.04	0.65	0.54	< 0.005	0.05	—	0.05	0.05	—	0.05	—	771	771	0.07	< 0.005	—	773
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.20	3.67	3.08	0.02	0.28	—	0.28	0.28	—	0.28	—	4,376	4,376	0.39	0.01	—	4,388
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.16	2.95	2.48	0.02	0.22	—	0.22	0.22	—	0.22	—	3,520	3,520	0.31	0.01	—	3,530

Strip Mall	< 0.005	0.07	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	84.7	84.7	0.01	< 0.005	—	85.0
Fast Food Restaurant with Drive Thru	0.04	0.65	0.54	< 0.005	0.05	—	0.05	0.05	—	0.05	—	771	771	0.07	< 0.005	—	773
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.20	3.67	3.08	0.02	0.28	—	0.28	0.28	—	0.28	—	4,376	4,376	0.39	0.01	—	4,388
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.03	0.54	0.45	< 0.005	0.04	—	0.04	0.04	—	0.04	—	583	583	0.05	< 0.005	—	584
Strip Mall	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.0	14.0	< 0.005	< 0.005	—	14.1
Fast Food Restaurant with Drive Thru	0.01	0.12	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	128	128	0.01	< 0.005	—	128
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.04	0.67	0.56	< 0.005	0.05	—	0.05	0.05	—	0.05	—	724	724	0.06	< 0.005	—	726

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.16	2.95	2.48	0.02	0.22	—	0.22	0.22	—	0.22	—	3,520	3,520	0.31	0.01	—	3,530

Strip Mall	< 0.005	0.07	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	84.7	84.7	0.01	< 0.005	—	85.0
Fast Food Restaurant with Drive Thru	0.04	0.65	0.54	< 0.005	0.05	—	0.05	0.05	—	0.05	—	771	771	0.07	< 0.005	—	773
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.20	3.67	3.08	0.02	0.28	—	0.28	0.28	—	0.28	—	4,376	4,376	0.39	0.01	—	4,388
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.16	2.95	2.48	0.02	0.22	—	0.22	0.22	—	0.22	—	3,520	3,520	0.31	0.01	—	3,530
Strip Mall	< 0.005	0.07	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	84.7	84.7	0.01	< 0.005	—	85.0
Fast Food Restaurant with Drive Thru	0.04	0.65	0.54	< 0.005	0.05	—	0.05	0.05	—	0.05	—	771	771	0.07	< 0.005	—	773
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.20	3.67	3.08	0.02	0.28	—	0.28	0.28	—	0.28	—	4,376	4,376	0.39	0.01	—	4,388
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.03	0.54	0.45	< 0.005	0.04	—	0.04	0.04	—	0.04	—	583	583	0.05	< 0.005	—	584
Strip Mall	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.0	14.0	< 0.005	< 0.005	—	14.1
Fast Food Restaurant with Drive Thru	0.01	0.12	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	128	128	0.01	< 0.005	—	128

Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.04	0.67	0.56	< 0.005	0.05	—	0.05	0.05	—	0.05	—	724	724	0.06	< 0.005	—	726

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	2.87	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.95	0.05	5.79	< 0.005	0.01	—	0.01	0.01	—	0.01	—	23.8	23.8	< 0.005	< 0.005	—	23.9
Total	4.17	0.05	5.79	< 0.005	0.01	—	0.01	0.01	—	0.01	—	23.8	23.8	< 0.005	< 0.005	—	23.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	2.87	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	3.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.52	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.09	< 0.005	0.52	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.95	1.95	< 0.005	< 0.005	—	1.95
Total	0.67	< 0.005	0.52	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.95	1.95	< 0.005	< 0.005	—	1.95

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	2.87	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.95	0.05	5.79	< 0.005	0.01	—	0.01	0.01	—	0.01	—	23.8	23.8	< 0.005	< 0.005	—	23.9
Total	4.17	0.05	5.79	< 0.005	0.01	—	0.01	0.01	—	0.01	—	23.8	23.8	< 0.005	< 0.005	—	23.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consumer	2.87	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	3.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.52	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.09	< 0.005	0.52	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.95	1.95	< 0.005	< 0.005	—	1.95
Total	0.67	< 0.005	0.52	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.95	1.95	< 0.005	< 0.005	—	1.95

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	51.0	184	235	5.24	0.13	—	403
Strip Mall	—	—	—	—	—	—	—	—	—	—	1.58	5.71	7.29	0.16	< 0.005	—	12.5

Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	4.09	14.7	18.8	0.42	0.01	—	32.3
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	3.88	3.88	< 0.005	< 0.005	—	3.90
Total	—	—	—	—	—	—	—	—	—	—	56.7	208	265	5.82	0.14	—	452
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	51.0	184	235	5.24	0.13	—	403
Strip Mall	—	—	—	—	—	—	—	—	—	—	1.58	5.71	7.29	0.16	< 0.005	—	12.5
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	4.09	14.7	18.8	0.42	0.01	—	32.3
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	3.88	3.88	< 0.005	< 0.005	—	3.90
Total	—	—	—	—	—	—	—	—	—	—	56.7	208	265	5.82	0.14	—	452
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	8.44	30.4	38.9	0.87	0.02	—	66.7
Strip Mall	—	—	—	—	—	—	—	—	—	—	0.26	0.94	1.21	0.03	< 0.005	—	2.07
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	0.68	2.44	3.12	0.07	< 0.005	—	5.35
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.64	0.64	< 0.005	< 0.005	—	0.65

Total	—	—	—	—	—	—	—	—	—	—	9.38	34.4	43.8	0.96	0.02	—	74.8

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	51.0	184	235	5.24	0.13	—	403
Strip Mall	—	—	—	—	—	—	—	—	—	—	1.58	5.71	7.29	0.16	< 0.005	—	12.5
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	4.09	14.7	18.8	0.42	0.01	—	32.3
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	3.88	3.88	< 0.005	< 0.005	—	3.90
Total	—	—	—	—	—	—	—	—	—	—	56.7	208	265	5.82	0.14	—	452
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	51.0	184	235	5.24	0.13	—	403
Strip Mall	—	—	—	—	—	—	—	—	—	—	1.58	5.71	7.29	0.16	< 0.005	—	12.5
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	4.09	14.7	18.8	0.42	0.01	—	32.3

Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	3.88	3.88	< 0.005	< 0.005	—	3.90
Total	—	—	—	—	—	—	—	—	—	—	56.7	208	265	5.82	0.14	—	452
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	8.44	30.4	38.9	0.87	0.02	—	66.7
Strip Mall	—	—	—	—	—	—	—	—	—	—	0.26	0.94	1.21	0.03	< 0.005	—	2.07
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	0.68	2.44	3.12	0.07	< 0.005	—	5.35
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.64	0.64	< 0.005	< 0.005	—	0.65
Total	—	—	—	—	—	—	—	—	—	—	9.38	34.4	43.8	0.96	0.02	—	74.8

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	58.3	0.00	58.3	5.83	0.00	—	204
Strip Mall	—	—	—	—	—	—	—	—	—	—	6.31	0.00	6.31	0.63	0.00	—	22.1

Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	43.6	0.00	43.6	4.36	0.00	—	153
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	108	0.00	108	10.8	0.00	—	379
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	58.3	0.00	58.3	5.83	0.00	—	204
Strip Mall	—	—	—	—	—	—	—	—	—	—	6.31	0.00	6.31	0.63	0.00	—	22.1
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	43.6	0.00	43.6	4.36	0.00	—	153
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	108	0.00	108	10.8	0.00	—	379
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	9.65	0.00	9.65	0.96	0.00	—	33.8
Strip Mall	—	—	—	—	—	—	—	—	—	—	1.05	0.00	1.05	0.10	0.00	—	3.66
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	7.23	0.00	7.23	0.72	0.00	—	25.3
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	17.9	0.00	17.9	1.79	0.00	—	62.7

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	58.3	0.00	58.3	5.83	0.00	—	204
Strip Mall	—	—	—	—	—	—	—	—	—	—	6.31	0.00	6.31	0.63	0.00	—	22.1
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	43.6	0.00	43.6	4.36	0.00	—	153
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	108	0.00	108	10.8	0.00	—	379
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	58.3	0.00	58.3	5.83	0.00	—	204
Strip Mall	—	—	—	—	—	—	—	—	—	—	6.31	0.00	6.31	0.63	0.00	—	22.1
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	43.6	0.00	43.6	4.36	0.00	—	153

Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	108	0.00	108	10.8	0.00	—	379
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	9.65	0.00	9.65	0.96	0.00	—	33.8
Strip Mall	—	—	—	—	—	—	—	—	—	—	1.05	0.00	1.05	0.10	0.00	—	3.66
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	7.23	0.00	7.23	0.72	0.00	—	25.3
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	17.9	0.00	17.9	1.79	0.00	—	62.7

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.07	0.07
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.0	11.0

Unrefrigerated Warehou Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.18	0.18
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.2	11.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.07	0.07
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.0	11.0
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.18	0.18
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.2	11.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.82	1.82
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.86	1.86

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.07	0.07
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.0	11.0
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.18	0.18
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.2	11.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.07	0.07
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.0	11.0
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.18	0.18
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.2	11.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.82	1.82

Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.86	1.86

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	4/17/2024	5/14/2024	5.00	20.0	—
Grading	Grading	5/15/2024	6/12/2024	5.00	20.0	—
Building Construction	Building Construction	6/13/2024	5/1/2025	5.00	230	—

Paving	Paving	5/2/2025	5/30/2025	5.00	20.0	—
Architectural Coating	Architectural Coating	5/31/2025	7/5/2025	5.00	25.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

Site Preparation	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	10.0	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT

Grading	—	—	—	—
Grading	Worker	15.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	31.3	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	54.8	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	21.8	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	11.0	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	10.0	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT

Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	31.3	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	54.8	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	21.8	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	11.0	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	217,206	72,402	13,301

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	20.0	0.00	—
Grading	—	5,000	40.0	0.00	—
Paving	0.00	0.00	0.00	0.00	4.80

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Unrefrigerated Warehouse-No Rail	0.00	0%
Strip Mall	0.00	0%
Fast Food Restaurant with Drive Thru	0.00	0%
Parking Lot	4.80	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	532	0.03	< 0.005
2025	0.00	532	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	1,696	1,696	1,696	619,040	13,089	13,089	13,089	4,777,449

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	1,696	1,696	1,696	619,040	13,089	13,089	13,089	4,777,449

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	199,865	66,622	12,545

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-No Rail	529,519	532	0.0330	0.0040	2,196,632
Strip Mall	108,894	532	0.0330	0.0040	66,086
Fast Food Restaurant with Drive Thru	246,858	532	0.0330	0.0040	801,834
Parking Lot	183,161	532	0.0330	0.0040	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-No Rail	529,519	532	0.0330	0.0040	2,196,632
Strip Mall	108,894	532	0.0330	0.0040	66,086
Fast Food Restaurant with Drive Thru	246,858	532	0.0330	0.0040	801,834
Parking Lot	183,161	532	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	26,606,238	0.00
Strip Mall	826,575	0.00
Fast Food Restaurant with Drive Thru	2,133,842	0.00
Parking Lot	0.00	827,789

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	26,606,238	0.00
Strip Mall	826,575	0.00
Fast Food Restaurant with Drive Thru	2,133,842	0.00
Parking Lot	0.00	827,789

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	108	—
Strip Mall	11.7	—
Fast Food Restaurant with Drive Thru	81.0	—
Parking Lot	0.00	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	108	—

Strip Mall	11.7	—
Fast Food Restaurant with Drive Thru	81.0	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Fast Food Restaurant with Drive Thru	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Fast Food Restaurant with Drive Thru	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Fast Food Restaurant with Drive Thru	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Unrefrigerated Warehouse-No Rail	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Fast Food Restaurant with Drive Thru	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Fast Food Restaurant with Drive Thru	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Fast Food Restaurant with Drive Thru	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Unrefrigerated Warehouse-No Rail	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	20.5	annual days of extreme heat
Extreme Precipitation	0.90	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.90	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A

Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	88.7
AQ-PM	6.42
AQ-DPM	23.3
Drinking Water	45.4
Lead Risk Housing	3.36
Pesticides	0.00
Toxic Releases	2.28
Traffic	54.3
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	2.11
Haz Waste Facilities/Generators	7.35
Impaired Water Bodies	0.00
Solid Waste	52.9
Sensitive Population	—
Asthma	43.8
Cardio-vascular	62.4
Low Birth Weights	3.57
Socioeconomic Factor Indicators	—
Education	51.0
Housing	37.5
Linguistic	61.5
Poverty	50.0

Unemployment	37.7

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	59.36096497
Employed	95.85525472
Median HI	46.91389709
Education	—
Bachelor's or higher	61.85037854
High school enrollment	100
Preschool enrollment	32.38804055
Transportation	—
Auto Access	53.75336841
Active commuting	19.15821891
Social	—
2-parent households	45.32272552
Voting	33.11946619
Neighborhood	—
Alcohol availability	73.47619659
Park access	29.10304119
Retail density	42.35852688
Supermarket access	61.22160914
Tree canopy	1.360195047
Housing	—
Homeownership	67.59912742

Housing habitability	42.70499166
Low-inc homeowner severe housing cost burden	8.879763891
Low-inc renter severe housing cost burden	54.20248941
Uncrowded housing	81.14974978
Health Outcomes	—
Insured adults	36.50712178
Arthritis	0.0
Asthma ER Admissions	53.3
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	32.9
Cognitively Disabled	74.6
Physically Disabled	38.4
Heart Attack ER Admissions	34.7
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	19.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0

No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	89.4
Elderly	50.2
English Speaking	74.2
Foreign-born	36.8
Outdoor Workers	62.3
Climate Change Adaptive Capacity	—
Impervious Surface Cover	54.4
Traffic Density	19.9
Traffic Access	23.0
Other Indices	—
Hardship	25.0
Other Decision Support	—
2016 Voting	55.9

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	18.0
Healthy Places Index Score for Project Location (b)	56.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Per site plan
Construction: Construction Phases	No demolition required
Operations: Vehicle Data	Approx. 3,743 trips per day per IEG traffic assessment. All trips applied to fast-food for simplicity.
Construction: Off-Road Equipment	Adjusted per construction timeline
Operations: Refrigerants	A/C added for self-storage unit

Date Palm Mixed Use - Alt 2 Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Date Palm Mixed Use - Alt 2
Construction Start Date	4/1/2024
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.30
Precipitation (days)	10.0
Location	33.827226852362244, -116.45770401427775
County	Riverside-Salton Sea
City	Cathedral City
Air District	South Coast AQMD
Air Basin	Salton Sea
TAZ	5673
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.21

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Unrefrigerated Warehouse-No Rail	115	1000sqft	2.64	115,054	0.00	—	—	—
Regional Shopping Center	54.7	1000sqft	1.26	54,725	0.00	—	—	—
Parking Lot	4.80	Acre	4.80	0.00	44,112	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-10-A	Water Exposed Surfaces
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	56.4	23.2	21.7	0.04	1.03	13.2	14.3	0.95	6.77	7.71	—	5,357	5,357	0.15	0.37	6.16	5,477
Mit.	56.4	23.2	21.7	0.04	1.03	5.24	6.27	0.95	2.66	3.61	—	5,357	5,357	0.15	0.37	6.16	5,477
% Reduced	—	—	—	—	—	60%	56%	—	61%	53%	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.50	12.7	17.4	0.03	0.51	1.10	1.61	0.47	0.27	0.74	—	4,144	4,144	0.15	0.18	0.16	4,200
Mit.	1.50	12.7	17.4	0.03	0.51	1.10	1.61	0.47	0.27	0.74	—	4,144	4,144	0.15	0.18	0.16	4,200

% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.28	7.41	9.56	0.02	0.31	1.59	1.89	0.28	0.67	0.96	—	2,144	2,144	0.07	0.09	1.19	2,174
Mit.	4.28	7.41	9.56	0.02	0.31	0.91	1.22	0.28	0.33	0.62	—	2,144	2,144	0.07	0.09	1.19	2,174
% Reduced	—	—	—	—	—	43%	36%	—	50%	36%	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.78	1.35	1.75	< 0.005	0.06	0.29	0.35	0.05	0.12	0.17	—	355	355	0.01	0.02	0.20	360
Mit.	0.78	1.35	1.75	< 0.005	0.06	0.17	0.22	0.05	0.06	0.11	—	355	355	0.01	0.02	0.20	360
% Reduced	—	—	—	—	—	43%	36%	—	50%	36%	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.41	23.2	21.7	0.04	1.03	13.2	14.3	0.95	6.77	7.71	—	5,357	5,357	0.15	0.37	6.16	5,477
2025	56.4	11.7	19.7	0.03	0.44	1.10	1.54	0.41	0.27	0.68	—	4,256	4,256	0.15	0.17	5.81	4,316
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.50	12.7	17.4	0.03	0.51	1.10	1.61	0.47	0.27	0.74	—	4,144	4,144	0.15	0.18	0.16	4,200
2025	1.42	11.8	17.0	0.03	0.44	1.10	1.54	0.41	0.27	0.68	—	4,111	4,111	0.15	0.17	0.15	4,166
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2024	0.86	7.41	9.56	0.02	0.31	1.59	1.89	0.28	0.67	0.96	—	2,144	2,144	0.07	0.09	1.19	2,174
2025	4.28	3.26	4.99	0.01	0.13	0.28	0.41	0.12	0.07	0.18	—	1,102	1,102	0.04	0.04	0.63	1,116
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.16	1.35	1.75	< 0.005	0.06	0.29	0.35	0.05	0.12	0.17	—	355	355	0.01	0.02	0.20	360
2025	0.78	0.60	0.91	< 0.005	0.02	0.05	0.07	0.02	0.01	0.03	—	182	182	0.01	0.01	0.10	185

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.41	23.2	21.7	0.04	1.03	5.24	6.27	0.95	2.66	3.61	—	5,357	5,357	0.15	0.37	6.16	5,477
2025	56.4	11.7	19.7	0.03	0.44	1.10	1.54	0.41	0.27	0.68	—	4,256	4,256	0.15	0.17	5.81	4,316
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.50	12.7	17.4	0.03	0.51	1.10	1.61	0.47	0.27	0.74	—	4,144	4,144	0.15	0.18	0.16	4,200
2025	1.42	11.8	17.0	0.03	0.44	1.10	1.54	0.41	0.27	0.68	—	4,111	4,111	0.15	0.17	0.15	4,166
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.86	7.41	9.56	0.02	0.31	0.91	1.22	0.28	0.33	0.62	—	2,144	2,144	0.07	0.09	1.19	2,174
2025	4.28	3.26	4.99	0.01	0.13	0.28	0.41	0.12	0.07	0.18	—	1,102	1,102	0.04	0.04	0.63	1,116
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.16	1.35	1.75	< 0.005	0.06	0.17	0.22	0.05	0.06	0.11	—	355	355	0.01	0.02	0.20	360
2025	0.78	0.60	0.91	< 0.005	0.02	0.05	0.07	0.02	0.01	0.03	—	182	182	0.01	0.01	0.10	185

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	19.3	12.3	120	0.25	0.24	19.3	19.6	0.23	4.90	5.13	148	27,627	27,775	16.2	1.33	82.8	28,657
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	15.1	13.2	79.2	0.22	0.23	19.3	19.5	0.22	4.90	5.12	148	24,852	25,000	16.2	1.36	2.58	25,814
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	16.5	12.7	91.9	0.23	0.23	19.2	19.4	0.22	4.87	5.09	148	25,946	26,094	16.2	1.33	36.0	26,931
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.02	2.32	16.8	0.04	0.04	3.50	3.55	0.04	0.89	0.93	24.5	4,296	4,320	2.68	0.22	5.96	4,459

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	14.0	11.6	112	0.24	0.18	19.3	19.5	0.16	4.90	5.06	—	24,756	24,756	1.03	1.17	82.3	25,212
Area	5.31	0.06	7.38	< 0.005	0.01	—	0.01	0.01	—	0.01	—	30.4	30.4	< 0.005	< 0.005	—	30.5
Energy	0.04	0.68	0.57	< 0.005	0.05	—	0.05	0.05	—	0.05	—	2,625	2,625	0.18	0.02	—	2,634
Water	—	—	—	—	—	—	—	—	—	—	58.8	216	274	6.04	0.14	—	468
Waste	—	—	—	—	—	—	—	—	—	—	89.3	0.00	89.3	8.92	0.00	—	312
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.44	0.44
Total	19.3	12.3	120	0.25	0.24	19.3	19.6	0.23	4.90	5.13	148	27,627	27,775	16.2	1.33	82.8	28,657

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	11.0	12.5	78.6	0.21	0.18	19.3	19.5	0.16	4.90	5.06	—	22,011	22,011	1.10	1.20	2.13	22,399
Area	4.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.04	0.68	0.57	< 0.005	0.05	—	0.05	0.05	—	0.05	—	2,625	2,625	0.18	0.02	—	2,634
Water	—	—	—	—	—	—	—	—	—	—	58.8	216	274	6.04	0.14	—	468
Waste	—	—	—	—	—	—	—	—	—	—	89.3	0.00	89.3	8.92	0.00	—	312
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.44	0.44
Total	15.1	13.2	79.2	0.22	0.23	19.3	19.5	0.22	4.90	5.12	148	24,852	25,000	16.2	1.36	2.58	25,814
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	11.8	12.0	87.7	0.23	0.18	19.2	19.4	0.16	4.87	5.03	—	23,090	23,090	1.05	1.17	35.5	23,501
Area	4.69	0.03	3.64	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	15.0	15.0	< 0.005	< 0.005	—	15.0
Energy	0.04	0.68	0.57	< 0.005	0.05	—	0.05	0.05	—	0.05	—	2,625	2,625	0.18	0.02	—	2,634
Water	—	—	—	—	—	—	—	—	—	—	58.8	216	274	6.04	0.14	—	468
Waste	—	—	—	—	—	—	—	—	—	—	89.3	0.00	89.3	8.92	0.00	—	312
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.44	0.44
Total	16.5	12.7	91.9	0.23	0.23	19.2	19.4	0.22	4.87	5.09	148	25,946	26,094	16.2	1.33	36.0	26,931
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.16	2.19	16.0	0.04	0.03	3.50	3.54	0.03	0.89	0.92	—	3,823	3,823	0.17	0.19	5.89	3,891
Area	0.86	0.01	0.66	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.48	2.48	< 0.005	< 0.005	—	2.49
Energy	0.01	0.12	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	435	435	0.03	< 0.005	—	436
Water	—	—	—	—	—	—	—	—	—	—	9.73	35.7	45.4	1.00	0.02	—	77.6
Waste	—	—	—	—	—	—	—	—	—	—	14.8	0.00	14.8	1.48	0.00	—	51.7
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.07	0.07
Total	3.02	2.32	16.8	0.04	0.04	3.50	3.55	0.04	0.89	0.93	24.5	4,296	4,320	2.68	0.22	5.96	4,459

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	14.0	11.6	112	0.24	0.18	19.3	19.5	0.16	4.90	5.06	—	24,756	24,756	1.03	1.17	82.3	25,212
Area	5.31	0.06	7.38	< 0.005	0.01	—	0.01	0.01	—	0.01	—	30.4	30.4	< 0.005	< 0.005	—	30.5
Energy	0.04	0.68	0.57	< 0.005	0.05	—	0.05	0.05	—	0.05	—	2,625	2,625	0.18	0.02	—	2,634
Water	—	—	—	—	—	—	—	—	—	—	58.8	216	274	6.04	0.14	—	468
Waste	—	—	—	—	—	—	—	—	—	—	89.3	0.00	89.3	8.92	0.00	—	312
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.44	0.44
Total	19.3	12.3	120	0.25	0.24	19.3	19.6	0.23	4.90	5.13	148	27,627	27,775	16.2	1.33	82.8	28,657
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	11.0	12.5	78.6	0.21	0.18	19.3	19.5	0.16	4.90	5.06	—	22,011	22,011	1.10	1.20	2.13	22,399
Area	4.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.04	0.68	0.57	< 0.005	0.05	—	0.05	0.05	—	0.05	—	2,625	2,625	0.18	0.02	—	2,634
Water	—	—	—	—	—	—	—	—	—	—	58.8	216	274	6.04	0.14	—	468
Waste	—	—	—	—	—	—	—	—	—	—	89.3	0.00	89.3	8.92	0.00	—	312
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.44	0.44
Total	15.1	13.2	79.2	0.22	0.23	19.3	19.5	0.22	4.90	5.12	148	24,852	25,000	16.2	1.36	2.58	25,814
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	11.8	12.0	87.7	0.23	0.18	19.2	19.4	0.16	4.87	5.03	—	23,090	23,090	1.05	1.17	35.5	23,501
Area	4.69	0.03	3.64	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	15.0	15.0	< 0.005	< 0.005	—	15.0
Energy	0.04	0.68	0.57	< 0.005	0.05	—	0.05	0.05	—	0.05	—	2,625	2,625	0.18	0.02	—	2,634
Water	—	—	—	—	—	—	—	—	—	—	58.8	216	274	6.04	0.14	—	468

Waste	—	—	—	—	—	—	—	—	—	—	89.3	0.00	89.3	8.92	0.00	—	312
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.44	0.44
Total	16.5	12.7	91.9	0.23	0.23	19.2	19.4	0.22	4.87	5.09	148	25,946	26,094	16.2	1.33	36.0	26,931
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.16	2.19	16.0	0.04	0.03	3.50	3.54	0.03	0.89	0.92	—	3,823	3,823	0.17	0.19	5.89	3,891
Area	0.86	0.01	0.66	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.48	2.48	< 0.005	< 0.005	—	2.49
Energy	0.01	0.12	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	435	435	0.03	< 0.005	—	436
Water	—	—	—	—	—	—	—	—	—	—	9.73	35.7	45.4	1.00	0.02	—	77.6
Waste	—	—	—	—	—	—	—	—	—	—	14.8	0.00	14.8	1.48	0.00	—	51.7
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.07	0.07
Total	3.02	2.32	16.8	0.04	0.04	3.50	3.55	0.04	0.89	0.93	24.5	4,296	4,320	2.68	0.22	5.96	4,459

3. Construction Emissions Details

3.1. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.35	23.2	20.7	0.03	1.03	—	1.03	0.95	—	0.95	—	3,337	3,337	0.14	0.03	—	3,348
Dust From Material Movement	—	—	—	—	—	13.1	13.1	—	6.73	6.73	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	1.27	1.13	< 0.005	0.06	—	0.06	0.05	—	0.05	—	183	183	0.01	< 0.005	—	183
Dust From Material Movement	—	—	—	—	—	0.72	0.72	—	0.37	0.37	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.23	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	30.3	30.3	< 0.005	< 0.005	—	30.4
Dust From Material Movement	—	—	—	—	—	0.13	0.13	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	1.03	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	152	152	0.01	< 0.005	0.57	154
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.56	7.56	< 0.005	< 0.005	0.01	7.67
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.25	1.25	< 0.005	< 0.005	< 0.005	1.27
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.2. Site Preparation (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.35	23.2	20.7	0.03	1.03	—	1.03	0.95	—	0.95	—	3,337	3,337	0.14	0.03	—	3,348
Dust From Material Movement	—	—	—	—	—	5.11	5.11	—	2.63	2.63	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	1.27	1.13	< 0.005	0.06	—	0.06	0.05	—	0.05	—	183	183	0.01	< 0.005	—	183

Dust From Material Movement	—	—	—	—	—	0.28	0.28	—	0.14	0.14	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.23	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	30.3	30.3	< 0.005	< 0.005	—	30.4
Dust From Material Movement	—	—	—	—	—	0.05	0.05	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	1.03	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	152	152	0.01	< 0.005	0.57	154
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.56	7.56	< 0.005	< 0.005	0.01	7.67
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.25	1.25	< 0.005	< 0.005	< 0.005	1.27
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.90	18.2	18.8	0.03	0.84	—	0.84	0.77	—	0.77	—	2,958	2,958	0.12	0.02	—	2,969
Dust From Material Movement	—	—	—	—	—	7.10	7.10	—	3.43	3.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	1.00	1.03	< 0.005	0.05	—	0.05	0.04	—	0.04	—	162	162	0.01	< 0.005	—	163
Dust From Material Movement	—	—	—	—	—	0.39	0.39	—	0.19	0.19	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.18	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	—	26.8	26.8	< 0.005	< 0.005	—	26.9

Dust From Material Movement	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.09	1.55	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	228	228	0.01	0.01	0.85	231
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.04	2.45	0.55	0.01	0.04	0.57	0.61	0.04	0.14	0.19	—	2,170	2,170	0.02	0.34	4.63	2,277
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.3	11.3	< 0.005	< 0.005	0.02	11.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.14	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	119	119	< 0.005	0.02	0.11	125
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.88	1.88	< 0.005	< 0.005	< 0.005	1.90
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	19.7	19.7	< 0.005	< 0.005	0.02	20.6

3.4. Grading (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.90	18.2	18.8	0.03	0.84	—	0.84	0.77	—	0.77	—	2,958	2,958	0.12	0.02	—	2,969
Dust From Material Movement	—	—	—	—	—	2.77	2.77	—	1.34	1.34	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	1.00	1.03	< 0.005	0.05	—	0.05	0.04	—	0.04	—	162	162	0.01	< 0.005	—	163
Dust From Material Movement	—	—	—	—	—	0.15	0.15	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.18	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	—	26.8	26.8	< 0.005	< 0.005	—	26.9
Dust From Material Movement	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.09	1.55	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	228	228	0.01	0.01	0.85	231
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.04	2.45	0.55	0.01	0.04	0.57	0.61	0.04	0.14	0.19	—	2,170	2,170	0.02	0.34	4.63	2,277
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.3	11.3	< 0.005	< 0.005	0.02	11.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.14	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	119	119	< 0.005	0.02	0.11	125
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.88	1.88	< 0.005	< 0.005	< 0.005	1.90
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	19.7	19.7	< 0.005	< 0.005	0.02	20.6

3.5. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	4.44	5.18	0.01	0.20	—	0.20	0.18	—	0.18	—	948	948	0.04	0.01	—	951
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.81	0.95	< 0.005	0.04	—	0.04	0.03	—	0.03	—	157	157	0.01	< 0.005	—	157
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.37	0.37	6.80	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	999	999	0.04	0.03	3.72	1,014
Vendor	0.03	0.98	0.44	0.01	0.01	0.24	0.25	0.01	0.07	0.08	—	896	896	0.01	0.12	2.43	935
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.27	0.40	3.88	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	850	850	0.04	0.03	0.10	861
Vendor	0.03	1.05	0.45	0.01	0.01	0.24	0.25	0.01	0.07	0.08	—	896	896	0.01	0.12	0.06	934
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.13	0.15	1.91	0.00	0.00	0.34	0.34	0.00	0.08	0.08	—	359	359	0.02	0.01	0.64	364
Vendor	0.01	0.41	0.18	< 0.005	< 0.005	0.09	0.10	< 0.005	0.03	0.03	—	354	354	< 0.005	0.05	0.41	369
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.03	0.35	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	59.5	59.5	< 0.005	< 0.005	0.11	60.3
Vendor	< 0.005	0.07	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	58.6	58.6	< 0.005	0.01	0.07	61.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.6. Building Construction (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	4.44	5.18	0.01	0.20	—	0.20	0.18	—	0.18	—	948	948	0.04	0.01	—	951

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.81	0.95	< 0.005	0.04	—	0.04	0.03	—	0.03	—	157	157	0.01	< 0.005	—	157
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.37	0.37	6.80	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	999	999	0.04	0.03	3.72	1,014
Vendor	0.03	0.98	0.44	0.01	0.01	0.24	0.25	0.01	0.07	0.08	—	896	896	0.01	0.12	2.43	935
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.27	0.40	3.88	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	850	850	0.04	0.03	0.10	861
Vendor	0.03	1.05	0.45	0.01	0.01	0.24	0.25	0.01	0.07	0.08	—	896	896	0.01	0.12	0.06	934
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.15	1.91	0.00	0.00	0.34	0.34	0.00	0.08	0.08	—	359	359	0.02	0.01	0.64	364
Vendor	0.01	0.41	0.18	< 0.005	< 0.005	0.09	0.10	< 0.005	0.03	0.03	—	354	354	< 0.005	0.05	0.41	369
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.03	0.35	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	59.5	59.5	< 0.005	< 0.005	0.11	60.3
Vendor	< 0.005	0.07	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	58.6	58.6	< 0.005	0.01	0.07	61.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.27	2.47	3.09	0.01	0.10	—	0.10	0.09	—	0.09	—	568	568	0.02	< 0.005	—	570
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.45	0.56	< 0.005	0.02	—	0.02	0.02	—	0.02	—	94.0	94.0	< 0.005	< 0.005	—	94.3
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.35	0.34	6.28	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	978	978	0.04	0.03	3.38	992
Vendor	0.03	0.93	0.41	0.01	0.01	0.24	0.25	0.01	0.07	0.08	—	881	881	0.01	0.12	2.42	919
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.26	0.37	3.57	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	832	832	0.04	0.03	0.09	843
Vendor	0.03	1.00	0.42	0.01	0.01	0.24	0.25	0.01	0.07	0.08	—	882	882	0.01	0.12	0.06	917
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.08	1.06	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	211	211	0.01	0.01	0.35	213
Vendor	0.01	0.23	0.10	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	209	209	< 0.005	0.03	0.25	217
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.19	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	34.9	34.9	< 0.005	< 0.005	0.06	35.3
Vendor	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	34.5	34.5	< 0.005	< 0.005	0.04	36.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.27	2.47	3.09	0.01	0.10	—	0.10	0.09	—	0.09	—	568	568	0.02	< 0.005	—	570
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.45	0.56	< 0.005	0.02	—	0.02	0.02	—	0.02	—	94.0	94.0	< 0.005	< 0.005	—	94.3
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.35	0.34	6.28	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	978	978	0.04	0.03	3.38	992
Vendor	0.03	0.93	0.41	0.01	0.01	0.24	0.25	0.01	0.07	0.08	—	881	881	0.01	0.12	2.42	919
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.26	0.37	3.57	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	832	832	0.04	0.03	0.09	843

Vendor	0.03	1.00	0.42	0.01	0.01	0.24	0.25	0.01	0.07	0.08	—	882	882	0.01	0.12	0.06	917
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.08	1.06	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	211	211	0.01	0.01	0.35	213
Vendor	0.01	0.23	0.10	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	209	209	< 0.005	0.03	0.25	217
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.19	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	34.9	34.9	< 0.005	< 0.005	0.06	35.3
Vendor	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	34.5	34.5	< 0.005	< 0.005	0.04	36.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	0.63	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.04	0.41	0.55	< 0.005	0.02	—	0.02	0.02	—	0.02	—	82.8	82.8	< 0.005	< 0.005	—	83.1
Paving	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.7	13.7	< 0.005	< 0.005	—	13.8
Paving	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	1.43	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	223	223	0.01	0.01	0.77	226
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.1	11.1	< 0.005	< 0.005	0.02	11.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.84	1.84	< 0.005	< 0.005	< 0.005	1.86
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Paving (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	0.63	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.41	0.55	< 0.005	0.02	—	0.02	0.02	—	0.02	—	82.8	82.8	< 0.005	< 0.005	—	83.1
Paving	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.7	13.7	< 0.005	< 0.005	—	13.8
Paving	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.08	0.08	1.43	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	223	223	0.01	0.01	0.77	226
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.1	11.1	< 0.005	< 0.005	0.02	11.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.84	1.84	< 0.005	< 0.005	< 0.005	1.86
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	56.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.06	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.15	9.15	< 0.005	< 0.005	—	9.18
Architectural Coatings	3.85	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.51	1.51	< 0.005	< 0.005	—	1.52
Architectural Coatings	0.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	1.26	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	196	196	0.01	0.01	0.68	198
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.2	12.2	< 0.005	< 0.005	0.02	12.3

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.02	2.02	< 0.005	< 0.005	< 0.005	2.04
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Architectural Coating (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	56.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.06	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.15	9.15	< 0.005	< 0.005	—	9.18
Architectural Coatings	3.85	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.51	1.51	< 0.005	< 0.005	—	1.52
Architectural Coatings	0.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	1.26	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	196	196	0.01	0.01	0.68	198
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.2	12.2	< 0.005	< 0.005	0.02	12.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.02	2.02	< 0.005	< 0.005	< 0.005	2.04
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Mobile source emissions results are presented in Sections 2.6. No further detailed breakdown of emissions is available.

4.1.2. Mitigated

Mobile source emissions results are presented in Sections 2.5. No further detailed breakdown of emissions is available.

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	772	772	0.05	0.01	—	775
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	778	778	0.05	0.01	—	781
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	267	267	0.02	< 0.005	—	268
Total	—	—	—	—	—	—	—	—	—	—	—	1,817	1,817	0.11	0.01	—	1,824
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrigerated Warehou Rail	—	—	—	—	—	—	—	—	—	—	—	772	772	0.05	0.01	—	775
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	778	778	0.05	0.01	—	781
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	267	267	0.02	< 0.005	—	268
Total	—	—	—	—	—	—	—	—	—	—	—	1,817	1,817	0.11	0.01	—	1,824
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	128	128	0.01	< 0.005	—	128
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	129	129	0.01	< 0.005	—	129
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	44.2	44.2	< 0.005	< 0.005	—	44.4
Total	—	—	—	—	—	—	—	—	—	—	—	301	301	0.02	< 0.005	—	302

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	772	772	0.05	0.01	—	775

Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	778	778	0.05	0.01	—	781
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	267	267	0.02	< 0.005	—	268
Total	—	—	—	—	—	—	—	—	—	—	—	1,817	1,817	0.11	0.01	—	1,824
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	772	772	0.05	0.01	—	775
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	778	778	0.05	0.01	—	781
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	267	267	0.02	< 0.005	—	268
Total	—	—	—	—	—	—	—	—	—	—	—	1,817	1,817	0.11	0.01	—	1,824
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	128	128	0.01	< 0.005	—	128
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	129	129	0.01	< 0.005	—	129
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	44.2	44.2	< 0.005	< 0.005	—	44.4
Total	—	—	—	—	—	—	—	—	—	—	—	301	301	0.02	< 0.005	—	302

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.03	0.59	0.50	< 0.005	0.04	—	0.04	0.04	—	0.04	—	704	704	0.06	< 0.005	—	706
Regional Shopping Center	< 0.005	0.09	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	104	104	0.01	< 0.005	—	104
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.04	0.68	0.57	< 0.005	0.05	—	0.05	0.05	—	0.05	—	808	808	0.07	< 0.005	—	810
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.03	0.59	0.50	< 0.005	0.04	—	0.04	0.04	—	0.04	—	704	704	0.06	< 0.005	—	706
Regional Shopping Center	< 0.005	0.09	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	104	104	0.01	< 0.005	—	104
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.04	0.68	0.57	< 0.005	0.05	—	0.05	0.05	—	0.05	—	808	808	0.07	< 0.005	—	810
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.01	0.11	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	—	117	117	0.01	< 0.005	—	117

Regional Shopping Center	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	17.2	17.2	< 0.005	< 0.005	—	17.2
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	0.12	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.03	0.59	0.50	< 0.005	0.04	—	0.04	0.04	—	0.04	—	704	704	0.06	< 0.005	—	706
Regional Shopping Center	< 0.005	0.09	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	104	104	0.01	< 0.005	—	104
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.04	0.68	0.57	< 0.005	0.05	—	0.05	0.05	—	0.05	—	808	808	0.07	< 0.005	—	810
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.03	0.59	0.50	< 0.005	0.04	—	0.04	0.04	—	0.04	—	704	704	0.06	< 0.005	—	706
Regional Shopping Center	< 0.005	0.09	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	104	104	0.01	< 0.005	—	104

Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.04	0.68	0.57	< 0.005	0.05	—	0.05	0.05	—	0.05	—	808	808	0.07	< 0.005	—	810
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.01	0.11	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	—	117	117	0.01	< 0.005	—	117
Regional Shopping Center	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	17.2	17.2	< 0.005	< 0.005	—	17.2
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	0.12	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	3.65	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1.21	0.06	7.38	< 0.005	0.01	—	0.01	0.01	—	0.01	—	30.4	30.4	< 0.005	< 0.005	—	30.5

Total	5.31	0.06	7.38	< 0.005	0.01	—	0.01	0.01	—	0.01	—	30.4	30.4	< 0.005	< 0.005	—	30.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	3.65	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	4.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.67	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.11	0.01	0.66	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.48	2.48	< 0.005	< 0.005	—	2.49
Total	0.86	0.01	0.66	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.48	2.48	< 0.005	< 0.005	—	2.49

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	3.65	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural	0.45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1.21	0.06	7.38	< 0.005	0.01	—	0.01	0.01	—	0.01	—	30.4	30.4	< 0.005	< 0.005	—	30.5
Total	5.31	0.06	7.38	< 0.005	0.01	—	0.01	0.01	—	0.01	—	30.4	30.4	< 0.005	< 0.005	—	30.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	3.65	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	4.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.67	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.11	0.01	0.66	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.48	2.48	< 0.005	< 0.005	—	2.49
Total	0.86	0.01	0.66	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.48	2.48	< 0.005	< 0.005	—	2.49

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	51.0	184	235	5.24	0.13	—	403
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	7.77	28.0	35.8	0.80	0.02	—	61.4
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	3.88	3.88	< 0.005	< 0.005	—	3.90
Total	—	—	—	—	—	—	—	—	—	—	58.8	216	274	6.04	0.14	—	468
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	51.0	184	235	5.24	0.13	—	403
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	7.77	28.0	35.8	0.80	0.02	—	61.4
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	3.88	3.88	< 0.005	< 0.005	—	3.90
Total	—	—	—	—	—	—	—	—	—	—	58.8	216	274	6.04	0.14	—	468
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	8.44	30.4	38.9	0.87	0.02	—	66.7

Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	1.29	4.63	5.92	0.13	< 0.005	—	10.2
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.64	0.64	< 0.005	< 0.005	—	0.65
Total	—	—	—	—	—	—	—	—	—	—	9.73	35.7	45.4	1.00	0.02	—	77.6

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	51.0	184	235	5.24	0.13	—	403
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	7.77	28.0	35.8	0.80	0.02	—	61.4
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	3.88	3.88	< 0.005	< 0.005	—	3.90
Total	—	—	—	—	—	—	—	—	—	—	58.8	216	274	6.04	0.14	—	468
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	51.0	184	235	5.24	0.13	—	403
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	7.77	28.0	35.8	0.80	0.02	—	61.4

Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	3.88	3.88	< 0.005	< 0.005	—	3.90
Total	—	—	—	—	—	—	—	—	—	—	58.8	216	274	6.04	0.14	—	468
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	8.44	30.4	38.9	0.87	0.02	—	66.7
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	1.29	4.63	5.92	0.13	< 0.005	—	10.2
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.64	0.64	< 0.005	< 0.005	—	0.65
Total	—	—	—	—	—	—	—	—	—	—	9.73	35.7	45.4	1.00	0.02	—	77.6

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	58.3	0.00	58.3	5.83	0.00	—	204
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	31.0	0.00	31.0	3.10	0.00	—	108
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	89.3	0.00	89.3	8.92	0.00	—	312
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	58.3	0.00	58.3	5.83	0.00	—	204
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	31.0	0.00	31.0	3.10	0.00	—	108
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	89.3	0.00	89.3	8.92	0.00	—	312
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	9.65	0.00	9.65	0.96	0.00	—	33.8
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	5.13	0.00	5.13	0.51	0.00	—	17.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	14.8	0.00	14.8	1.48	0.00	—	51.7

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefriger Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	58.3	0.00	58.3	5.83	0.00	—	204
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	31.0	0.00	31.0	3.10	0.00	—	108
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	89.3	0.00	89.3	8.92	0.00	—	312
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	58.3	0.00	58.3	5.83	0.00	—	204
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	31.0	0.00	31.0	3.10	0.00	—	108
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	89.3	0.00	89.3	8.92	0.00	—	312
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	9.65	0.00	9.65	0.96	0.00	—	33.8
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	5.13	0.00	5.13	0.51	0.00	—	17.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	14.8	0.00	14.8	1.48	0.00	—	51.7

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.26	0.26
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.18	0.18
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.44	0.44
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.26	0.26
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.18	0.18
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.44	0.44
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.04	0.04

Unrefrigerated	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.07	0.07

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.26	0.26
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.18	0.18
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.44	0.44
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.26	0.26
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.18	0.18
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.44	0.44
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.04	0.04
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.07	0.07

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetatio	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	4/17/2024	5/14/2024	5.00	20.0	—
Grading	Grading	5/15/2024	6/12/2024	5.00	20.0	—
Building Construction	Building Construction	6/13/2024	5/1/2025	5.00	230	—
Paving	Paving	5/2/2025	5/30/2025	5.00	20.0	—
Architectural Coating	Architectural Coating	5/31/2025	7/5/2025	5.00	25.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74

Building Construction	Tractors/Loaders/Backh	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	10.0	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	31.3	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	65.8	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	27.8	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	13.2	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT

Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	10.0	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	31.3	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	65.8	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	27.8	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	13.2	18.5	LDA,LDT1,LDT2

Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	217,206	72,402	13,301

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	20.0	0.00	—
Grading	—	5,000	40.0	0.00	—
Paving	0.00	0.00	0.00	0.00	4.80

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Unrefrigerated Warehouse-No Rail	0.00	0%

Regional Shopping Center	0.00	0%
Parking Lot	4.80	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	532	0.03	< 0.005
2025	0.00	532	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	3,542	3,542	3,542	1,292,830	27,335	27,335	27,335	9,977,421

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	254,669	84,890	12,545

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-No Rail	529,519	532	0.0330	0.0040	2,196,632
Regional Shopping Center	534,028	532	0.0330	0.0040	324,091
Parking Lot	183,161	532	0.0330	0.0040	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)

Unrefrigerated Warehouse-No Rail	529,519	532	0.0330	0.0040	2,196,632
Regional Shopping Center	534,028	532	0.0330	0.0040	324,091
Parking Lot	183,161	532	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	26,606,238	0.00
Regional Shopping Center	4,053,619	0.00
Parking Lot	0.00	827,789

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	26,606,238	0.00
Regional Shopping Center	4,053,619	0.00
Parking Lot	0.00	827,789

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	108	—
Regional Shopping Center	57.5	—
Parking Lot	0.00	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	108	—
Regional Shopping Center	57.5	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Regional Shopping Center	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Regional Shopping Center	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Unrefrigerated Warehouse-No Rail	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Regional Shopping Center	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Regional Shopping Center	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Unrefrigerated Warehouse-No Rail	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	20.5	annual days of extreme heat

Extreme Precipitation	0.90	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.90	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	88.7
AQ-PM	6.42
AQ-DPM	23.3
Drinking Water	45.4
Lead Risk Housing	3.36
Pesticides	0.00

Toxic Releases	2.28
Traffic	54.3
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	2.11
Haz Waste Facilities/Generators	7.35
Impaired Water Bodies	0.00
Solid Waste	52.9
Sensitive Population	—
Asthma	43.8
Cardio-vascular	62.4
Low Birth Weights	3.57
Socioeconomic Factor Indicators	—
Education	51.0
Housing	37.5
Linguistic	61.5
Poverty	50.0
Unemployment	37.7

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	59.36096497
Employed	95.85525472
Median HI	46.91389709
Education	—

Bachelor's or higher	61.85037854
High school enrollment	100
Preschool enrollment	32.38804055
Transportation	—
Auto Access	53.75336841
Active commuting	19.15821891
Social	—
2-parent households	45.32272552
Voting	33.11946619
Neighborhood	—
Alcohol availability	73.47619659
Park access	29.10304119
Retail density	42.35852688
Supermarket access	61.22160914
Tree canopy	1.360195047
Housing	—
Homeownership	67.59912742
Housing habitability	42.70499166
Low-inc homeowner severe housing cost burden	8.879763891
Low-inc renter severe housing cost burden	54.20248941
Uncrowded housing	81.14974978
Health Outcomes	—
Insured adults	36.50712178
Arthritis	0.0
Asthma ER Admissions	53.3
High Blood Pressure	0.0
Cancer (excluding skin)	0.0

Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	32.9
Cognitively Disabled	74.6
Physically Disabled	38.4
Heart Attack ER Admissions	34.7
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	19.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	89.4
Elderly	50.2
English Speaking	74.2
Foreign-born	36.8
Outdoor Workers	62.3
Climate Change Adaptive Capacity	—

Impervious Surface Cover	54.4
Traffic Density	19.9
Traffic Access	23.0
Other Indices	—
Hardship	25.0
Other Decision Support	—
2016 Voting	55.9

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	18.0
Healthy Places Index Score for Project Location (b)	56.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification

Land Use	Per site plan
Construction: Construction Phases	No demolition required
Operations: Vehicle Data	Approx. 3,743 trips per day per IEG traffic assessment. All trips applied to fast-food for simplicity.
Construction: Off-Road Equipment	Adjusted per construction timeline
Operations: Refrigerants	A/C added for self-storage unit

Appendix B:

County of Riverside GHG Screening Tables

County of Riverside Screening Table for Implementation of GHG Reduction Measures for Commercial Development

Feature	Description	Assigned Point Values	Project Points
Building Envelope			
Insultation	2017 Title 24 Requirements (walls R-13; roof/attic R-30)	0	12
	Modestly Enhanced Insulation (walls R-13, roof/attic R-38))	9	
	Enhanced Insulation (rigid wall insulation R-13, roof/attic R-38)	11	
	Greatly Enhanced Insulation (spray foam insulated walls R-15 or higher, roof/attic R-38 or higher)	12	
Windows	2016 Title 24 Windows (0.57 U-factor, 0.4 solar heat gain coefficient [SHGC})	0	5
	Modestly Enhanced Window Insulation (0.4 U-factor, 0.32 SHGC)	4	
	Enhanced Window Insulation (0.32 U-factor, 0.25 SHGC)	5	
	Greatly Enhanced Window Insulation (0.28 or less U-factor, 0.22 or less SHGC)	7	
Cool Roof	Modest Cool Roof (CRRC Rated 0.15 aged solar reflectance, 0.75 thermal emittance)	7	8
	Enhanced Cool Roof (CRRC Rated 0.2 aged solar reflectance, 0.75 thermal emittance)	8	
	Greatly Enhanced Cool Roof (CRRC Rated 0.35 aged solar reflectance, 0.75 thermal emittance)	10	
Air Filtration	Air barrier applied to exterior walls, calking, and visual inspection such as the HERS Verified Quality Insulation Installation (QII or equivalent)	7	7
	Blower Door HERS Verified Envelope Leakage or equivalent	6	
Thermal Storage of Building	Modest Thermal Mass (10% of floor or 10% of walls 12" or more thick exposed concrete or masonry with no permanently installed floor covering such as carpet, linoleum, wood or other insulating materials)	2	4
	Enhanced Thermal Mass (20% of floor or 20% of walls 12" or more thick exposed concrete or masonry with no permanently installed floor covering such as carpet, linoleum, wood or other insulating materials)	4	
	Enhanced Thermal Mass (80% of floor or 80% of walls 12" or more thick exposed concrete or masonry with no permanently installed floor covering such as carpet, linoleum, wood or other insulating materials)	14	
Indoor Space Efficiencies			
Heating/Cooling Distribution System	Minimum Duct Insulation (R-4.2 required)	0	6
	Modest Duct insulation (R-6)	5	
	Enhanced Duct Insulation (R-8)	6	
	Distribution loss reduction with inspection (HERS Verified Duct Leakage or equivalent)	8	
Space Heating/Cooling Equipment	2016 Title 24 Minimum HVAC Efficiency (EER 13/75% AFUE or 7.7 HSPF)	0	5
	Improved Efficiency HVAC (EER 14/78% AFUE or 8 HSPF)	4	
	High Efficiency HVAC (EER 15/80% AFUE or 8.5 HSPF)	5	
	Very High Efficiency HVAC (EER 16/82% AFUE or 9 HSPF)	7	
Commercial Heat Recovery Systems	Heat recovery strategies employed with commercial laundry, cooking equipment, and other commercial heat sources for reuse in HVAC air intake or other appropriate heat recovery technology. Point values for these types of systems will be determined based upon design and engineering data documenting the energy savings.	TBD	
Water Heaters	2016 Title 24 Minimum Efficiency (0.57 Energy Factor)	0	10
	Improved Efficiency Water Heater (0.675 Energy Factor)	8	
	High Efficiency Water Heater (0.72 Energy Factor)	10	
	Very High Efficiency Water Heater (0.92 Energy Factor)	11	
	Solar Pre-heat System (0.2 Net Solar Fraction)	2	
	Enhanced Solar Pre-heat System (0.35 Net Solar Fraction)	5	
Daylighting	All peripheral rooms within building have at least one window or skylight	0	
	All rooms within building have daylight (through use of windows, solar tubes, skylights, etc.)	1	
	All rooms daylighted	1	
Artificial Lighting	Efficient Lights (25% of in-unit fixtures considered high efficacy. High efficacy is defined as 40 lumens/watt for 15 watt or less fixtures; 50 lumens/watt for 15-40 watt fixtures, 60 lumens/watt for fixtures >40watt)	5	7
	High Efficiency Lights (50% of in-unit fixtures are high efficacy)	7	
	Very High Efficiency Lights (100% of in-unit fixtures are high efficacy)	8	
Appliances	Star Commercial Refrigerator (new)	2	2
	Energy Star Commercial Dish Washer (new)	2	2
	Energy Star Commercial Cloths Washing	2	
Miscellaneous Commercial/Industrial Building Efficiencies			
Building Placement	North/South alignment of building or other building placement such that the orientation of the buildings optimizes conditions for natural heating, cooling, and lighting.	4	
Shading	At least 90% of south-facing glazing will be shaded by vegetation or overhangs at noon on Jun 21st.	6	
Other	This allows innovation by the applicant to provide design features that increase the energy efficiency of the project not provided in the table. Note that engineering data will be required documenting the energy efficiency of innovative designs and point values given based upon the proven efficiency beyond Title 24 Energy Efficiency Standards.	TBD	

Renewable Energy			
Photovoltaic	30 percent of the power needs of the project	8	
	40 percent of the power needs of the project	12	
	50 percent of the power needs of the project	16	
	60 percent of the power needs of the project	19	
	70 percent of the power needs of the project	23	
	80 percent of the power needs of the project	26	
	90 percent of the power needs of the project	30	
	100 percent of the power needs of the project	34	
Wind Turbines	30 percent of the power needs of the project	8	
	40 percent of the power needs of the project	12	
	50 percent of the power needs of the project	16	
	60 percent of the power needs of the project	19	
	70 percent of the power needs of the project	23	
	80 percent of the power needs of the project	26	
	90 percent of the power needs of the project	30	
	100 percent of the power needs of the project	34	
Irrigation and Landscaping			
Water Efficient Landscaping	Eliminate conventional turf from landscaping	0	5
	Only moderate water using plants	2	
	Only low water using plants	3	
	Only California Native landscape that requires no or only supplemental irrigation	5	
Water Efficient Irrigation Systems	Low precipitation spray heads< .75"/hr or drip irrigation	1	1
	Weather based irrigation control systems combined with drip irrigation (demonstrate 20% reduced water use)	3	
Stormwater Reuse Systems	Innovative on-site stormwater collection, filtration, and reuse systems are being developed that provide supplemental irrigation water and provide vector control. These systems can greatly reduce the irrigation needs of a project. Point values for these types of systems will be determined based upon design and engineering data documenting the water savings.	TBD	
Recycled Water	Graywater (purple pipe) irrigation system on site	5	5
Potable Water			
Showers	Water Efficient Showerheads (2.0 gpm)	2	
Toilets	Water Efficient Toilets/Urinals (1.5gpm)	3	6
	Waterless Urinals (note that commercial buildings having both waterless urinals and high efficiency toilets will have a combined point value of 6 points)	3	
Faucets	Water Efficient faucets (1.28gpm)	3	3
Commercial Dishwashers	Water Efficient dishwashers (20% water savings)	2	2
Commercial Laundry Washers	Water Efficient laundry (15% water savings)	2	
	High Efficiency laundry Equipment that captures and reuses rinse water (30% water savings)	4	
Employment Based Trip and VMT Reduction Policy			
Alternative Scheduling	Provide flexibility in scheduling such that at least 30% of employees participate in 9/80 work week, 4-day/40-hour work week, or telecommuting 1.5 days/week.	5	
Car/Vanpools	Car/vanpool program	1	
	Car/vanpool program with preferred parking	2	
	Car/vanpool with guaranteed ride home program	3	
	Subsidized employee incentive car/vanpool program	5	
Employee Bicycle/Pedestrian Programs	Complete sidewalk to residential within ½ mile	1	1
	Complete bike path to residential within 3 miles	1	
	Bike lockers and secure racks	1	1
	Showers and changing facilities	2	
	Subsidized employee walk/bike program	3	
Shuttle/Transit Programs	Local transit within ¼ mile	1	1
	Light rail transit within ½ mile	3	
	Shuttle service to light rail transit station	5	
	Guaranteed ride home program	1	
	Subsidized Transit passes	2	
Commute Trip Reduction	Employer based Commute Trip Reduction (CTR). CTRs apply to commercial, offices, or industrial projects that include a reduction of vehicle trip or VMT goal using a variety of employee commutes trip reduction methods. The point value will be determined based upon a TIA that demonstrates the trip/VMT reductions. Suggested point ranges: Incentive based CTR Programs (1–8 points), Mandatory CTR programs (5–20 points)	TBD	
Other Trip Reduction Measures	Point values for other trip or VMT reduction measures not listed above may be calculated based on a TIA and/or other traffic data supporting the trip and/or VMT reductions	TBD	

Mixed-Use Development			
Mixed-Use	Mixes of land uses that complement one another in a way that reduces the need for vehicle trips can greatly reduce GHG emissions. The point value of mixed-use projects will be determined based upon traffic studies that demonstrate trip reductions and/or reductions in vehicle miles traveled.	TBD	
Local Retail Near Residential (Commercial only Projects)	Having residential developments within walking and biking distance of local retail helps to reduce vehicle trips and/or vehicle miles traveled. The point value of residential projects in close proximity to local retail will be determined based upon traffic studies that demonstrate trip reductions and/or reductions in vehicle miles traveled.	TBD	
Preferential Parking			
Signal Improvements	Provide reserved preferential parking spaces for car-share, carpool, and ultra-low or zero emission vehicles.	1	
	Provide larger parking spaces that can accommodate vans used for ridesharing programs and reserve them for vanpools and include adequate passenger waiting/loading areas.	1	
Signial Synchronization and Intelligent Traffic Systems			
Signal Improvements	Signal synchronization	1 point/signal	
	Traffic signals connected to ITS	3 points/signal	
Increase Public Transit			
Public Transit	The point value of a projects ability to increase public transit use will be determined based upon a Transportation Impact Analysis (TIA) demonstrating decreased use of private vehicles and increased use of public transportation. Increased transit accessibility (1-15 points)	TBD	
Adopt and Implement a Bicycle Master Plan to Expand Bike Routes around the County			
Sidewalks	Provide sidewalks on one side of the street (required)	0	
	Provide sidewalks on both sides of the street	1	
	Provide pedestrian linkage between commercial and residential land uses within 1 mile	3	
Electrifying the Fleet			
Electric Vehicle Recharging	Provide circuit and capacity in garages/parking areas for installation of electric vehicle charging stations.	2 points/area	
	Install electric vehicle charging stations in garages/parking areas	8 points/station	
Neighborhood Electric Vehicle (NEV) Infrastructure	Provide NEV safe routes within the project site	3	
	Provide NEV safe routes between the project site and other land uses.	5	
Reduce Waste to Landfills			
Recycling	Provide separated recycling bins within each commercial building/floor and provide large external recycling collection bins at central location for collection truck pick-up	2	2
	Provide commercial/industrial recycling programs that fulfills an on-site goal of 80% diversion of solid waste	5	5
Other GHG Reduction Feature Implementation			
Other GHG Reduction Features	This allows innovation by the applicant to provide commercial design features that the GHG emissions from construction and/or operation of the project not provided in the table. Note that engineering data will be required documenting the GHG reduction amount and point values given based upon emission reductions calculations using approved models, methods, and protocols.	TBD	
Total Points			**100**
Minimum Required Points			**100**

Source: County of Riverside Climate Action Plan Update. November 2019.

Appendix C:

EMFAC2017 Output

Source: EMFAC2017 (v1.0.3) Emissions Inventory
Region Type: Air District
Region: South Coast AQMD
Calendar Year: 2023
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Y	Vehicle Cat	Model Year	Speed	Fuel	Population	VMT	Trips	Fuel Consumption	Fuel Consumption	Total Fuel Consumption	VMT	Total VMT	Miles Per Gallon	Vehicle Class
South Coas	2023	HHDT	Aggregate	Aggregate	Gasoline	75.10442936	8265.097	1502.689	1.936286145	1936.286145	1913466.474	8265.097	13656273.03	7.14	**HHD**
South Coas	2023	HHDT	Aggregate	Aggregate	Diesel	109818.6753	13648008	1133618	1911.530188	1911530.188		13648008			
South Coas	2023	LDA	Aggregate	Aggregate	Gasoline	6635002.295	2.53E+08	31352477	7971.24403	7971244.03	8020635.698	2.53E+08	255180358.3	31.82	**LDA**
South Coas	2023	LDA	Aggregate	Aggregate	Diesel	62492.97958	2469816	297086.6	49.3916685	49391.6685		2469816			
South Coas	2023	LDA	Aggregate	Aggregate	Electricity	150700.3971	6237106	751566	0	0		6237106			
South Coas	2023	LDT1	Aggregate	Aggregate	Gasoline	758467.6481	27812996	3504563	1023.913006	1023913.006	1024279.466	27812996	27821405.09	27.16	**LDT1**
South Coas	2023	LDT1	Aggregate	Aggregate	Diesel	360.7799144	8408.618	1256.88	0.366459477	366.4594769		8408.618			
South Coas	2023	LDT1	Aggregate	Aggregate	Electricity	7122.93373	303507.5	35798.19	0	0		303507.5			
South Coas	2023	LDT2	Aggregate	Aggregate	Gasoline	2285150.139	85272416	10723315	3338.798312	3338798.312	3356536.438	85272416	85922778.34	25.60	**LDT2**
South Coas	2023	LDT2	Aggregate	Aggregate	Diesel	15594.68309	650362.8	76635.83	17.73812611	17738.12611		650362.8			
South Coas	2023	LDT2	Aggregate	Aggregate	Electricity	28809.63735	917592.8	145405.4	0	0		917592.8			
South Coas	2023	LHDT1	Aggregate	Aggregate	Gasoline	174910.3847	6216643	2605904	583.3851736	583385.1736	811563.1022	6216643	11211395.79	13.81	**LHDT1**
South Coas	2023	LHDT1	Aggregate	Aggregate	Diesel	125545.0822	4994753	1579199	228.1779285	228177.9285		4994753			
South Coas	2023	LHDT2	Aggregate	Aggregate	Gasoline	30102.75324	1034569	448486.2	111.5753864	111575.3864	209423.5025	1034569	2969599.008	14.18	**LHDT2**
South Coas	2023	LHDT2	Aggregate	Aggregate	Diesel	50003.13116	1935030	628976.5	97.84811618	97848.11618		1935030			
South Coas	2023	MCY	Aggregate	Aggregate	Gasoline	305044.5141	2104624	610089	57.849018	57849.018	57849.018	2104624	2104623.657	36.38	**MCY**
South Coas	2023	MDV	Aggregate	Aggregate	Gasoline	1589862.703	55684188	7354860	2693.883526	2693883.526	2744536.341	55684188	57109879.73	20.81	**MDV**
South Coas	2023	MDV	Aggregate	Aggregate	Diesel	36128.1019	1425691	176566.9	50.65281491	50652.81491		1425691			
South Coas	2023	MDV	Aggregate	Aggregate	Electricity	16376.67653	537591.7	83475.95	0	0		537591.7			
South Coas	2023	MH	Aggregate	Aggregate	Gasoline	34679.50542	330042.9	3469.338	63.26295123	63262.95123	74893.26955	330042.9	454344.9436	6.07	**MH**
South Coas	2023	MH	Aggregate	Aggregate	Diesel	13122.69387	124302	1312.269	11.63031832	11630.31832		124302			
South Coas	2023	MHDT	Aggregate	Aggregate	Gasoline	25624.3151	1363694	512691.3	265.2060557	265206.0557	989975.6425	1363694	9484317.768	9.58	**MHDT**
South Coas	2023	MHDT	Aggregate	Aggregate	Diesel	122124.488	8120623	1221858	724.7695868	724769.5868		8120623			
South Coas	2023	OBUS	Aggregate	Aggregate	Gasoline	5955.291639	245774	119153.5	48.07750689	48077.50689	86265.88761	245774	579743.8353	6.72	**OBUS**
South Coas	2023	OBUS	Aggregate	Aggregate	Diesel	4286.940093	333969.8	41558.29	38.18838072	38188.38072		333969.8			
South Coas	2023	SBUS	Aggregate	Aggregate	Gasoline	2783.643068	112189.6	11134.57	12.19474692	12194.74692	39638.85935	112189.6	323043.5203	8.15	**SBUS**
South Coas	2023	SBUS	Aggregate	Aggregate	Diesel	6671.825716	210853.9	76991.94	27.44411242	27444.11242		210853.9			
South Coas	2023	UBUS	Aggregate	Aggregate	Gasoline	957.7686184	89782.63	3831.074	17.62416327	17624.16327	17863.66378	89782.63	91199.2533	5.11	**UBUS**
South Coas	2023	UBUS	Aggregate	Aggregate	Diesel	13.00046095	1416.622	52.00184	0.239500509	239.5005093		1416.622			
South Coas	2023	UBUS	Aggregate	Aggregate	Electricity	16.11693886	1320.163	64.46776	0			1320.163			

Appendix B

Habitat Assessment and CVMSHCP Consistency Analysis

March 7, 2024

The Altum Group
Attention: Stephen Nieto
44-600 Village Court, Suite 100
Palm Desert, California 92260

SUBJECT: **Habitat Assessment and Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP) Consistency Analysis for the Proposed Date Palm and Rosemount Road Storage Project Located in the City of Cathedral City, Riverside County, California.**

Introduction

This report contains the findings of ELMT Consulting's biological resources investigation for the proposed Date Palm and Rosemount Storage Project (project site, site) located in the City of Cathedral City, Riverside County, California. ELMT biologist Jacob H. Lloyd Davies conducted a field survey and evaluated the condition of the habitat within the proposed project site on February 9, 2023. The literature review and field investigation were conducted to characterize existing site conditions and assess the probability of occurrence of special-status[1] plant and wildlife species that could pose a constraint to implementation of the project. This report provides a detailed assessment of the suitability of the on-site habitat to support special-status plant and wildlife species that were identified by the California Natural Diversity Database (CNDDB) and other electronic databases as potentially occurring in the vicinity of the proposed project site. Special attention was given to the suitability of the on-site habitat to support species protected under the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP), and potential jurisdictional drainage features.

Project Location

The proposed project site is generally located south and west of Interstate 10 and north and east of State Route 111 in the City of Cathedral City, Riverside County, California. The site is depicted on the Cathedral City quadrangle of the United States Geological Survey's (USGS) 7.5-minute topographic map series within Section 15 of Township 4 South, Range 6 East. Specifically, the project site is bounded to the west by Date Palm Drive and to the north by the planned extension of Rosemount Road within Assessor Parcel Numbers 670-110-048, -049, -050, -051, -052, -053, and -056. Refer to Exhibits 1-3 in Attachment A.

Project Description

The project proposes to construct a self-storage facility and retail area with associated landscaping and improvements. Refer to Attachment B, *Site Plan*.

1 As used in this report, "special-status" refers to plant and wildlife species that are federally or State listed, proposed, or candidates; CVMSHCP listed species; plant species that have been designated a CNPS Rare Plant Rank; and wildlife species that are designated by the CDFW as fully protected, species of special concern, or watch list species.

Methodology

Literature Review

Prior to conducting the field investigation, a literature review and records search was conducted for special-status biological resources potentially occurring on or within the vicinity of the project site. Previously recorded occurrences of special-status plant and wildlife species and their proximity to the project site were determined through a query of the CDFW's CNDDB Rarefind 5, the California Native Plant Society's (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California, Calflora Database, compendia of special-status species published by CDFW, and the United States Fish and Wildlife Service (USFWS) species listings.

Literature detailing biological resources previously observed in the vicinity of the project site and historical land uses were reviewed to understand the extent of disturbances to the habitats on-site. Standard field guides and texts on special-status and non-special-status biological resources were reviewed for habitat requirements, as well as the following resources:

- CDFW 2012 Staff Report on Burrowing Owl Mitigation;
- Coachella Valley Multiple Species Habitat Conservation Plan;
- Google Earth Pro historic aerial imagery (1994-2021);
- United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS), Soil Survey[2]; and
- USFWS Critical Habitat designations for Threatened and Endangered Species.

The literature review provided a baseline from which to inventory the biological resources potentially occurring on the project site. Additional recorded occurrences of these species found on or near the project site were derived from database queries. The CNDDB ArcGIS database was used, in conjunction with ArcGIS software, to locate the nearest occurrence and determine the distance from the project site.

Field Investigation

ELMT biologist Jacob H. Lloyd Davies inventoried and evaluated the extent and conditions of the plant communities found within the boundaries of the project site and a 200-foot buffer on February 9, 2023. Plant communities identified on aerial photographs during the literature review were verified by walking meandering transects through the plant communities and along boundaries between plant communities. The plant communities were evaluated for their potential to support special-status plant and wildlife species. In addition, field staff identified any natural corridors and linkages that may support the movement of wildlife through the area. Special attention was given to special-status habitats and/or undeveloped areas, which have a higher potential to support special-status plant and wildlife species.

All plant and wildlife species observed, as well as dominant plant species within each plant community, were recorded. Wildlife detections were made through observation of scat, trails, tracks, burrows, nests, and/or visual and aural observation. In addition, site characteristics such as soil condition, topography,

2 A soil series is defined as a group of soils with similar profiles developed from similar parent materials under comparable climatic and vegetation conditions. These profiles include major horizons with similar thickness, arrangement, and other important characteristics, which may promote favorable conditions for certain biological resources.

hydrology, anthropogenic disturbances, indicator species, condition of on-site plant communities, and presence of potential jurisdictional drainage and/or wetland features were noted.

Soil Series Assessment

On-site and adjoining soils were researched prior to the field visit using the USDA NRCS Soil Survey for Riverside County, California. In addition, a review of the local geological conditions and historical aerial photographs was conducted to assess the ecological changes the project site has undergone.

Plant Communities

Plant communities were mapped using 7.5-minute USGS topographic base maps and aerial photography. The plant communities were delineated on an aerial photograph, classified in accordance with those described in the MSHCP, and then digitized into GIS Arcview. The Arcview application was used to compute the area of each plant community in acres.

Plants

Common plant species observed during the field survey were identified by visual characteristics and morphology in the field and recorded in a field notebook. Unusual and less-familiar plants were photographed in the field and identified in the laboratory using taxonomic guides. Taxonomic nomenclature used in this study follows the 2012 Jepson Manual (Hickman 2012). In this report, scientific names are provided immediately following common names of plant species (first reference only).

Wildlife

Wildlife species detected during field surveys by sight, calls, tracks, scat, or other sign were recorded during surveys in a field notebook. Field guides were used to assist with identification of wildlife species during the survey included The Sibley Field Guide to the Birds of Western North America (Sibley 2003), A Field Guide to Western Reptiles and Amphibians (Stebbins 2003), and A Field Guide to Mammals of North America (Reid 2006). Although common names of wildlife species are fairly well standardized, scientific names are provided immediately following common names in this report (first reference only).

Jurisdictional Drainages and Wetlands

Aerial photography was reviewed prior to conducting a field investigation in order to locate and inspect any potential natural drainage features, ponded areas, or water bodies that may fall under the jurisdiction of the United States Army Corps of Engineers (Corps), Regional Water Quality Control Board (Regional Board), or CDFW. In general, surface drainage features indicated as blue-line streams on USGS maps that are observed or expected to exhibit evidence of flow are considered potential riparian/riverine habitat and are also subject to state and federal regulatory jurisdiction. In addition, ELMT reviewed jurisdictional waters information through examining historical aerial photographs to gain an understanding of the impact of land-use on natural drainage patterns in the area. The USFWS National Wetland Inventory (NWI) and Environmental Protection Agency (EPA) Water Program “My Waters” data layers were also reviewed to determine whether any hydrologic features and wetland areas have been documented on or within the vicinity of the project site.

Topography and Soils

The project site is located at an approximate elevation of 363 to 371 feet above mean sea level. On-site topography is generally flat with no significant topographical variability. Based on the NRCS USDA Web Soil Survey, the project site is underlain by Myoma fine sand (0 to 5 percent slopes). Refer to Exhibit 4, *Soils*, in Attachment A. Soils on-site have been disturbed in recent decades from staging and storage activities associated with adjacent construction and surrounding development.

Existing Site Condition

The project site occurs in an area that has undergone a transition from natural plant communities to urbanization in the form of sprawling residential developments with associated commercial and industrial developments intermixed. Land in the vicinity of the project site predominantly supports residential development with scattered commercial and institutional development, in addition to remaining swathes of vacant, undeveloped land. The site is bounded to the north by the partially developed planned extension of Rosemount Road with vacant, undeveloped land beyond; to the east by residential development; to the south by commercial and residential development; and to the west by Date Palm Drive with commercial development and vacant, undeveloped land beyond. The site itself primarily supports undeveloped land with some development occurring within existing and planned roads.

Vegetation

The project site supports one (1) natural plant community: creosote bush scrub. In addition, the site supports two (2) land cover types that would be classified as disturbed and developed. Refer to Attachment C, *Site Photographs*, for representative site photographs.

The creosote bush scrub plant community supported on-site is generally dominated by creosote (*Larrea tridentata*) with uncommon, localized dominance of swathes of hoary saltbush (*Atriplex canescens*) where revegetation has occurred following vegetation clearing in recent decades. Other common species observed in this plant community include desert sand verbena (*Abronia villosa*), Saharan mustard (*Brassica tournefortii*), clavate fruited primrose (*Chylismia claviformis*), Palmer's coldenia (*Tiquilia palmeri*), dyebush (*Psorothamnus emoryi*), and Mediterranean grass (*Schismus barbatus*).

Disturbed land is present along site boundaries, within unpaved access roads, and in the southeast portion. Due to regular disturbance, these areas are barren or minimally vegetated. Common species observed in the disturbed portions of the site include hoary saltbush, Saharan mustard, Palmer’s coldenia, Mediterranean grass, and Mexican palo verde (*Parkinsonia aculeata*).

Developed land is present along existing and planned paved roadways that traverse the middle portion of the site and the site’s southeast corner. These areas are generally barren and may support limited presence of especially hardy weedy/early successional species.

Wildlife

Plant communities provide foraging habitat, nesting/denning sites, and shelter from adverse weather or predation. This section provides a discussion of those wildlife species that were observed or are expected to occur within the project site. The discussion is to be used as a general reference and is limited by the season, time of day, and weather conditions in which the field survey was conducted. Wildlife detections were based on calls, songs, scat, tracks, burrows, and direct observation.

Fish

No fish or hydrogeomorphic features (e.g., creeks, ponds, lakes, reservoirs) that would provide suitable habitat for fish were observed on or within the vicinity of the project site. Therefore, no fish are expected to occur and are presumed absent from the site.

Amphibians

No amphibians or hydrogeomorphic features that would provide suitable habitat for amphibian species were observed on or within the vicinity of the project site. Therefore, no amphibians are expected to occur and are presumed absent from the site.

Reptiles

The project site provides limited foraging and cover habitat for local reptilian species adapted to routine human disturbance. No reptiles were observed during the field investigation. Common reptilian species that could be expected to occur on-site include desert iguana (*Dipsosaurus dorsalis*), desert spiny lizard (*Sceloporus magister*), and western side-blotched lizard (*Uta stansburiana elegans*).

Birds

The project site and surrounding area provide suitable foraging and cover habitat for local avian species adapted to routine human disturbance. The only avian species observed during the field investigation were common raven (*Corvus corax*) and Costa's hummingbird (*Calypte costae*). Other common avian species that could be expected to occur on-site include rock pigeon (*Columba liva*), house sparrow (*Haemorhous mexicanus*), mourning dove (*Zenaida macroura*), great-tailed grackle (*Quiscalus mexicanus*), and northern mockingbird (*Mimus polyglottos*).

Mammals

The project site provides limited foraging and denning habitat for local mammalian species adapted to human disturbance. However, most mammal species are nocturnal and are difficult to observe during a diurnal field visit. The only mammalian species detected during the field investigation were kangaroo rat (*Dipodomys* sp.) and domestic dog (*Canis familiaris*). Multiple domestic dogs were observed off-leash in the southeast corner of the site during the field investigation, under the supervision of their owners. Several families were observed exiting the neighboring apartment complex with their dogs, and the abundance of scat indicates that the site frequently supports off-leash dogs.

Nesting Birds and Raptors

No active nests or birds displaying nesting behavior were observed on-site during the field survey, which was conducted outside of the breeding season. The project site surrounding area have the potential to provide suitable nesting habitat for year-round and seasonal avian residents, as well as migrating songbirds that could occur in the area that area adapted to urban environments. No raptors are expected to nest on-site due to lack of suitable nesting opportunities.

Nesting birds are protected pursuant to the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (Sections 3503, 3503.5, 3511, and 3513 prohibit the take, possession, or destruction of birds, their nests or eggs). If construction occurs between February 1st and August 31st, a pre-construction clearance survey for nesting birds should be conducted within three (3) days of the start of any vegetation removal or ground disturbing activities to ensure that no nesting birds will be disturbed during construction.

If an active avian nest is discovered during the pre-construction clearance survey, construction activities should stay outside of a no-disturbance buffer. The size of the no-disturbance buffer will be determined by the wildlife biologist and will depend on the level of noise and/or surrounding anthropogenic disturbances, line of sight between the nest and the construction activity, type and duration of construction activity, ambient noise, species habituation, and topographical barriers. These factors will be evaluated on a case-by-case basis when developing buffer distances. Limits of construction to avoid an active nest will be established in the field with flagging, fencing, or other appropriate barriers; and construction personnel will be instructed on the sensitivity of nest areas. A biological monitor should be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by the construction activity. Once the young have fledged and left the nest, or the nest otherwise becomes inactive under natural conditions, construction activities within the buffer area can occur.

Migratory Corridors and Linkages

Habitat linkages provide connections between larger habitat areas that are separated by development. Wildlife corridors are similar to linkages but provide specific opportunities for animals to disperse or migrate between areas. A corridor can be defined as a linear landscape feature of sufficient width to allow animal movement between two comparatively undisturbed habitat fragments. Adequate cover is essential for a corridor to function as a wildlife movement area. It is possible for a habitat corridor to be adequate for one species yet still inadequate for others. Wildlife corridors are features that allow for the dispersal, seasonal migration, breeding, and foraging of a variety of wildlife species. Additionally, open space can provide a buffer against both human disturbance and natural fluctuations in resources.

The project site has not been identified as occurring in a wildlife corridor or linkage. The nearest open space to the site as mapped by the CVMSHCP is the Willow Hole Conservation Area, which occurs approximately 1.77 miles to the northeast. In addition, there are no riparian corridors, creeks, or useful patches of steppingstone habitat (natural areas) within or connecting the site to a recognized wildlife corridor or linkage. As such, implementation of the proposed project is not expected to impact wildlife movement opportunities. Therefore, impacts to wildlife corridors or linkages are not expected to occur.

Jurisdictional Areas

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The Corps Regulatory Branch regulates discharge of dredge or fill materials into "waters of the United States" pursuant to Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Of the State agencies, the CDFW regulates alterations to streambed and bank under Fish and Wildlife Code Sections 1600 et seq., and the Regional Board regulates discharges into surface waters pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act.

No jurisdictional drainage and/or wetland features were observed on or near the project site during the field investigation. Further, no blueline streams have been recorded on the project site. Therefore, development of the project will not result in impacts to Corps, Regional Board, or CDFW jurisdiction and regulatory approvals will not be required.

Special-Status Biological Resources

The CNDDB was queried for reported locations of special-status plant and wildlife species as well as natural communities of special concern in the Cathedral City USGS 7.5-minute quadrangle. This singular quadrangle was used due to the proximity of the project site to quadrangle boundaries, on-site conditions, and site isolation. A search of published records within this quadrangle was conducted using the CNDDB Rarefind 5 online software and the CDFW BIOS database and the CNPS Inventory of Rare and Endangered Plants of California that supplied information regarding the distribution and habitats of vascular plants in the vicinity of the project site. The habitat assessment evaluated the conditions of the habitat(s) within the boundaries of the project site to determine if the existing plant communities, at the time of the survey, have the potential to provide suitable habitat(s) for special-status plant and wildlife species.

The literature search identified thirteen (13) special-status plant species, seventeen (17) special-status wildlife species, and one (1) special-status plant community were identified as having potential to occur within the Cathedral City quadrangle. Special-status plant and wildlife species were evaluated for their potential to occur within the project site based on habitat requirements, availability and quality of suitable habitat, and known distributions. Species determined to have the potential to occur within the general vicinity are presented in *Table D-1: Potentially Occurring Special-Status Biological Resources*, provided in Attachment D. Refer to Table D-1 for a determination regarding the potential occurrence of special-status plant and wildlife species within the project site.

Special-Status Plants

According to the CNDDB and CNPS, thirteen (13) special-status plant species have been recorded in the Cathedral City quadrangle (refer to Attachment D). No special-status plants were observed on the project site during the field investigation. Based on habitat requirements for specific species, the availability and quality of on-site habitats, and isolation of the site, it was determined that the project site has a low potential to support chaparral sand-verbena (*Abronia villosa* var. *aurita*), Coachella Valley milk-vetch (*Astragalus lentiginosus* var. *coachellae*), pointed dodder (*Cuscuta californica* var. *apiculata*), Arizona spurge (*Euphorbia arizonica*), flat-seeded spurge (*Euphorbia platysperma*), ribbed cryptantha (*Johnstonella costata*), and winged cryptantha (*Johnstonella holoptera*). It was further determined that the remaining special-status wildlife species known to occur in the vicinity of the site do not have potential to occur and are presumed to be absent.

Of the aforementioned special-status plant species, Coachella Valley milk-vetch is federally listed as endangered and is listed as a covered species under the CVMSHCP. None of the other species are federally or state listed as endangered or threatened. Due to listing status, the potential occurrence of Coachella Valley milk-vetch is discussed in further detail below.

Coachella Valley Milk-Vetch

Coachella Valley milk-vetch can be either an annual or perennial herb that blooms between February and May. It is federally listed as endangered and is designated by the CNPS with the Rare Plant Rank 1B.2, indicating that is rare, threatened, or endangered in California and elsewhere, and is considered fairly threatened in California, with 20-80% of its known occurrences threatened. It is covered under the MSHCP. It is endemic to California and is only known from Riverside County. It occurs in sandy soils within desert dunes and Sonoran desert scrub, where it typically grows at elevations between 130 and 2,150 feet. Coachella Valley milk-vetch is known to occur in many locations throughout the Coachella Valley.

Coachella Valley milk-vetch was not observed during the field investigation. The creosote bush scrub supported by the project site provides suitable habitat for this species. However, much of the site has been impacted by historic and ongoing disturbances and the site and adjacent undeveloped land are isolated from known occupied areas by surrounding development. Therefore, Coachella Valley milk-vetch was determined to have a low potential to occur on-site. Since Coachella Valley milk-vetch is a covered species under the CVMSHCP, no further surveys or additional mitigation measures will be required for impacts to this species, if present.

Special-Status Wildlife

According to the CNDDB, seventeen (17) special-status wildlife species have been reported in the Cathedral City quadrangle (refer to Attachment D). The only special-status wildlife species observed during the field investigation was Costa's hummingbird, which was not listed within the Cathedral City quadrangle by the CNDDB. The project site and surrounding area have been impacted by development and associated staging and storage activities in recent decades and the site and limited adjacent open space are thoroughly isolated from natural open space. However, the creosote bush scrub supported by the site continues to provide limited habitat for some species. Based on habitat requirements for specific species and the availability and quality of on-site habitats, it was determined that the project site has a low potential to support prairie falcon (*Falco mexicanus*), loggerhead shrike (*Lanius ludovicianus*), and Coachella giant sand treader cricket (*Macrobaenetes valgum*). It was further determined that all the other special-status wildlife species known to occur in the vicinity of the site do not have potential to occur and are presumed to be absent.

None of the aforementioned special-status wildlife species are federally or state listed as endangered or threatened and Costa's hummingbird and Coachella giant sand treader cricket are covered under the CVMSHCP. Prairie falcon is only expected to occur on-site during foraging, as no suitable nesting opportunities for prairie falcon are present within or near the project site. Limited nesting habitat for Costa's hummingbird and loggerhead shrike are present.

In order to ensure impacts to special-status avian species do not occur from implementation of the proposed project, a pre-construction nesting bird clearance survey shall be conducted prior to ground disturbance. With implementation of the pre-construction nesting bird clearance survey, impacts to special-status avian species will be less than significant and no mitigation will be required.

Due to listing status, the potential occurrence of Coachella giant sand treader cricket is discussed in further detail below. Additionally, based on regional significance, the potential occurrence of burrowing owl is discussed in further detail below.

Coachella Giant Sand Treader Cricket

The Coachella giant sand treader cricket has no state or federal designation but is covered under the CVMSHCP. Its known range extends through the western Coachella Valley to approximately two miles west of the City of Indio. This species is dependent on active dunes and ephemeral sand fields in the western Coachella Valley. It is strongly correlated with windblown habitats dominated by creosote bush, burrobush (*Ambrosia dumosa*), honey mesquite (*Prosopis glandulosa*), Mormon tea (*Ephedra* spp.), desert willow (*Chilopsis linearis*), and sandpaper bush (*Mortonia scabrella*). Stabilized sandy environments are avoided.

Coachella giant sand treader cricket was not observed during the field investigation. The creosote bush scrub plant community supported by the project site provides suitable habitat for this species. However, much of the site has been impacted by historic and ongoing disturbances and the site and adjacent undeveloped land are isolated from known occupied areas by surrounding development. Therefore, Coachella giant sand treader cricket was determined to have a low potential to occur on-site. Since Coachella giant sand treader cricket is a covered species under the CVMSHCP, no further surveys or additional mitigation measures will be required for impacts to this species, if present.

Burrowing Owl

he burrowing owl is currently listed as a California Species of Special Concern. It is a grassland specialist distributed throughout western North America where it occupies open areas with short vegetation and bare ground within shrub, desert, and grassland environments. Burrowing owls use a wide variety of arid and semi-arid environments with well-drained, level to gently-sloping areas characterized by sparse vegetation and bare ground (Haug and Didiuk 1993; Dechant et al. 1999). Burrowing owls are dependent upon the presence of burrowing mammals (such as ground squirrels) whose burrows are used for roosting and nesting (Haug and Didiuk 1993). The presence or absence of colonial mammal burrows is often a major factor that limits the presence or absence of burrowing owls. Where mammal burrows are scarce, burrowing owls have been found occupying man-made cavities, such as buried and non-functioning drain pipes, stand-pipes, and dry culverts. Burrowing mammals may burrow beneath rocks and debris or large, heavy objects such as abandoned cars, concrete blocks, or concrete pads. They also require open vegetation allowing line-of-sight observation of the surrounding habitat to forage as well as watch for predators.

Despite a systematic search of the project site, no burrowing owls or sign (i.e., pellets, feathers, castings, or whitewash) were observed during the field investigation. Several small mammal burrows that have the potential to provide suitable burrowing owl nesting habitat (>4 inches in diameter) were observed within the boundaries of the site. Based on this information, and as a result of current and historic on-site disturbances, and surrounding development, it was determined that burrowing owls do not have potential to occur, and no focused surveys are recommended.

Special-Status Plant Communities

The CNDDB lists one (1) special-status plant community as being identified within the Cathedral City quadrangle: Desert Fan Palm Oasis Woodland. Based on the results of the field investigation, no special-status plant communities were observed on-site. Therefore, no special-status plant communities will be impacted by project implementation.

Critical Habitat

Under the federal Endangered Species Act, “Critical Habitat” is designated at the time of listing of a species or within one year of listing. Critical Habitat refers to specific areas within the geographical range of a species at the time it is listed that include the physical or biological features that are essential to the survival and eventual recovery of that species. Maintenance of these physical and biological features requires special management considerations or protection, regardless of whether individuals or the species are present or not. All federal agencies are required to consult with the United States Fish and Wildlife Service (USFWS) regarding activities they authorize, fund, or permit which may affect a federally listed species or its designated Critical Habitat. The purpose of the consultation is to ensure that projects will not jeopardize the continued existence of the listed species or adversely modify or destroy its designated Critical Habitat.

The designation of Critical Habitat does not affect private landowners, unless a project they are proposing is on federal lands, uses federal funds, or requires federal authorization or permits (e.g., funding from the Federal Highways Administration or a CWA Permit from the Corps). If a there is a federal nexus, then the federal agency that is responsible for providing the funding or permit would consult with the USFWS.

The project site is not located with federally designated Critical Habitat (refer to Exhibit 6, *Critical Habitat*, in Attachment A). The nearest designated Critical Habitat to the site is located approximately 2.3 miles to the southwest for Casey's June beetle (*Dinacoma caseyi*). Therefore, the loss or adverse modification of Critical Habitat will not occur as a result of the proposed project and consultation with the USFWS will not be required for implementation of the proposed project.

Coachella Valley MSHCP

The proposed project was reviewed to determine consistency with the CVMSHCP. Geographic Information System (GIS) software was utilized to map the project site in relation to the CVMSHCP including conservation areas, corridors and linkages, and sand transport areas. The CVMSHCP requires that local permittees, such as the City of Cathedral City, comply with various protective measures for covered species, communities, essential ecological processes, and biological corridors. In addition, certain projects may be subject to local development mitigation fees, a Joint Project Review Process, or other conservation or implementation measures.

The project site is located within the boundaries of the CVMSHCP Area, but is not located within any Conservation Areas, Preserves, Cores, or Linkages (refer to Exhibit 7, *CVMSHCP Conservation Areas* in Attachment A). The proposed project is not listed as a planned "Covered Activity" under the published CVMSHCP, but is still considered to be a current Covered Activity pursuant to Section 7.1 of the CVMSHCP. According to Section 7.1 of the CVMSHCP, take authorization will be provided for certain activities that take place outside of Conservation Areas including "*new projects approved pursuant to county and city general plans, transportation improvement plans for roads in addition to those addressed in Section 7.2, master drainage plans, capital improvement plans, water and waste management plans, the County's adopted Trails Master Plan, and other plans adopted by the Permittees*."

As a Covered Activity located outside designated conservation areas, construction of the proposed project is expected to be consistent with the applicable avoidance, minimization, and mitigation measures described in Section 4.4 of the CVMSHCP. Since the proposed project is considered a Covered Activity under Section 7.1 of the CVMSHCP, no further avoidance, minimization, and mitigation measures are required, and the project is in compliance with the CVMSHCP.

The CVMSHCP identifies modeled habitat for Coachella Valley milk-vetch, Palm Springs pocket mouse (*Perognathus longimembris bangsi*), fat-tailed horned lizard (*Phrynosoma mcallii*), Le Conte's thrasher (*Toxostoma lecontei*), Coachella Valley fringe-toed lizard (*Uma inornata*), and Coachella Valley round-tailed ground squirrel (*Xerospermophilus tereticaudus chlorus*) as occurring within the project site. Based on the results of the field investigation, the undeveloped portions of the project site support creosote bush scrub and disturbed land that has been subjected to a variety of anthropogenic disturbances. These disturbances have reduced, if not eliminated, the ability of the project site to provide suitable habitat for the majority of CVMSHCP Covered species. Due to the location of the project site and quality of onsite habitat, no impacts to CVMSHCP Covered Species are expected to occur from implementation of the proposed project.

Conclusion

Based on the literature review and field survey, and existing site conditions discussed in this report, implementation of the project will have no significant impacts on federally or State listed species known to occur in the general vicinity of the project site. Additionally, the project will have no effect on designated Critical Habitat or regional wildlife corridors/linkage because none exists within the area. No jurisdictional drainage and/or wetland features were observed on the project site during the field investigation. No further surveys are recommended. With completion of the recommendations provided below, no impacts to year-round, seasonal, or special-status avian residents or special-status species will occur from implementation of the proposed project.

As a Covered Activity located outside designated conservation areas, construction of the proposed project is expected to implement the applicable regulatory complinace measures described in Section 4.4 of the CVMSHCP. With implementation of these measures, and payment of the CVMSHCP mitigaiton fee, the proposed project would be fully consistent with the biological goals and objectives of the CVMSHCP.

Impact Analysis

The discussion below provides a summary of survey results; avoidance and minimization efforts; direct, indirect, and cumulative project impacts; and compensatory mitigation measures for each biological resource area required to be analyzed according to CEQA, based on Appendix G (Environmental Checklist Form) of the CEQA Guidelines:

***CEQA Threshold**: Would the proposed Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?*

Special-Status Plant Species

No special-status plants were observed on the project site during the field investigation. Based on habitat requirements for specific species, the availability and quality of on-site habitats, and isolation of the site, it was determined that the project site has a low potential to support chaparral sand-verbena, Coachella Valley milk-vetch, pointed dodder, Arizona spurge, flat-seeded spurge, ribbed cryptantha, and winged cryptantha (refer to Attachment D). It was further determined that the remaining special-status wildlife species known to occur in the vicinity of the site do not have potential to occur and are presumed to be absent.

Of the aforementioned special-status plant species, Coachella Valley milk-vetch is federally listed as endangered and is listed as a covered species under the CVMSHCP. None of the other species are federally or state listed as endangered or threatened. No impacts to special-status plant species are expected to occur from project implementation, as long as the project is consistent with the CVMSHCP.

Special-Status Wildlife Species

The only special-status wildlife species observed during the field investigation was Costa's hummingbird. Based on habitat requirements for specific species and the availability and quality of on-site habitats, it was determined that the project site has a low potential to support prairie falcon, loggerhead shrike, and Coachella giant sand treader cricket (refer to Attachment D). It was further determined that all the other special-status wildlife species known to occur in the vicinity of the site do not have potential to occur and are presumed to be absent.

None of the aforementioned special-status wildlife species are federally or state listed as endangered or threatened and Costa's hummingbird and Coachella giant sand treader cricket are covered under the CVMSHCP. Prairie falcon is only expected to occur on-site during foraging, as no suitable nesting opportunities for prairie falcon are present within or near the project site. Limited nesting habitat for Costa's hummingbird and loggerhead shrike are present.

In order to ensure impacts to special-status avian species do not occur from implementation of the proposed project, a pre-construction nesting bird clearance survey shall be conducted prior to ground disturbance. With implementation of the pre-construction nesting bird clearance survey, impacts to special-status avian species will be less than significant.

Recommended mitigation measure:

1. Nesting birds are protected pursuant to the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (Sections 3503, 3503.3, 3511, and 3513 of the California Fish and Game Code prohibit the take, possession, or destruction of birds, their nests or eggs). In order to protect migratory bird species, a nesting bird clearance survey should be conducted prior to any ground disturbance or vegetation removal activities that may disrupt the birds during the nesting season. Consequently, if avian nesting behaviors are disrupted, such as nest abandonment and/or loss of reproductive effort, it is considered "take" and is potentially punishable by fines and/or imprisonment.

   If construction occurs between February 1st and August 31st, a pre-construction clearance survey for nesting birds should be conducted within three (3) days of the start of any vegetation removal or ground disturbing activities to ensure that no nesting birds will be disturbed during construction. The biologist conducting the clearance survey should document a negative survey with a brief letter report indicating that no impacts to active avian nests will occur. If an active avian nest is discovered during the pre-construction clearance survey, construction activities should stay outside of a no-disturbance buffer. The size of the no-disturbance buffer will be determined by the wildlife biologist and will depend on the level of noise and/or surrounding anthropogenic disturbances, line of sight between the nest and the construction activity, type and duration of construction activity, ambient noise, species habituation, and topographical barriers. These factors will be evaluated on a case-by-case basis when developing buffer distances. Limits of construction to avoid an active nest will be established in the field with flagging, fencing, or other appropriate barriers; and construction personnel will be instructed on the sensitivity of nest areas. A biological monitor should be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by the construction activity. Once the young have fledged and left the nest, or the nest otherwise becomes inactive under natural conditions, construction activities within the buffer area can occur.

CEQA Threshold: *Would the proposed Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?*

Riparian Habitat and Special-Status Natural Communities

No jurisdictional drainage and/or wetland features were observed on or near the project site during the field investigation. Further, no blueline streams have been recorded on the project site. Therefore, development of the project will not result in impacts to Corps, Regional Board, or CDFW jurisdiction and regulatory approvals will not be required.

No sensitive habitats were identified within the Project site. Thus, no sensitive natural communities will be impacted from Project implementation.

CEQA Threshold: *Would the proposed Project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

Federally Protected Wetlands

No inundated areas, wetland features, or wetland plant species that would be considered wetlands as defined by Section 404 of the Clean Water Act occur within the proposed Project footprint. As a result, implementation of the proposed Project would not result in any impacts or have substantial adverse effect on federally protected wetlands.

CEQA Threshold: *Would the proposed Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

Wildlife Corridors

The project site has not been identified as occurring in a wildlife corridor or linkage. The nearest open space to the site as mapped by the CVMSHCP is the Willow Hole Conservation Area, which occurs approximately 1.77 miles to the northeast. In addition, there are no riparian corridors, creeks, or useful patches of steppingstone habitat (natural areas) within or connecting the site to a recognized wildlife corridor or linkage. As such, implementation of the proposed project is not expected to impact wildlife movement opportunities. Therefore, impacts to wildlife corridors or linkages are not expected to occur.

CEQA Threshold: *Would the proposed Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

Local Policies or Ordinances

There are no local policies or ordinances that pertain to the proposed project. Therefore, impacts to local polices or ordinances are not expected to occur from development of the proposed project, and mitigation is not required.

CEQA Threshold: *Would the proposed Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state Habitat Conservation Plan?*

Local, Regional, and State Plans

The project site is located within the boundaries of the CVMSHCP Area, but is not located within any Conservation Areas, Preserves, Cores, or Linkages. The proposed project is not listed as a planned "Covered Activity" under the published CVMSHCP, but is still considered to be a current Covered Activity pursuant to Section 7.1 of the CVMSHCP. As a Covered Activity located outside designated conservation areas, construction of the proposed project is expected to be consistent with the applicable avoidance, minimization, and mitigation measures described in Section 4.4 of the CVMSHCP. Since the proposed project is considered a Covered Activity under Section 7.1 of the CVMSHCP, no further avoidance, minimization, and mitigation measures are required, and the project is in compliance with the CVMSHCP.

Please do not hesitate to contact Tom McGill at (951) 285-6014 or tmcgill@elmtconsulting.com or Travis McGill at (909) 816-1646 or travismcgill@elmtconsulting.com should you have any questions regarding this proposal.

Sincerely,

Thomas J. McGill, Ph.D.
Managing Director

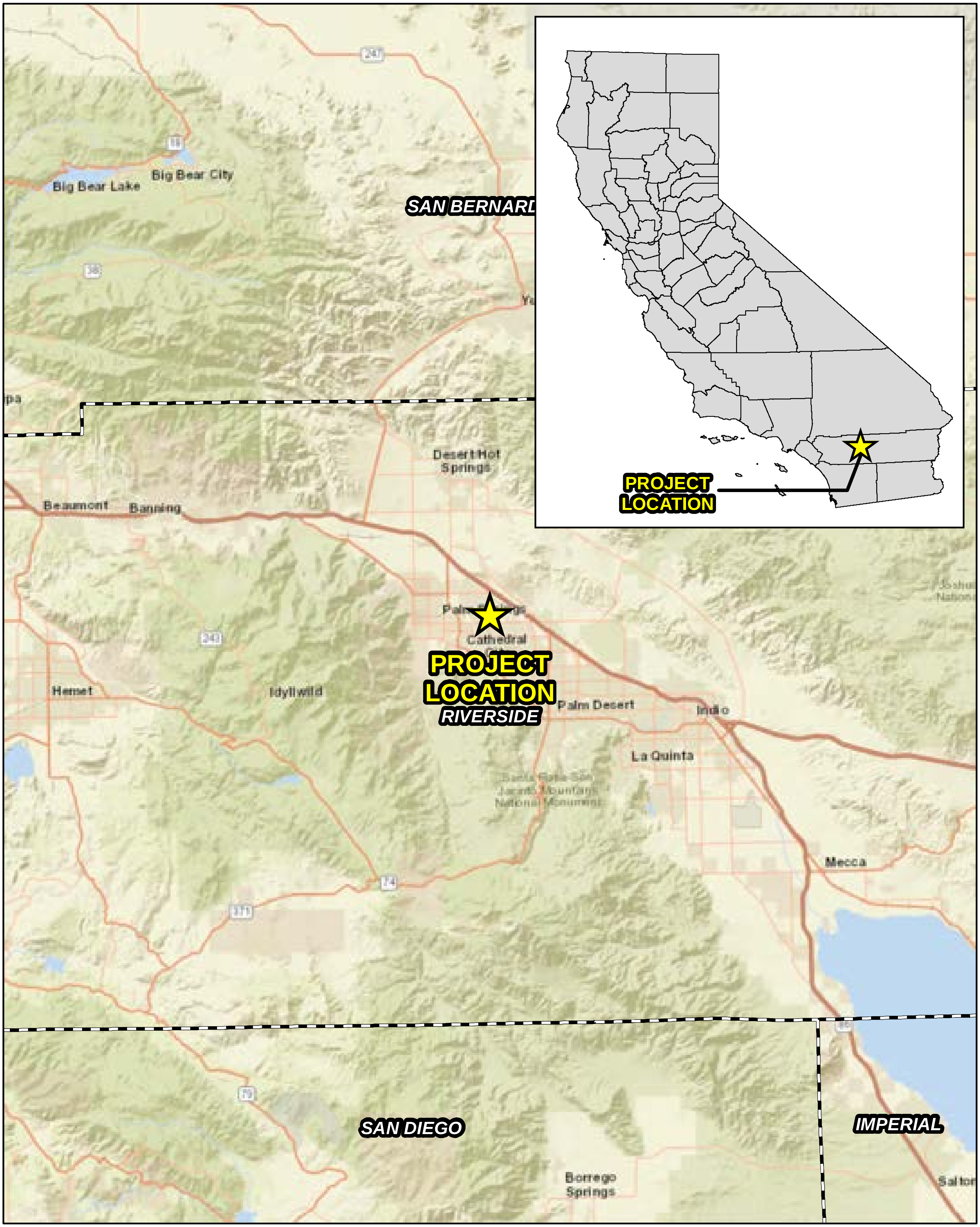
Travis J. McGill
Director

Attachments:

A. *Project Exhibits*
B. *Site Plan*
C. *Site Photographs*
D. *Potentially Occurring Special-Status Biological Resources*
E. *Regulations*

Attachment A

Project Exhibits



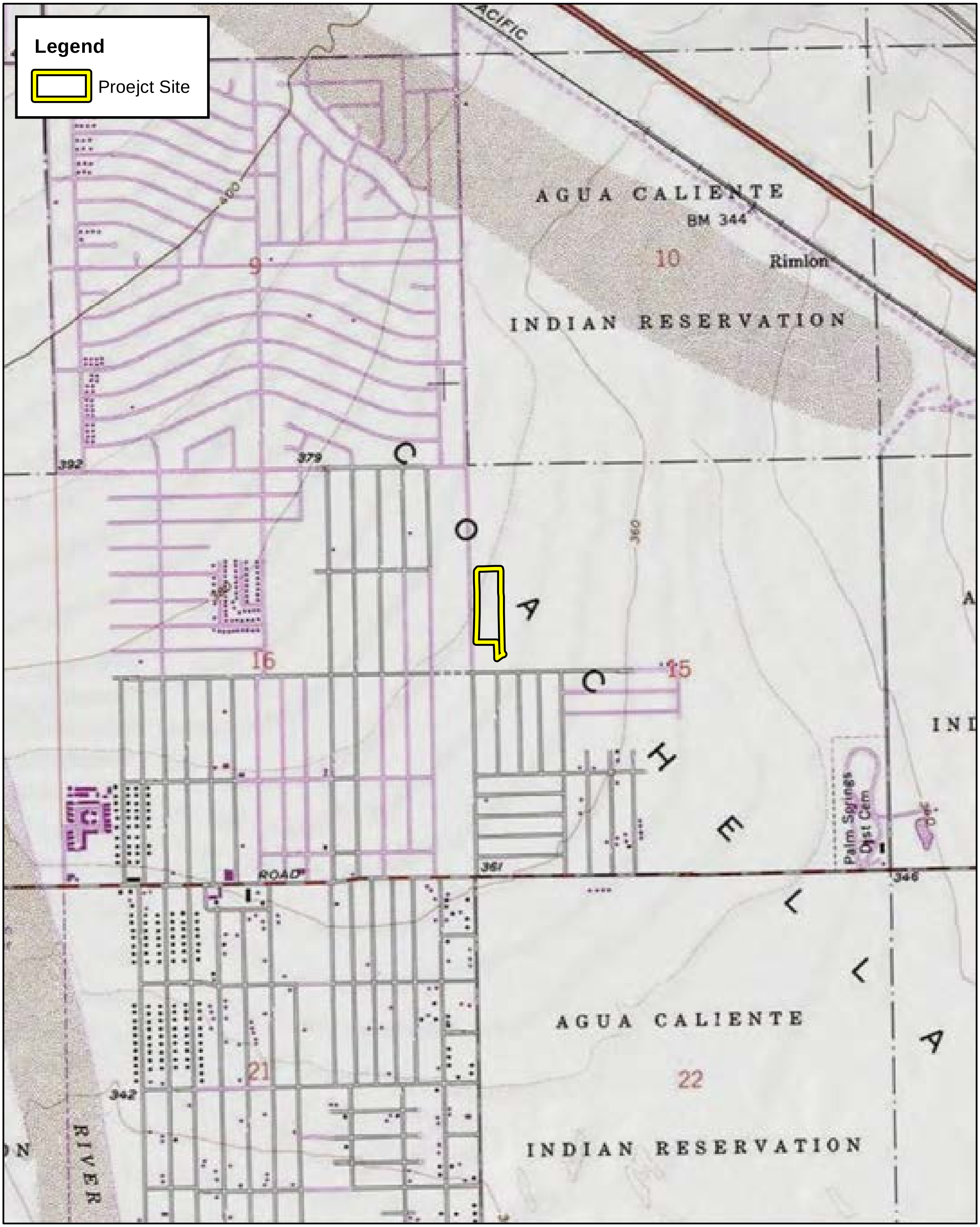
HABITAT ASSESSMENT AND CVMSHCP CONSISTENCY ANALYSIS
DATE PALM DRIVE AND ROSEMONT ROAD

Regional Vicinity

0 2.5 5 10 Miles

Source: World Street Map, Riverside County

Exhibit 1



HABITAT ASSESSMENT AND CVMSHCP CONSISTENCY ANALYSIS
DATE PALM DRIVE AND ROSEMONT ROAD

0 1,000 2,000 4,000 Feet

Site Vicinity

Source: USA Topographic Map, Riverside County

Exhibit 2

HABITAT ASSESSMENT AND CVMSHCP CONSISTENCY ANALYSIS
DATE PALM DRIVE AND ROSEMONT ROAD

0 62.5 125 250
Feet

Source: ESRI Aerial Imagery, Riverside County

Project Site

Exhibit 3

HABITAT ASSESSMENT AND CVMSHCP CONSISTENCY ANALYSIS
DATE PALM DRIVE AND ROSEMONT ROAD

ELMT CONSULTING

0 62.5 125 250 Feet

Soils

Source: ESRI Aerial Imagery, Soil Survey Geographic Database, Riverside County

Exhibit 4

HABITAT ASSESSMENT AND CVMSHCP CONSISTENCY ANALYSIS
DATE PALM DRIVE AND ROSEMONT ROAD

ELMT CONSULTING

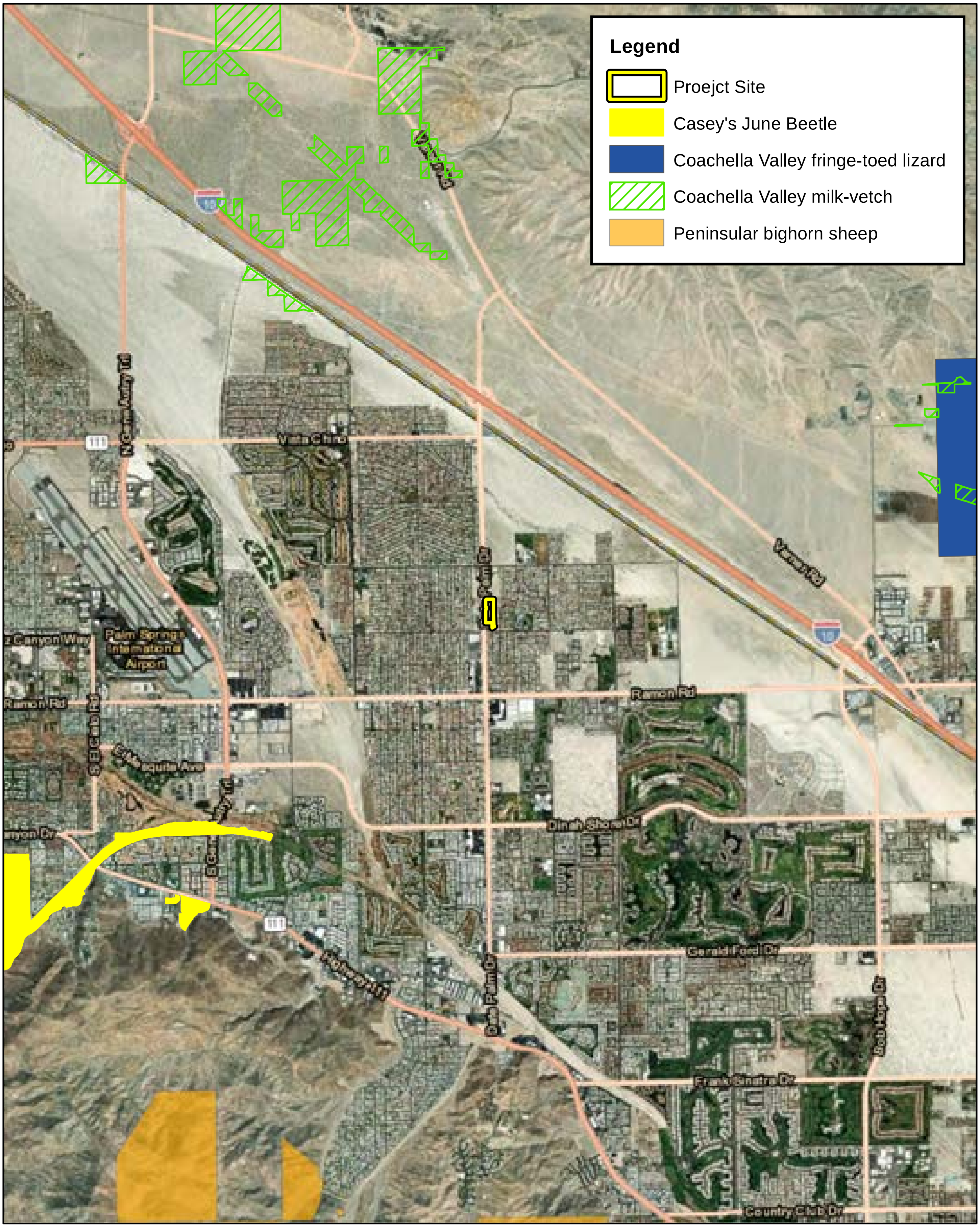
N

0 62.5 125 250
Feet

Vegetation

Source: ESRI Aerial Imagery, Riverside County

Exhibit 5



HABITAT ASSESSMENT AND CVMSHCP CONSISTENCY ANALYSIS
DATE PALM DRIVE AND ROSEMONT ROAD

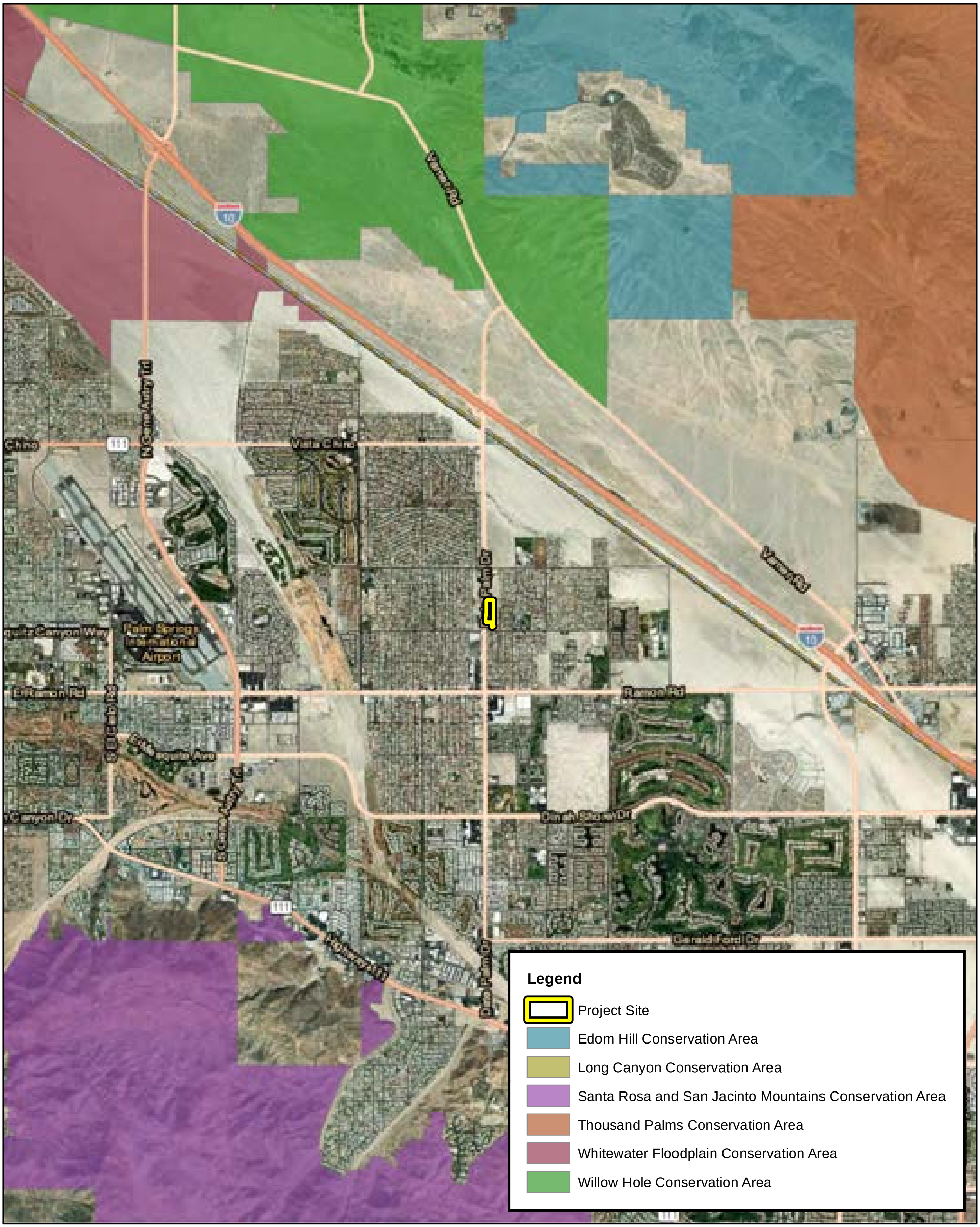
ELMT CONSULTING

0 0.5 1 2 Miles

Critical Habitat

Source: ESRI Aerial Imagery, USFWS Critical Habitat, Riverside County

Exhibit 6



HABITAT ASSESSMENT AND CVMSHCP CONSISTENCY ANALYSIS
DATE PALM DRIVE AND ROSEMONT ROAD

ELMT CONSULTING

0 0.5 1 2 Miles

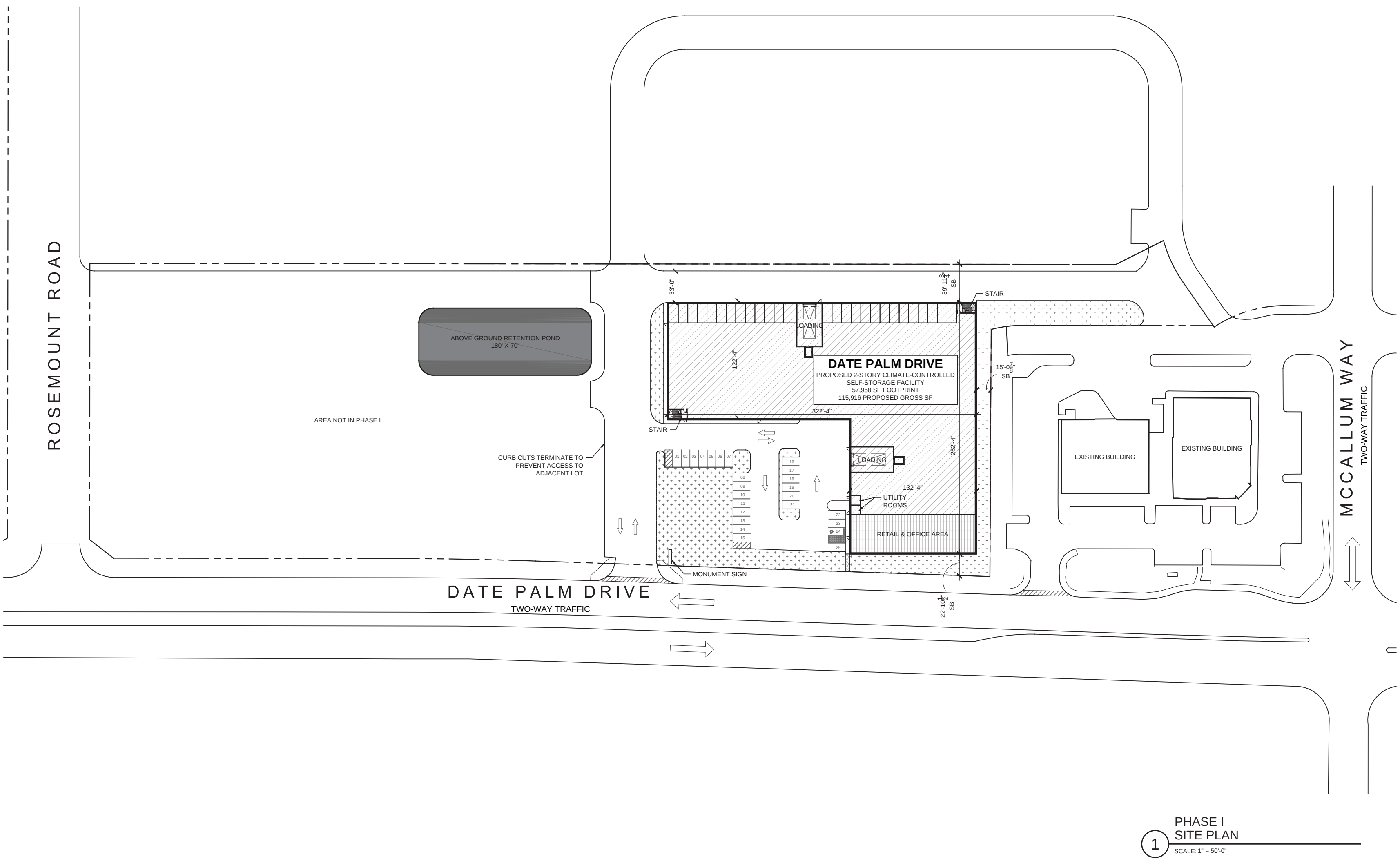
CVMSHCP Conservation Areas

Source: ESRI Aerial Imagery, CVMSHCP, Riverside County

Exhibit 7

Attachment B

Site Plan



SITE KEY

	LANDSCAPE AREA - 24,554 SF TOTAL
	PROPOSED SELF-STORAGE FACILITY 115,916 GROSS SF
	PROPOSED RETAIL AREA 5,448 GROSS SF
	PROPOSED ADA WALKWAY

25 TOTAL PARKING SPACES

PHASE I
SITE PLAN
SCALE: 1" = 50'-0"

NOT FOR CONSTRUCTION

04/04/23 - ISSUED FOR REVIEW

SGW ARCHITECTURE & DESIGN
444 N MICHIGAN AVE
SUITE 1850
CHICAGO, IL 60611
Ph 312.988.7412
Fx 312.988.7409
www.sgwarch.com
PROFESSIONAL DESIGN FIRM
License Number: 184-001505
Expiration Date: April 30, 2023

The Altum Group
Strive Higher
44-600 VILLAGE COURT
SUITE 100
PALM DESERT, CA 92260
Ph 760.346.4750
Fx 760.340.0089

PRINCIPAL: MS P.M.: CP
QC BY: DRAWN BY: BW, AB

NO	DATE	ISSUE DESCRIPTION
1	04/04/23	ISSUE FOR OWNER REVIEW

0 10' 30' 50' 100'
SCALE: 1" = 50'

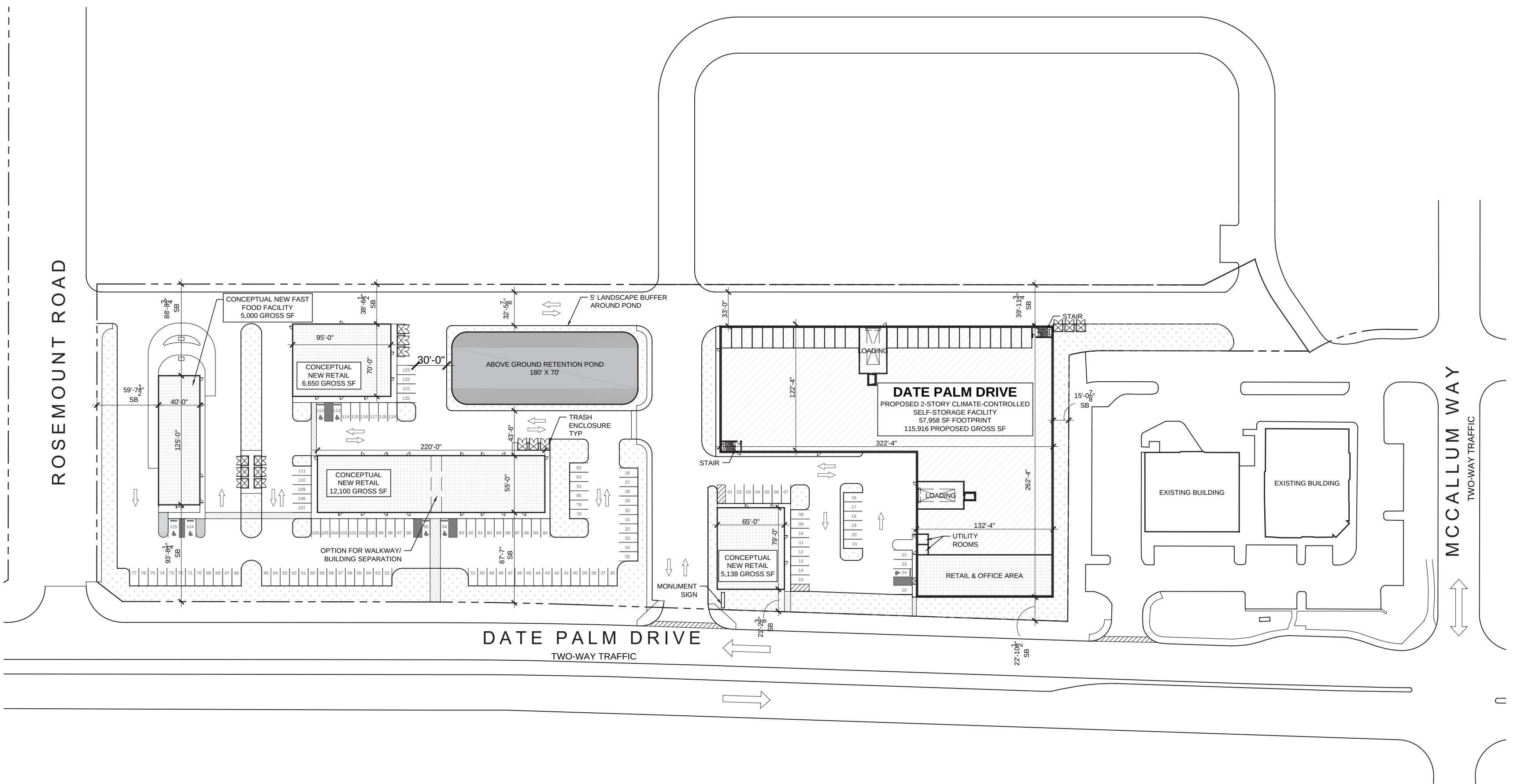
DATE PALM DRIVE

CATHEDRAL CITY, CA 92234

SITE PLAN - PHASE I

NORTH

A0-01



1 PHASE II SITE PLAN
SCALE: 1" = 50'-0"

SITE KEY

- LANDSCAPE AREA - 44,112 SF TOTAL
- PROPOSED SELF-STORAGE FACILITY 115,916 GROSS SF
- PROPOSED RETAIL AREA 34,333 GROSS SF
- PROPOSED ADA WALKWAY

125 TOTAL PARKING SPACES

SGW ARCHITECTURE & DESIGN
444 N MICHIGAN AVE
SUITE 1850
CHICAGO, IL 60611
Ph 312.988.7412
Fx 312.988.7409
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SUITE 100
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Ph 760.346.4750
Fx 760.340.0089

04/04/23 - ISSUED FOR REVIEW
NOT FOR CONSTRUCTION

CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO PROCEEDING WITH CONSTRUCTION AND NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES OR CONFLICTS.

PRINCIPAL: MS P.M.: CP
QC BY: DRAWN BY: BW, AB

NO	DATE	ISSUE DESCRIPTION
1	04/04/23	ISSUE FOR OWNER REVIEW

0 10' 30' 50' 100'
SCALE: 1" = 50'

DATE PALM DRIVE

CATHEDRAL CITY, CA 92234

SITE PLAN - PHASE II

NORTH

A0-02

Attachment C

Site Photographs

Photograph 1: From the northwest corner of the project site looking south along the western boundary.

Photograph 2: From the northwest corner of the project site looking east along the northern boundary.

Photograph 3: From the northeast corner of the project site looking west along the northern boundary.

Photograph 4: From the northeast corner of the project site looking south along the eastern boundary.

Photograph 5: From the southeast corner of the project site looking north along the eastern boundary.

Photograph 6: From the middle of the southern boundary of the project site looking north.

Photograph 7: From the southwest corner of the project site looking east along the southern boundary.

Photograph 8: From the southwest corner of the project site looking north along the western boundary.

Attachment D

Potentially Occurring Special-Status Biological Resources

Table D-1: Potentially Occurring Special-Status Biological Resources

Scientific Name Common Name	**Status**	**Habitat**	**Observed On-site**	**Potential to Occur**
SPECIAL-STATUS WILDLIFE SPECIES				
Athene cunicularia burrowing owl	Fed: None CA: SSC CVMSHCP: Covered	Primarily a grassland species, but it persists and even thrives in some landscapes highly altered by human activity. Occurs in open, annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. The overriding characteristics of suitable habitat appear to be burrows for roosting and nesting and relatively short vegetation with only sparse shrubs and taller vegetation.	No	**Presumed Absent** The project site provides line-of-sight opportunities favored by burrowing owls; however, no suitable burrows (>4 inches) were observed. No burrowing owls or sign were observed.
Crotalus ruber red-diamond rattlesnake	Fed: None CA: SSC CVMSHCP: Not Covered	It can be found from the desert, through dense chaparral in the foothills (it avoids the mountains above around 4,000 feet), to warm inland mesas and valleys, all the way to the cool ocean shore. It is most commonly associated with heavy brush with large rocks or boulders. Dense chaparral in the foothills, cactus or boulder associated coastal sage scrub, oak and pine woodlands, and desert slope scrub associations are known to carry populations of the northern red-diamond rattlesnake; however, chamise and red shank associations may offer better structural habitat for refuges and food resources for this species than other habitats.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Dinacoma caseyi Casey's June beetle	Fed: **END** CA: None CVMSHCP: Not Covered	All *Dinacoma* populations are associated with alluvial sediments occurring in or contiguous with bases of desert alluvial fans, and the broad, gently sloping, depositional surfaces at the base of the Santa Rosa mountain ranges in the dry Coachella valley region. Most commonly associated with the Carsitas series soil.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Falco mexicanus prairie falcon	Fed: None CA: WL CVMSHCP: Not Covered	Commonly occur in arid and semiarid shrubland and grassland community types. Also occasionally found in open parklands within coniferous forests. During the breeding season, they are found commonly in foothills and mountains which provide cliffs and escarpments suitable for nest sites.	No	**Low** There is suitable foraging habitat present within and adjacent to the project site. No suitable nesting opportunities are present.
Habropoda pallida white-faced bee	Fed: None CA: None CVMSHCP: Not Covered	Builds nests in clay-rich sandy slopes along water courses in the Mojave Desert. In California, it occurs from Into County south to Imperial County and east to the Nevada and Arizona borders. Prefers areas with a high density of creosote and dune-restricted endemic plants.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.

Scientific Name Common Name	Status	Habitat	Observed On-site	Potential to Occur
Lanius ludovicianus loggerhead shrike	Fed: None CA: SSC CVMSHCP: Not Covered	Often found in broken woodlands, shrublands, and other habitats. Prefers open country with scattered perches for hunting and fairly dense brush for nesting.	No	**Low** Limited foraging and nesting habitat are present within and adjacent to the project site.
Lasiurus xanthinus western yellow bat	Fed: None CA: SSC CVMSHCP: Not Covered	Roosts in palm trees in foothill riparian, desert wash, and palm oasis habitats with access to water for foraging.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Macrobaenetes valgum Coachella giant sand treader cricket	Fed: None CA: None CVMSHCP: Covered	Nocturnal and moisture sensitive insects. Emergence occurs with winter rains and appear at maximum densities in January-February. Can be detected via their characteristic delta-shaped burrow excavations.	No	**Low** There is suitable habitat present within and adjacent to the project site.
***Ovis canadensis nelsoni* pop. 2** Peninsular bighorn sheep DPS	Fed: **END** CA: **THR**; FP CVMSHCP: Covered	Preferred habitat is near mountainous terrain above the desert floor that is visually open, as well as steep and rocky. Most Mojave Desert mountain ranges satisfy these requirements well. Surface water is another element that is considered important to population health. Found mainly in the Peninsular Ranges.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Perognathus longimembris bangsi Palm Springs pocket mouse	Fed: None CA: SSC CVMSHCP: Covered	Inhabits areas having flat to gently sloping topography, sparse to moderate vegetative cover, and loosely packed or sandy soils on slopes ranging from 0% to approximately 15%. Remaining habitat in the Coachella Valley and environs is about 142,000 acres.	No	**Presumed Absent** Limited habitat is present; however, historic and ongoing disturbance and isolation of the site likely preclude this species from occurring.
Phrynosoma mcallii flat-tailed horned lizard	Fed: None CA: SSC CVMSHCP: Covered	Typical habitat is sandy desert hardpan or gravel flats with scattered sparse vegetation of low species diversity. Most common in areas with high density of harvester ants and fine windblown sand, but rarely occurs on dunes.	No	**Presumed Absent** Limited habitat is present; however, historic and ongoing disturbance and isolation of the site likely preclude this species from occurring.
Polioptila californica californica coastal California gnatcatcher	Fed: **THR** CA: SSC CVMSHCP: Not Covered	Obligate resident of sage scrub habitats that are dominated by California sagebrush. This species generally occurs below 750 feet elevation in coastal regions and below 1,500 feet inland. It prefers habitat with more low-growing vegetation.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.

Scientific Name Common Name	Status	Habitat	Observed On-site	Potential to Occur
Setophaga petechia yellow warbler	USFWS: None CDFW: SSC CVMSHCP: Covered	Nests over all of California except the Central Valley, the Mojave Desert region, and high altitudes and the eastern side of the Sierra Nevada. Winters along the Colorado River and in parts of Imperial and Riverside Counties. Nests in riparian areas dominated by willows, cottonwoods, sycamores, or alders or in mature chaparral. May also use oaks, conifers, and urban areas near stream courses.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
***Stenopelmatus cahuilaensis* [*Ammopelmatus cahuiaensis*]** Coachella Valley Jerusalem cricket	Fed: None CA: None CVMSHCP: Covered	Restricted to desert dunes.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Toxostoma lecontei Le Conte's thrasher	Fed: None CA: SSC CVMSHCP: Covered	An uncommon to rare, local resident in southern California deserts from southern Mono Co. south to the Mexican border, and in western and southern San Joaquin Valley. Occurs primarily in open desert wash, desert scrub, alkali desert scrub, and desert succulent shrub habitats; also occurs in Joshua tree habitat with scattered shrubs.	No	**Presumed Absent** Limited habitat is present within and adjacent to the project site; however, the site is isolated from known occupied areas.
Uma inornata Coachella Valley fringe-toed lizard	Fed: **THR** CA: **END** CVMSHCP: Covered	Sparsely-vegetated arid areas with fine wind-blown sand, including dunes, washes, and flats with sandy hummocks formed around the bases of vegetation. Needs fine, loose sand for burrowing.	No	**Presumed Absent** Limited habitat is present; however, historic and ongoing disturbance and isolation of the site likely preclude this species from occurring.
Xerospermophilus tereticaudus chlorus Coachella Valley round-tailed ground squirrel	Fed: None CA: SSC CVMSHCP: Covered	Inhabits sandy arid regions of Lower Sonoran Life Zone. Its scrub and wash habitats include mesquite and creosote dominated sand dunes, creosote bush scrub, palo verde and saltbush/alkali scrub.	No	**Presumed Absent** Limited habitat is present; however, historic and ongoing disturbance and isolation of the site likely preclude this species from occurring.
SPECIAL-STATUS PLANT SPECIES				
Abronia villosa* var. *aurita chaparral sand-verbena	Fed: None CA: None CNPS: 1B.1 CVMSHCP: Not Covered	Grows within chaparral, coastal scrub, and desert dunes habitats in areas of full sun and sandy soils. Found at elevations ranging from 245 to 5,249 feet. Blooming period is from January to September.	No	**Low** Limited habitat is present within and adjacent to the project site.
Astragalus hornii* var. *hornii Horn's milk-vetch	Fed: None CA: None CNPS: 1B.1 CVMSHCP: Not Covered	Occurs in lake margins in playas, meadows and seeps. Found at elevations ranging from 197 to 2,789 feet. Blooming period is from May to October.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.

Scientific Name Common Name	Status	Habitat	Observed On-site	Potential to Occur
Astragalus lentiginosus* var. *borreganus Borrego milk-vetch	Fed: None CA: None CNPS: 4.3 CVMSHCP: Not Covered	Grows in sandy soils within Mojavean desert scrub and Sonoran desert scrub. Found at elevations ranging from 98 to 1,050 feet in elevation. Blooming period is from February to May.	No	**Low** There is suitable habitat present within or adjacent to the project site.
Astragalus lentiginosus* var. *coachellae Coachella Valley milk-vetch	Fed: **END** CA: None CNPS: 1B.2 CVMSHCP: Covered	Preferred habitat includes desert dunes and sandy Sonoran desert scrub. Found at elevations ranging from 130 to 2,150 feet in elevation. Blooming period is from February to May.	No	**Low** Limited habitat is present within and adjacent to the project site.
Cuscuta californica* var. *apiculata pointed dodder	Fed: None CA: None CNPS: 3 CVMSHCP: Not Covered	Occurs in Mojavean desert scrub and Sonoran desert scrub habitats. Found at elevations ranging from 0 to 1640 feet. Blooming period is from February to August.	No	**Low** There is suitable habitat present within or adjacent to the project site.
Euphorbia arizonica Arizona spurge	Fed: None CA: None CNPS: 2B.3 CVMSHCP: Not Covered	Preferred habitat includes sandy, Sonoran desert scrub habitat. Found at elevations ranging from 164 to 984 feet. Blooming period is from March to April.	No	**Low** There is suitable habitat present within or adjacent to the project site.
Euphorbia platysperma flat-seeded spurge	Fed: None CA: None CNPS: 1B.2 CVMSHCP: Not Covered	Occurs within desert scrub and sandy Sonoran desert scrub habitats. Found at elevations ranging from 213 to 328 feet. Blooming period is from February to September.	No	**Low** There is suitable habitat present within or adjacent to the project site.
Johnstonella costata ribbed cryptantha	Fed: None CA: None CNPS: 4.3 CVMSHCP: Not Covered	Preferred habitat includes desert dunes, Mojavean desert scrub, and Sonoran desert scrub habitats on sandy soil. Found at elevations ranging from 197 to 1,640 feet. Blooming period is from February to May.	No	**Low** There is suitable habitat present within or adjacent to the project site.
Johnstonella holoptera winged cryptantha	Fed: None CA: None CNPS: 4.3 CVMSHCP: Not Covered	Found in Mojavean desert scrub and Sonoran desert scrub habitats. Found at elevations ranging from 328 to 5,545 feet. Blooming period is from March to April.	No	**Low** There is suitable habitat present within or adjacent to the project site.
Lycium torreyi Torrey's box-thorn	Fed: None CA: None CNPS: 4.2 CVMSHCP: Not Covered	Found in sandy, rocky, washes, streambanks and desert valleys in association with Mojavean and Sonoran Desert scrub habitats. Found at elevations ranging from 130 to 3,575 feet. Blooming period is from March to May.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Nemacaulis denudata* var. *gracilis slender cottonheads	Fed: None CA: None CNPS: 2B.2 CVMSHCP: Not Covered	Occurs in coastal dunes, desert dunes, and Sonoran desert scrub habitats. Found at elevations ranging from 164 to 1,312 feet. Blooming period is from March to May.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Selaginella eremophila desert spike-moss	Fed: None CA: None CNPS: 2B.2 CVMSHCP: Not Covered	Found in chaparral and Sonoran desert scrub habitats within gravelly or rocky soil. Found at elevations ranging from 656 to 2,953 feet. Blooming period is from May to July.	No	**Presumed Absent** The project site occurs outside of the known elevation range for this species.

Scientific Name Common Name	**Status**	**Habitat**	**Observed On-site**	**Potential to Occur**
Stemodia durantifolia purple stemodia	Fed: None CA: None CNPS: 2B.1 CVMSHCP: Not Covered	Occurs in Sonoran desert scrub habitats. Found at elevations ranging from 591 to 984 feet. Blooming period is from January to December.	No	**Presumed Absent** The project site occurs outside of the known elevation range for this species.
CDFW SENSITIVE HABITATS				
Desert Fan Palm Oasis Woodland	CDFW Sensitive Habitat	Rare plant community that is one of the most unusual biological resources located within the Coachella Valley. Found within canyons and along the San Andreas Fault Zone, where water occurs naturally. Generally characterized by open to dense groves of native desert fan palms, which are the most massive native palm in North America, growing more than 66 feet.	No	**Absent**

U.S. Fish and Wildlife Service (Fed) - Federal
END – Federal Endangered
THR – Federal Threatened

California Department of Fish and Wildlife (CA) - California
END – California Endangered
THR – California Threatened
FP – California Fully Protected
SSC – California Species of Special Concern
WL – California Watch List

California Native Plant Society (CNPS)
California Rare Plant Rank
1B Plants Rare, Threatened, or Endangered in California and Elsewhere
2B Plants Rare, Threatened, or Endangered in California, but More Common Elsewhere
3 More Information Needed
4 Plants of Limited Distribution – A Watch List

Threat Ranks
0.1- Seriously threatened in California
0.2- Moderately threatened in California
0.3- Not very threatened in California

Attachment E

Regulations

Special status species are native species that have been afforded special legal or management protection because of concern for their continued existence. There are several categories of protection at both federal and state levels, depending on the magnitude of threat to continued existence and existing knowledge of population levels.

Federal Regulations

Endangered Species Act of 1973

Federally listed threatened and endangered species and their habitats are protected under provisions of the Federal Endangered Species Act (ESA). Section 9 of the ESA prohibits "take" of threatened or endangered species. "Take" under the ESA is defined as to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any of the specifically enumerated conduct." The presence of any federally threatened or endangered species that are in a project area generally imposes severe constraints on development, particularly if development would result in "take" of the species or its habitat. Under the regulations of the ESA, the United States Fish and Wildlife Service (USFWS) may authorize "take" when it is incidental to, but not the purpose of, an otherwise lawful act.

Critical Habitat is designated for the survival and recovery of species listed as threatened or endangered under the ESA. Critical Habitat includes those areas occupied by the species, in which are found physical and biological features that are essential to the conservation of an ESA listed species and which may require special management considerations or protection. Critical Habitat may also include unoccupied habitat if it is determined that the unoccupied habitat is essential for the conservation of the species.

Whenever federal agencies authorize, fund, or carry out actions that may adversely modify or destroy Critical Habitat, they must consult with USFWS under Section 7 of the ESA. The designation of Critical Habitat does not affect private landowners, unless a project they are proposing uses federal funds, or requires federal authorization or permits (e.g., funding from the Federal Highway Administration or a permit from the U.S. Army Corps of Engineers (Corps)).

If USFWS determines that Critical Habitat will be adversely modified or destroyed from a proposed action, the USFWS will develop reasonable and prudent alternatives in cooperation with the federal institution to ensure the purpose of the proposed action can be achieved without loss of Critical Habitat. If the action is not likely to adversely modify or destroy Critical Habitat, USFWS will include a statement in its biological opinion concerning any incidental take that may be authorized and specify terms and conditions to ensure the agency is in compliance with the opinion.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 U.S. Government Code [USC] 703) makes it unlawful to pursue, capture, kill, possess, or attempt to do the same to any migratory bird or part, nest, or egg of any such bird listed in wildlife protection treaties between the United States, Great Britain, Mexico, Japan, and the countries of the former Soviet Union, and authorizes the U.S. Secretary of the Interior to protect and regulate the taking of migratory birds. It establishes seasons and bag limits for hunted species and protects migratory birds, their occupied nests, and their eggs (16 USC 703; 50 CFR 10, 21).

The MBTA covers the taking of any nests or eggs of migratory birds, except as allowed by permit pursuant to 50 CFR, Part 21. Disturbances causing nest abandonment and/or loss of reproductive effort (i.e., killing or abandonment of eggs or young) may also be considered "take." This regulation seeks to protect migratory birds and active nests.

In 1972, the MBTA was amended to include protection for migratory birds of prey (e.g., raptors). Six families of raptors occurring in North America were included in the amendment: Accipitridae (kites, hawks, and eagles); Cathartidae (New World vultures); Falconidae (falcons and caracaras); Pandionidae (ospreys); Strigidae (typical owls); and Tytonidae (barn owls). The provisions of the 1972 amendment to the MBTA protects all species and subspecies of the families listed above. The MBTA protects over 800 species including geese, ducks, shorebirds, raptors, songbirds and many relatively common species.

State Regulations

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA) provides for the protection of the environment within the State of California by establishing State policy to prevent significant, avoidable damage to the environment through the use of alternatives or mitigation measures for projects. It applies to actions directly undertaken, financed, or permitted by State lead agencies. If a project is determined to be subject to CEQA, the lead agency will be required to conduct an Initial Study (IS); if the IS determines that the project may have significant impacts on the environment, the lead agency will subsequently be required to write an Environmental Impact Report (EIR). A finding of non-significant effects will require either a Negative Declaration or a Mitigated Negative Declaration instead of an EIR. Section 15380 of the CEQA Guidelines independently defines "endangered" and "rare" species separately from the definitions of the California Endangered Species Act (CESA). Under CEQA, "endangered" species of plants or animals are defined as those whose survival and reproduction in the wild are in immediate jeopardy, while "rare" species are defined as those who are in such low numbers that they could become endangered if their environment worsens.

California Endangered Species Act (CESA)

In addition to federal laws, the state of California implements the CESA which is enforced by CDFW. The CESA program maintains a separate listing of species beyond the FESA, although the provisions of each act are similar.

State-listed threatened and endangered species are protected under provisions of the CESA. Activities that may result in "take" of individuals (defined in CESA as; "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill") are regulated by CDFW. Habitat degradation or modification is not included in the definition of "take" under CESA. Nonetheless, CDFW has interpreted "take" to include the destruction of nesting, denning, or foraging habitat necessary to maintain a viable breeding population of protected species.

The State of California considers an endangered species as one whose prospects of survival and reproduction are in immediate jeopardy. A threatened species is considered as one present in such small numbers throughout its range that it is likely to become an endangered species in the near future in the absence of special protection or management. A rare species is one that is considered present in such small numbers throughout its range that it may become endangered if its present environment worsens. State threatened and endangered species are fully protected against take, as defined above.

The CDFW has also produced a species of special concern list to serve as a species watch list. Species on this list are either of limited distribution or their habitats have been reduced substantially, such that a threat to their populations may be imminent. Species of special concern may receive special attention during environmental review, but they do not have formal statutory protection. At the federal level, USFWS also uses the label species of concern, as an informal term that refers to species which might be in need of concentrated conservation actions. As the Species of Concern designated by USFWS do not receive formal legal protection, the use of the term does not necessarily ensure that the species will be proposed for listing as a threatened or endangered species.

Fish and Game Code

Fish and Game Code Sections 3503, 3503.5, 3511, and 3513 are applicable to natural resource management. For example, Section 3503 of the Code makes it unlawful to destroy any birds' nest or any birds' eggs that are protected under the MBTA. Further, any birds in the orders Falconiformes or Strigiformes (Birds of Prey, such as hawks, eagles, and owls) are protected under Section 3503.5 of the Fish and Game Code which makes it unlawful to take, possess, or destroy their nest or eggs. A consultation with CDFW may be required prior to the removal of any bird of prey nest that may occur on a project site. Section 3511 of the Fish and Game Code lists fully protected bird species, where the CDFW is unable to authorize the issuance of permits or licenses to take these species. Pertinent species that are State fully protected by the State include golden eagle (*Aquila chrysaetos*) and white-tailed kite (*Elanus leucurus*). Section 3513 of the Fish and Game Code makes it unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

Native Plant Protection Act

Sections 1900–1913 of the Fish and Game Code were developed to preserve, protect, and enhance Rare and Endangered plants in the state of California. The act requires all state agencies to use their authority to carry out programs to conserve Endangered and Rare native plants. Provisions of the Native Plant Protection Act prohibit the taking of listed plants from the wild and require notification of the CDFW at least ten days in advance of any change in land use which would adversely impact listed plants. This allows the CDFW to salvage listed plant species that would otherwise be destroyed.

California Native Plant Society Rare and Endangered Plant Species

Vascular plants listed as rare or endangered by the CNPS, but which have no designated status under FESA or CESA are defined as follows:

California Rare Plant Rank

- 1A- Plants Presumed Extirpated in California and either Rare or Extinct Elsewhere

- 1B- Plants Rare, Threatened, or Endangered in California and Elsewhere

2A- Plants Presumed Extirpated in California, But More Common Elsewhere

2B- Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere

3- Plants about Which More Information is Needed - A Review List

4- Plants of Limited Distribution - A Watch List

Threat Ranks

.1- Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)

.2- Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

.3- Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known).

Local Policies

Coachella Valley MSHCP

A Multiple Species Habitat Conservation Plan (Plan) was prepared for the entire Coachella Valley and surrounding mountains to address current and potential future state and federal Endangered Species Act issues in the Plan Area. A Memorandum of Understanding ("Planning Agreement") was developed to govern the preparation of the Plan. In late 1995 and early 1996, under the auspices of CVAG, the cities of Cathedral City, Coachella, Desert Hot Springs, Indian Wells, Indio, La Quinta, Palm Desert, Palm Springs, and Rancho Mirage; County of Riverside (County); U.S. Fish and Wildlife Service (USFWS); California Department of Fish and Game (CDFG); Bureau of Land Management (BLM); U.S. Forest Service (USFS); and National Park Service (NPS) signed the Planning Agreement to initiate the planning effort. Subsequently, Caltrans, Coachella Valley Water District (CVWD), Imperial Irrigation District (IID), Riverside County Flood Control and Water Conservation District (County Flood Control), Riverside County Regional Park and Open Space District (County Parks), Riverside County Waste Resources Management District (County Waste), California Department of Parks and Recreation (State Parks), and CVMC decided to participate in the Plan.

The Plan balances environmental protection and economic development objectives in the Plan Area and simplifies compliance with endangered species related laws. The Plan is intended to satisfy the legal requirements for the issuance of Permits that will allow the Take of species covered by the Plan in the course of otherwise lawful activities. The Plan will, to the maximum extent practicable, minimize and mitigate the impacts of the Taking and provide for Conservation of the Covered Species.

The Conservation Plan includes the establishment of an MSHCP Reserve System, setting Conservation Objectives to ensure the Conservation of the Covered Species and conserved natural communities in the MSHCP Reserve System, provisions for management of the MSHCP Reserve System, and a Monitoring Program, and Adaptive Management. The MSHCP Reserve System will be established from lands within

21 Conservation Areas. Because some Take Authorization is provided under the Plan for Development in Conservation Areas, the actual MSHCP Reserve System will be somewhat smaller than the total acres in the Conservation Areas. When assembled, the Reserve System will provide for the Conservation of the Covered Species in the Plan Area.

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The Corps Regulatory Branch regulates activities pursuant to Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Of the State agencies, the CDFG regulates activities under the Fish and Game Code Section 1600-1616, and the Regional Board regulates activities pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act.

Federal Regulations

Section 404 of the Clean Water Act

In accordance with the Revised Definition of "Waters of the United States"; Conforming (September 8, 2023), "waters of the United Sates" are defined as follows:

(a) ***Waters of the United States*** means:

(1) Waters which are:
(i) Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
(ii) The territorial seas; or
(iii) Interstate waters;

(2) Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under paragraph (a)(5) of this section;

(3) Tributaries of waters identified in paragraph (a)(1) or (2) of this section that are relatively permanent, standing or continuously flowing bodies of water;

(4) Wetlands adjacent to the following waters:
(i) Waters identified in paragraph (a)(1) of this section; or
(ii) Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3) of this section and with a continuous surface connection to those waters;

(5) Intrastate lakes and ponds not identified in paragraphs (a)(1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3) of this section

(b) The following are not "waters of the United States" even where they otherwise meet the terms of paragraphs (a)(2) through (5) of this section:

(1) Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act;

(2) Prior converted cropland designated by the Secretary of Agriculture. The exclusion would cease upon a change of use, which means that the area is no longer available for the production of agricultural commodities. Notwithstanding the determination of an area's status as prior converted

cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA;

(3) Ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water;

(4) Artificially irrigated areas that would revert to dry land if the irrigation ceased;
(5) Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;
(6) Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;

(7) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States; and

(8) Swales and erosional features (*e.g.,* gullies, small washes) characterized by low volume, infrequent, or short duration flow.

(c) In this section, the following definitions apply:

(1) ***Wetlands*** means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

(2) ***Adjacent*** means having a continuous surface connection

(3) ***High tide line*** means the line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

(4) ***Ordinary high water mark*** means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

(5) ***Tidal waters*** means those waters that rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by hydrologic, wind, or other effects.

Section 401 of the Clean Water Act

Pursuant to Section 401 of the CWA, any applicant for a federal license or permit to conduct any activity which may result in any discharge to waters of the United States must provide certification from the State or Indian tribe in which the discharge originates. This certification provides for the protection of the physical, chemical, and biological integrity of waters, addresses impacts to water quality that may result from issuance of federal permits, and helps insure that federal actions will not violate water quality standards of the State or Indian tribe. In California, there are nine Regional Water Quality Control Boards (Regional Board) that issue or deny certification for discharges to waters of the United States and waters of the State, including wetlands, within their geographical jurisdiction. The State Water Resources Control Board assumed this responsibility when a project has the potential to result in the discharge to waters within multiple Regional Boards.

State Regulations

Fish and Game Code

Fish and Game Code Sections 1600 et. seq. establishes a fee-based process to ensure that projects conducted in and around lakes, rivers, or streams do not adversely impact fish and wildlife resources, or, when adverse impacts cannot be avoided, ensures that adequate mitigation and/or compensation is provided.

Fish and Game Code Section 1602 requires any person, state, or local governmental agency or public utility to notify the CDFW before beginning any activity that will do one or more of the following:

(1) substantially obstruct or divert the natural flow of a river, stream, or lake;
(2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or
(3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake.

Fish and Game Code Section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the State. CDFW’s regulatory authority extends to include riparian habitat (including wetlands) supported by a river, stream, or lake regardless of the presence or absence of hydric soils and saturated soil conditions. Generally, the CDFW takes jurisdiction to the top of bank of the stream or to the outer limit of the adjacent riparian vegetation (outer drip line), whichever is greater. Notification is generally required for any project that will take place in or in the vicinity of a river, stream, lake, or their tributaries. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish or other aquatic life and watercourses having a surface or subsurface flow that support or have supported riparian vegetation. A Section 1602 Streambed Alteration Agreement would be required if impacts to identified CDFW jurisdictional areas occur.

Porter Cologne Act

The California *Porter-Cologne Water Quality Control Act* gives the State very broad authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. The Porter-Cologne Act has become an important tool in the post SWANCC and Rapanos regulatory environment, with respect to the state's authority over isolated and insignificant waters. Generally, any person proposing to discharge waste into a water body that could affect its water quality must file a Report of Waste Discharge in the event that there is no Section 404/401 nexus. Although "waste" is partially defined as any waste substance associated with human habitation, the Regional Board also interprets this to include fill discharged into water bodies.

Appendix C

Cultural and Paleontological Resources

PALEOWEST

CULTURAL RESOURCE INVESTIGATION IN SUPPORT OF THE DATE PALM AND ROSEMOUNT STORAGE PROJECT, CATHEDRAL CITY, RIVERSIDE COUNTY, CALIFORNIA

08/09/2022

CULTURAL RESOURCE INVESTIGATION IN SUPPORT OF THE DATE PALM AND ROSEMOUNT STORAGE PROJECT, CATHEDRAL CITY, RIVERSIDE COUNTY, CALIFORNIA

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March 5, 2024

Keywords: CEQA; Cathedral City; Coachella valley; Riverside County; 7.1 acres; negative survey

MANAGEMENT SUMMARY

PaleoWest, LLC (PaleoWest) was contracted by The Altum Group to conduct a Phase I cultural resource assessment for the proposed Date Palm and Rosemount Storage Project (Project). The Project is planned to construct either retail uses with a 2-story indoor mini-storage facility, or a grocery store up to 50,000 square feet, 2-story indoor mini-storage facility, and retail uses, parking, landscaping, and a retention basin in Cathedral City, Riverside County, California. The Project requires compliance with the California Environmental Quality Act (CEQA). Cathedral City (City) is acting as the lead CEQA agency.

This report summarizes the methods and results of the cultural resource investigation of the Project area. The investigation included background research, communication with the Native American Heritage Commission (NAHC) and interested Native American tribal groups, and a pedestrian survey of the Project area. The purpose of the investigation was to determine the potential for the Project to impact archaeological and historical resources under CEQA.

A cultural resource records search and literature review was conducted at the Eastern Information Center of the California Historical Resource Information System on July 6, 2023. The records search indicated that no fewer than 13 previous studies have been conducted within 1 mile (mi) of the Project area. These studies have resulted in the documentation of four cultural resources within 1 mi of the Project area, all of which are historic period isolated finds composed of sanitary cans. None of these previously documented resources are mapped within the Project area.

As part of the cultural resource assessment of the Project area, PaleoWest also requested a search of the Sacred Lands File from the NAHC on February 28, 2023. Results indicate that there are no known Native American cultural resources within the immediate Project area. The NAHC suggested contacting 18 individuals representing 12 Native American tribal groups to find out if they have additional information about the Project area. The 12 recommended tribal groups were contacted. To date, six responses have been received.

PaleoWest conducted a pedestrian survey of the Project area on July 17, 2023. No archaeological or built-environment resources were identified during the survey, but geoarchaeological data indicate that the Project area is moderately sensitive for buried archaeological deposits. PaleoWest recommends that an archaeological monitor be retained to observe ground disturbing activities during the initial phases of construction. If the qualified archaeologist determines that the construction activities have little or no potential to impact cultural resources (e.g., excavations are within previously disturbed, non-native soils, or within soil formations not expected to yield cultural resources deposits), then monitoring may be reduced or eliminated.

In the event that potentially significant cultural resources are encountered during construction activities associated with the Project, a qualified archaeologist shall be obtained to assess the significance of the find in accordance with the criteria set forth in the California Register of Historic Places. In addition, Health and Safety Code 7050.5, CEQA 15064.5(e), and Public Resources Code 5097.98 mandate the process to be followed in the unlikely event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

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APPENDICES

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1 INTRODUCTION

PaleoWest, LLC (PaleoWest) was contracted by The Altum Group to conduct a Phase I cultural resource assessment for the proposed Date Palm and Rosemount Storage Project (Project). The Project involves the development of an approximately 7-acre parcel in Cathedral City, Riverside County, California. The Project requires compliance with the California Environmental Quality Act (CEQA). Cathedral City (City) is acting as the lead CEQA agency.

1.1 PROJECT LOCATION AND DESCRIPTION

The Project area is in Cathedral City, east of Date Palm Avenue on an undeveloped lot between Mccallum Way to the south and Rosemount Road to the north (Figure 1-1). The Project area is on Assessor's Parcel Numbers (APNs) 670110048, 670110049, 670110050, 670110051, 670110052, 670110053, and 670110056, and totals approximately 7.1 acres. As shown in Figure 1-2, the Project area is within Section 15, Township (T) 4 South (S), Range (R) 5 East (E), San Bernardino Baseline and Meridian (SBBM), as depicted on the Cathedral City, California 7.5' U.S. Geological Survey (USGS) topographic quadrangle. The elevation of the Project area is between 118 meters (m; 386 ft) above mean sea level (amsl) and 119 m (389 ft) amsl.

The proposed Project includes the development of approximately seven (7) acres located in the city of Cathedral City, east of Date Palm Drive, between Rosemount Road to the north and McCallum Way to the south. The project will require a recommendation from the Planning Commission and for City Council to take final action on an entitlement and legislative action for parcels including APN: 670-110-48, 49, 50, 51, 52, 53, & 56. The proposed project includes the below:

A Design Review and Lot Merger for the construction of a 2-story indoor mini-storage facility with a total area of 115,054 square feet at 57,527 square feet per floor. The current zoning of the site is Specific Plan No. 99-58 with the underlying zone of PCC (Planned Community Commercial) District.

A Specific Plan Amendment to create Planning Unit 4 which would allow the indoor mini-storage use and a 50,000 square foot grocery store as well as changes to the development code, new streamlined architectural standards, and updated list of permitted and conditional land uses.

The Mitigated Negative Declaration was processed at full buildout so that future entitlements would not have to obtain separate Mitigated Negative Declarations. At full buildout the project could include either of two scenarios: retail uses with a 2-story indoor mini-storage facility, or a grocery store up to 50,000 square feet, 2-story indoor mini-storage facility, and retail uses. The project is currently being proposed as a phased project and each future proposal would require its own entitlement consistent with the Mitigated Negative Declaration. The Design Review only includes the indoor mini-storage facility, underground retention basin, and a minimum of 12 spaces for on-site parking.

With regard to CEQA, the proposed Project would be developed with phased construction which includes the operation of a 2-story 115,054 square foot (sf) indoor climate-controlled mini-storage facility with 57,527 square feet per floor. The indoor mini-storage facility includes climate-controlled self-storage, retail, office, and loading areas. The CEQA Analysis includes two scenarios, scenario one would include the first phase which would be an approximate two (2) story 115,054 square feet (sf) at 57,527 sf per floor, climate controlled self-storage facility with associated retail, office, and loading areas and Phase 2 would include one (1) retail building approximately 4,725 sf in size, two (2) drive through facilities with areas of 2,413 sf and 4,617 sf respectively, and two (2) retail buildings with areas of 3,217 sf each. Scenario two would include the two (2) story 115,054 square feet (sf) at 57,527 sf per floor, climate-controlled self-storage facility with associated retail, office, and loading Units and one (1) grocery store/big box building with a maximum Unit of 50,000 sf, and a retail building with a Unit of 4,725 sf. Both alternatives will have on-site landscaping, on-site parking, signage, low walls, along frontage, and underground retention for on-site water retention.

1.2 REPORT ORGANIZATION

This report documents the results of a cultural resource investigation conducted for the proposed Project. Section 1 has introduced the Project location and description. Section 2 states the regulatory context that should be considered for the Project. Section 3 synthesizes the natural and cultural setting of the Project area and surrounding region. The results of the existing cultural resource data literature and resource record review, the Sacred Lands File (SLF) search, and a summary of the Native American communications is presented in Section 4. The field methods and results are outlined in Section 5, and management recommendations are provided in Section 6. This is followed by bibliographic references and appendices.

Figure 1-1. Project vicinity map.

Figure 1-2. Project location map.

2 REGULATORY CONTEXT

2.1 STATE

2.1.1 California Environmental Quality Act

The proposed Project is subject to compliance with CEQA, as amended in 2018. Compliance with CEQA statutes and guidelines requires both public and private projects with financing or approval from a public agency to assess the project's impact on cultural resources (Public Resources Code Section 21082, 21083.2 and 21084 and California Code of Regulations 10564.5). The first step in the process is to identify cultural resources that may be impacted by the project and then determine whether the resources are "historically significant" resources.

CEQA defines historically significant resources as "resources listed or eligible for listing in the California Register of Historical Resources (CRHR)" (Public Resources Code Section 5024.1). A cultural resource may be considered historically significant if the resource is 45 years old or older, possesses integrity of location, design, setting, materials, workmanship, feeling, and association, and meets any of the following criteria for listing on the CRHR:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or,
4. Has yielded, or may be likely to yield, information important in prehistory or history (Public Resources Code Section 5024.1).

Cultural resources are buildings, sites, humanly modified landscapes, traditional cultural properties, structures, or objects that may have historical, architectural, cultural, or scientific importance. CEQA states that if a project will have a significant impact on important cultural resources, deemed "historically significant," then project alternatives and mitigation measures must be considered.

2.1.2 California Assembly Bill 52

Signed into law in September 2014, California Assembly Bill 52 (AB 52) created a new class of resources—tribal cultural resources (TCRs)—for consideration under CEQA. TCRs may include sites, features, places, cultural landscapes, sacred places, or objects with cultural value to a California Native American tribe that are listed or determined to be eligible for listing in the CRHR, included in a local register of historical resources, or a resource determined by the lead CEQA agency, in its discretion and supported by substantial evidence, to be significant and eligible for listing on the CRHR. AB 52 requires that the lead CEQA agency consult with California Native American tribes that have requested consultation for projects that may affect tribal cultural resources. The lead CEQA agency shall begin consultation with participating

Native American tribes prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report. Under AB 52, a project that has potential to cause a substantial adverse change to a tribal cultural resource constitutes a significant effect on the environment unless mitigation reduces such effects to a less than significant level.

2.2 LOCAL

2.2.1 City of Cathedral City Comprehensive General Plan

The City's Comprehensive General Plan includes an Archaeological and Historic Resources Element (City of Cathedral City 2009). This element identifies goals, policies, and programs to ensure that cultural heritage and historic traditions of the City of Cathedral City and its vicinity are preserved. The goal of the element is identification, preservation, and revitalization of significant cultural, historical and archaeological resources that are valuable to the City of Cathedral City's heritage. The following policies and programs have been established to help reach that goal.

Policies:

1. The City will ensure that sites in archaeologically and historically sensitive areas are surveyed prior to development.

   Program 1.A: Develop and maintain a database of archaeological and historic resources, incorporating information from the Eastern Information Center (EIC) at the University of California, Riverside, General Land Office (GLO) Survey, site surveys conducted in the planning area, and other data sources.

   Program 1.B: City staff shall require, early in the project review process, the preparation of focused cultural resource surveys in areas of known sensitivity.

   Program 1.C: The City shall adopt specific standards for the identification, preservation and maintenance of archaeological and historic sites. These standards shall include professional qualifications for persons performing site-specific surveys.

   Program 1.D: As part of the development review process, the City shall transmit development applications to the EIC for comment.

   Program 1.E: In the event archaeological resources are identified during construction, the City shall require that development cease, and a professional archaeologist shall be employed to examine and document the site to determine subsequent actions.

2. The City shall make every effort to protect sensitive archaeological and historic resources from vandalism and illegal collection.

   Program 2.A: Mapping and site-specific information shall be kept confidential, and access shall be given only to those with appropriate professional credentials.

   Program 2.B: The preservation of sensitive sites or artifacts in-situ should be considered whenever feasible.

3. The City shall encourage the Cathedral City Historical Society to establish a program to qualify and list locally significant resources on available state and federal registers.

Program 3.A: The City and Historical Society shall cooperate to complete a city-wide cultural resource inventory to include both prehistoric and historic resources.

Program 3.B: The City will consider participating in the Certified Local Government program in order to secure better local control over the management of cultural resources.

4. Encourage public participation and appreciation of archaeological and historic resources.

   Program 4.A: Continue to coordinate and cooperate with the Agua Caliente Band of Cahuilla Indians in the identification and preservation of sensitive Cahuilla Indian sites and resources, and the continued expansion of the tribal Cultural Museum.

5. Consider offering economic incentives, such as low-interest loans from all possible sources, and application/permitting fee reductions or waivers, to property owners to encourage the maintenance of significant historical and cultural buildings and sites.

   Program 5.A: Provide property owners with information and guidance on property rehabilitation measures and financing alternatives.

3 SETTING

This section of the report summarizes information regarding the physical and cultural setting of the Project area, including the prehistoric, ethnographic, and historic contexts of the general area. Several factors, including topography, available water sources, and biological resources, affect the nature and distribution of prehistoric, ethnographic, and historic-period human activities in an area. This background provides a context for understanding the nature of the cultural resources that may be identified within the region.

3.1 ENVIRONMENTAL SETTING

The Project area is east of the Peninsular Ranges in the southern extent of the Coachella Valley, at the western edge of the Colorado Desert. The Coachella Valley is bordered by the San Jacinto and Santa Rosa mountains (part of the Peninsular Ranges) to the southwest and by the low, rolling Indio and Mecca hills to the northeast. From the steep slopes of the San Jacinto Mountains, the desert floor descends suddenly at less than 3 kilometers (km; 2 miles [mi]) eastward to sea level in the city of Indio, less than 20 mi southeast of the Project area.

South of the Project area, elevations gradually drop to 90 m (300 ft) below mean sea level (bmsl) at the Salton Sea Basin. This basin has filled periodically throughout the Pleistocene and Holocene when the Colorado River shifted its course near its mouth at the Gulf of California, flowing north into the basin and forming a large freshwater lake, commonly known as Lake Cahuilla. A major water source flowing through the central valley is the Whitewater River. The river drained the southern slope of the San Bernardino Mountains for thousands of years (Laflin 2001), prior to the development of the Coachella Valley, flowing in a generally south-southeast direction 80.5 kilometers (50 mi) toward the Salton Sea. The Whitewater River was likely the largest perennial stream that entered the Salton Basin during prehistoric times, replenishing the underground aquifer during nonlacustrine intervals. The Whitewater River Storm Channel runs along the western boundary of the Project area.

Prior to the mid-1900s, the climate of the Project region was characterized by low relative humidity, very low rainfall, high summer temperatures of up to 52° Celsius (125° Fahrenheit), and mild winters. Since the 1950s, the relative humidity in the area has risen gradually as more and more golf courses have been built and maintained in the Coachella Valley. High winds are common and are accompanied by blowing sand and dust during the spring and late fall. Within the desert areas surrounding the Project area, the average annual rainfall is as sparse as 6 centimeters (2.5 inches) per year, and occurs primarily during the winter months. The Project area is within a region identified by Bean and Saubel (1972) as a Lower Sonoran life zone. The Lower Sonoran life zone is characterized by low rainfall, fine-textured alluvial to sandy soils, and xerophytic plant communities.

3.1.1 Lake Cahuilla

Arguably the most important environmental change in the Colorado Desert in the past 2,000 years was the formation of Lake Cahuilla. In response to the western diversion of the Colorado River in the Salton Trough, Lake Cahuilla filled and shrank numerous times throughout the Pleistocene and Holocene. The lake would fill until the water reached an altitude of 12 m (40 ft), the minimum crest of the delta at Cerro Prieto, where overflow would spill into the Gulf of California (Waters 1983:374). Wilke (1976) calculated that it would take roughly 12 to 20 years of receiving the entire flow of the Colorado River to fill Lake Cahuilla to an altitude of 12 m (40 ft). Alternatively, Wilke (1976) also determined that approximately 60 years would be required to completely dry out the lake without input from the Colorado River.

Using radiocarbon assays, historical accounts and evidence, and cross dating artifacts found along the former Lake Cahuilla shoreline, researchers have posited five lacustrine intervals in the Salton Basin, representing an unknown number of stands of Lake Cahuilla during the past 2,000 years (Cleland 1998; Laylander 1994; Schaefer 1986; Waters 1983; Wilke 1976). The first and earliest of these events has been dated to A.D. 700–890, followed by a gradual, but complete, drought of the lake at about A.D. 950. The second interval began shortly after A.D. 950, peaking at approximately A.D. 965–1150, and followed by another gradual, but complete, desiccation of the lake at A.D. 1210. The third interval began shortly after A.D. 1210, peaking between A.D. 1225 and 1360. The third interval was followed by a gradual, but not complete desiccation of the lake by A.D. 1450; the lake remained approximately 50 m (165 ft) deep at this time. The fourth interval lasted between A.D. 1450–1520, desiccating again by A.D. 1580. The fifth, more recent lacustrine interval of Lake Cahuilla occurred during the Spanish explorations of the region between 1540 and 1775 (Cleland 1998:13).

Recent paleoclimatic research indicates that a Medieval Climatic Anomaly (MCA) was registered throughout Far West North America between circa 1060 and 575 calibrated Before Present (cal B.P.) (Graumlich 1993; Spaulding 2001; Stine 1994). Researchers believe the MCA would have restricted prehistoric occupation in the southern California deserts to a few suitable water sources, such as the Colorado River and Lake Cahuilla. High stands of Lake Cahuilla, whose source is not directly affected by climatic conditions, are in fact registered during the MCA, suggesting that the area was likely highly favorable for prehistoric occupation.

3.2 PREHISTORIC SETTING

Native American occupation of the Colorado Desert is typically divided into six cultural periods: Paleoindian Period (ca. 10,500–9500 years B.P.); Early Archaic (ca. 9500–7000 B.P.); Middle

Archaic (ca. 7000–4000 B.P.); Late Archaic (ca. 4000–1500 B.P); Saratoga Springs (ca. 1500–750 B.P.); and the Late Prehistoric (ca. 750–410 B.P.). These cultural periods exclude the controversial "Early Man" pre-projectile point materials from Calico. The prehistoric cultural setting discussed below presents a brief description of each period based on the archival research conducted for the study area.

3.2.1 Paleoindian Period

The Paleoindian Period is marked by deglacial climatic changes that began by about 13,000 B.P. (Gosse et al. 1995; Mix 1987; Sowers and Bender 1995). In the desert interior, the change from glacial to postglacial ecosystems began by at least 11,700 B.P. (Spaulding 1995), but took millennia to complete. Paleoclimatic and paleoecological data suggest that, until about 7500 B.P., the prevailing westerly air flow pattern weakened, as the desert interior received moist monsoonal flow from the southeast (Davis and Sellers 1987; Spaulding and Graumlich 1986). This monsoonal flow was blocked from reaching the inland valleys of cismontane southern California by the Transverse and Peninsular ranges (Spaulding 2001). As a result, the interior deserts had considerably higher levels of effective moisture during this time. Thus, the desert interior was apparently less arid than cismontane southern California during this period, and possessed an abundance of water sources and relatively productive ecosystems (Van Devender et al. 1987).

Both coastal and desert region designations for the early Holocene refer to a long period of human adaptation to environmental changes brought about by the transition from the late Pleistocene to the early Holocene geologic periods. As climatic conditions became warmer and more arid, Pleistocene megafauna perished abruptly between 13,000 and 10,000 B.P. Human populations responded to these changing environmental conditions by focusing their subsistence efforts on the procurement of a wider variety of faunal and floral resources.

These early occupants of Southern California are believed to have been nomadic large-game hunters whose tool assemblage included percussion-flaked scrapers and knives; large, well-made fluted, leaf-shaped, or stemmed (e.g., Lake Mojave, Silver Lake) projectile points; crescentics; heavy core-cobble tools; hammerstones; bifacial cores; choppers; and scraper planes. Both Warren (1968, 1980) and Wallace (1978) suggest that the absence of milling tools commonly used for seed preparation indicates that an orientation toward hunting continued throughout this phase.

3.2.2 Early Archaic Period

The Early Archaic Period saw a continuation of the weather patterns described above for the latest Pleistocene/Early Holocene, with the coast and desert interior apparently much more favorable for human occupation than the cismontane valleys of southern California. It has been postulated that small, highly mobile groups still traveled over a wide home range utilizing highly portable tool kits to procure and process critical resources, with brief and anticipated intervals of seasonal sedentism. However, because of the arid conditions within the interior valley areas, prehistoric use of the inland valley regions would still have been negligible, as populations would still have favored the coastal or interior desert regions. Those populations exploiting the interior valleys would still have been tethered to the few, reliable, drought-resistant water sources, such as Lake Elsinore, Mystic Lake, and possibly the Cajalco Basin.

Throughout areas of southern California, this interval has been described frequently as the "Milling Stone Horizon" because of the preponderance of milling tools (manos and metates) and paucity of projectile points and vertebrate faunal remains in sites dating to this era (Basgall and True 1985; Kowta 1969; Wallace 1955). In addition to the preponderance of milling equipment, the artifact inventory of this period is similar to that of the previous period and includes crude hammerstones, scraper planes, choppers, large drills, crescents, and large flake tools. This assemblage also occasionally includes large (dart-sized) projectile points and knives, and nonutilitarian artifacts such as beads, pendants, charmstones, discoidals, spherical stones, and cogged stones (Kowta 1969; True 1958; Warren et al. 1961).

Few sites dating to the Early Archaic have been documented within the inland valley areas of southern California, supporting the theory of negligible use of these localities at this time because of arid conditions. Many of these sites contain only scant evidence of Early Archaic use in the form of obsidian hydration rind measurements, suggesting ephemeral site use by small, mobile groups, However, some sites dating to the Early Archaic (e.g., CA-RIV-2798/H, CA-RIV-5786, and the lower cultural component at CA-RIV-6069) do contain evidence of fairly sedentary residential occupations and evidence that site reuse was anticipated, suggesting a predictable availability of water and other critical resources. These sites have been found invariably near large, drought-resistant, inland water sources, and may have been destination points on a scheduled, seasonal round.

3.2.3 Middle Archaic Period

The Middle Archaic saw a reversal of the weather patterns that had prevailed throughout much of cismontane southern California for several millennia. By about 6000 B.P., local environmental conditions ameliorated while conditions in the deserts deteriorated, reaching maximum aridity of the postglacial period (Antevs 1952; Hall 1985; Haynes 1967; Mehringer and Warren 1976; Spaulding 1991, 1995). Spaulding (2001) proposes that a westerly air-flow pattern returned to southern California while the monsoonal weather patterns in the deserts retreated. As a result, the inland areas may have seen increased effective moisture, and the interior deserts, no longer receiving moist monsoonal flow and now in the rainshadow of the Transverse and Peninsular Ranges, became quite arid. This suggests that cismontane southern California may have been a more hospitable environment than the interior deserts during the middle Holocene.

Due to both the amelioration of local environmental conditions and deterioration of conditions in the interior deserts, it has been postulated that the inland areas of cismontane southern California would see an increase in prehistoric use and occupation after about 6000 B.P. compared to earlier periods (Goldberg et al. 2001). Evidence has shown that Middle Archaic components include intensively used residential bases and/or temporary camps containing abundant cultural debris, including temporally diagnostic artifacts (Pinto and Silver Lake projectile points, crescents), lithic scatters that appear to have functioned as resource extraction and processing sites, and at least one human burial covered with large rocks and ground stone artifacts. In addition, evidence of ephemeral Middle Archaic use is present at several sites in the form of isolated radiocarbon-dated features and/or sparse scatters of obsidian debitage dated through obsidian hydration methods. These more intensively used residential locations occur along the margins of alluvial fans, and less intensively used areas tend to be in arroyo bottoms or on upland benches (Goldberg et al. 2001).

In the desert regions of Southern California, the "Pinto Period" succeeded the "Lake Mojave Period" beginning approximately 7000 B.P. (or possibly as early as 8820 B.P.) and lasting to 4000 or 3500 B.P. Relatively recent paleoecological and paleohydrological evidence suggest maximum aridity in the desert regions between circa 7000 and 5000 B.P., with amelioration beginning approximately 4500 B.P. and continuing through 4000 B.P. (Spaulding 1991, 1995). As an adaptive response to these changing climatic conditions, the Pinto Period is characterized by necessary shifts in prehistoric subsistence practices and adaptations, with greater emphasis placed on the exploitation of plants and small animals than the preceding Lake Mojave Period, as well as a continued focus on artiodactyls (Warren 1980, 1984).

3.2.4 Late Archaic Period

The Late Archaic Period was one of cultural intensification in southern California. The beginning of the Late Archaic coincides with the Little Pluvial, a period of increased moisture in the region. Effective moisture continued to increase in the desert interior by approximately 3600 B.P. and lasted throughout most of the Late Archaic. This ameliorated climate allowed for more extensive occupation of the region. By approximately 2100 B.P., however, drying and warming increased, perhaps causing resource intensification.

Technologically, the artifact assemblage of the Late Archaic was similar to the preceding Middle Archaic, but new tools were added, either as innovations or as "borrowed" cultural items. Diagnostic projectile points of this period are still large (dart-sized), but also include more refined notched (Elko), concave base (Humboldt), and small stemmed (Gypsum) forms (Warren 1984). Late in the period, Rose Spring arrow points appear in the archaeological record in the deserts, reflecting the spread of bow and arrow technology from the Great Basin and the Colorado River region. However, there is no evidence to suggest that the bow and arrow had come into use at this time in the inland valleys of southern California.

In the eastern deserts of southern California, the "Gypsum Period" (ca. 4000 to 1500 B.P.) is generally coeval with Wallace's (coastal) Intermediate Horizon. In addition to diagnostic projectile points (Elko, Humboldt, Gypsum), Gypsum Period sites include leaf-shaped points, rectangular-based knives, flake scrapers, T-shaped drills and, occasionally, large scraper planes, choppers, and hammerstones (Warren 1984:416). Manos and milling stones are also common. A technological innovation introduced during this period was the mortar and pestle, used for processing acorns and hard seeds, such as those derived from hollyleaf cherry and mesquite pods. In addition, the frequencies of grinding tools show the increasing importance of plant foods throughout the Late Archaic, with a substantially greater emphasis after 2000 B.P. (Goldberg et. al. 2001). Other artifacts include arrow shaft straighteners, incised slate and sandstone tablets and pendants, bone awls, Olivella shell beads, and Haliotis beads and ornaments. The presence of both Haliotis and Olivella ornaments and split-twig figurines indicates that the California desert occupants were in contact with populations from the southern California coast, as well as the southern Great Basin (e.g. Arizona, Utah, Nevada). Increased contact with neighboring groups likely provided desert occupants important storable foodstuffs during less productive seasons or years, in exchange for valuable lithic materials such as obsidian, chalcedonies, and cherts. The increased carrying capacity and intensification of resources suggests higher populations in the desert with a greater ability to adapt to arid conditions (Warren 1984:420).

3.2.5 Saratoga Springs Period

Because paleoenvironmental conditions were little changed from the preceding period, cultural trends in the early Saratoga Springs Period were, in large part, a continuation of the developments that began during the end of the Late Archaic. However, the MCA, a period of even more persistent drought, began by 1060 B.P., and conditions became significantly warmer and drier. These climatic conditions were experienced throughout the western U.S. (Jones et al.1999; Kennett and Kennett 2000), although the inland areas of cismontane southern California may have been less affected than the desert interior. The MCA continued through the first 200 years of the Late Prehistoric Period until approximately 550 B.P. (Spaulding 2001).

Throughout much of the California deserts, the Saratoga Springs Period saw essentially a continuation of the Gypsum Period subsistence adaptation.Unlike the preceding period, the Saratoga Springs Period is marked by strong regional cultural developments, especially in the southern desert regions, which were heavily influenced by the Hakataya (or Patayan) culture of the lower Colorado River (Warren 1984:421–0422). Specifically, turquoise mining and long-distance trade networks appear to have attracted both Ancestral Pueblo and Hakataya peoples into the California deserts from the east and southeast, respectively, as evidenced by the introduction of Buff and Brown Ware pottery and Cottonwood and Desert Side-notched arrow points. The initial date for the first Hakataya influence in the south Mojave Desert remains unknown, but it appears that by about 1000 to 1100 B.P., the Mojave Sink was heavily influenced, if not occupied by, lower Colorado River peoples.

During this period, the onset of the MCA circa 1060 B.P. led to the withdrawal of Native American populations from marginal desert areas to more reliable, drought resistant water sources such as the Colorado River and ancient Lake Cahuilla, the episodic presence of which was not climatically controlled, but dependent upon natural discharges from the Colorado River. Ancient Lake Cahuilla experienced at least two high stands (between 1010 and 740 cal B.P. and again between 740 and 580 cal B.P.) during the MCA (Waters 1983).

The shoreline of recent high stands of Lake Cahuilla extended from about 32 km (20 mi) south of the Mexican border to just northwest of the modern city of Indio, inundating much of the Coachella and Imperial valleys. During late Holocene periods of high water, the lake's surface attained maximum elevations of approximately 12 m (40 ft) amsl (Wilke 1976:53) or perhaps a bit higher (Moratto and McDougall 2017). When inflow from the Colorado River was sufficient to maintain a relatively stable lake level, extensive marshes would have formed around its margins and waterfowl, freshwater fish, and shellfish populations would have flourished. Thus, Lake Cahuilla would have offered an especially productive environment for aboriginal populations of the western Colorado Desert. Additionally, as Lake Cahuilla gradually declined, the expansion of mesquite thickets would have followed the retreating shoreline, resulting in different resources available for exploitation by prehistoric inhabitants of the region (Smith and Brock 1998). Considering each interval of filling the empty basin or evaporating the water may have taken decades, it is clear that during much of the past 2300 years, the lake was neither full nor empty (Norris and Webb 1990). Because the areal extent of Lake Cahuilla was highly variable over time, Native American settlement must have shifted often as the shoreline advanced or retreated.

In late prehistoric times, especially after circa 950 B.P., toolstone from Obsidian Butte was used widely in Southern California. The source could be inundated and its glass inaccessible whenever Lake Cahuilla's surface elevation was higher than around 40 m (131 ft) (Schafer and

Laylander 2007). Thus, whether expanding or receding, the lake would have prevented access to Obsidian Butte glass whenever the water level stood between 40 m bmsl and 12 m amsl.

Recently, Sutton (2011) proposed that the proto-Cahuilla (Patayan) cultures occupying the Peninsular Range and the northern Coachella Valley resulted from an eastward movement of people of Yuman ethnicity that spoke Takic languages from the inland areas of coastal Orange County and northern San Diego County (i.e., Phase I groups of the San Luis Rey Pattern of the Palomar Tradition). Sutton (2011:6) proposed that the impetus for this migration was the filling of Lake Cahuilla after circa 1070 B.P. Sutton identifies this eastward movement of people, and the concomitant introduction of new technologies and ideas to the region, as Peninsular I, II, and III phases of the Palomar Tradition (Sutton 2011:1–74).

3.2.6 Late Prehistoric Period

The MCA extended into the Late Prehistoric Period, ending about 550 B.P. The cultural trends and patterns of land-use that characterized the MCA, including that portion which extends into the earlier part of the Late Prehistoric Period, are discussed above. At the end of the MCA, however, and lasting throughout the ensuing Protohistoric Period (410–150 B.P.), a period of cooler temperatures and greater precipitation ushered in the Little Ice Age, during which time ecosystem productivity greatly increased, along with availability and predictability of water (Spaulding 2001).

It was during this period that Lake Cahuilla began to recede (Waters 1983). Groups associated with the Peninsular II phase of the Palomar Tradition in the northern Coachella Valley, dating from circa 750 to 300 B.P., are thought to have been the proto-Cahuilla (Sutton 2011:5). Peninsular II is "proposed to reflect the changes in settlement and subsistence that were instituted to adapt to the fluctuations in Lake Cahuilla, prior to its 'final' desiccation" (Sutton 2011:42). Peninsular II material culture traits include the addition of Tizon Brown pottery, ceramic pipes, and few ceramic figurines; increased usage of Tumco Buff and Salton Buff pottery in lakeshore sites; use of glass from the Coso Volcanic Field, Obsidian Butte, and some unknown sources; and the addition of stone fish traps along the fluctuating shoreline of Lake Cahuilla. Additionally, the "Peninsular Funerary Complex" appeared during this phase, with secondary cremations placed in "containers," along with associated mourning ceremonies. The Peninsular II phase ended with the final desiccation of Lake Cahuilla about 300 B.P. (Sutton 2011:5, 42).

3.3 ETHNOHISTORIC SETTING

The Cahuilla have been studied extensively by Dr. Lowell Bean and much of the following discussion is derived from Bean's description of the Cahuilla in Volume 8 of the *Handbook of North American Indians* (Bean 1978:575–587).

The Cahuilla belong to nonpolitical, nonterritorial patrimoieties that governed marriage patterns, as well as patrilineal clans and lineages. Each clan, "political-ritual-corporate units" composed of three to 10 lineages, owned a large territory in which each lineage owned a village site with specific resource areas. Clan lineages cooperated in defense, in large communal subsistence activities, and in performing rituals. Clans were apt to own land in the valley, foothill, and mountain areas, providing them with the resources of many different ecological niches.

In prehistoric times Cahuilla shelters are believed to have been dome shaped; after contact, they tended to be rectangular in shape. Cahuilla shelters were often made of brush, palm fronds, or arrowweed. Most of the Cahuilla domestic activities were performed outside the shelters within the shade of large, expansive *ramadas*.

The Cahuilla were, for the most part, hunting, collecting, harvesting, and protoagricultural peoples. As in most of California, acorns were a major staple, but the roots, leaves, seeds, and fruit of many other plants also were used. Fish, birds, insects, and large and small mammals were also available.

To gather and prepare these food resources, the Cahuilla had an extensive inventory of equipment, including bows and arrows, traps, nets, disguises, blinds, spears, hooks and lines, poles for shaking down pine nuts and acorns, cactus pickers, seed beaters, digging sticks and weights, and pry bars. In addition, the Cahuilla also had an extensive inventory of food processing equipment, including hammers and anvils, mortars and pestles, manos and metates, winnowing shells and baskets, strainers, leaching baskets and bowls, knives (made of stone, bone, wood, and carrizo cane), bone saws, and drying racks made of wooden poles to dry fish.

Mountain tops, unusual rock formations, springs, and streams are held sacred to the Cahuilla, as are rock art sites and burial and cremation sites. Addtionally, various birds are revered as sacred beings of great power and were sometimes killed ritually and mourned in mortuary ceremonies similar to those for important individuals. As such, bird cremation sites are considered sacred by the Cahuilla.

3.4 HISTORICAL SETTING

The following section presents a summary of the history of the California desert region based on the detailed review by von Till Warren and others (1981:85–105). Known information of historical events in and around the current Project area will be the focus.

Prior to 1820, little is known of historical developments within the Coachella Valley. In 1821, a party of Cocomaricopa Native Americans arrived at the San Gabriel Mission stating they had traveled from the Colorado River in only six days along the Cocomaricopa trail (von Till Warren 1981:85). The Cocomaricopa trail began east of Blythe and generally followed the present route of Interstate 10. The trail passed through the Chuckwalla Valley, through the Mecca-Indio area at the east end of the Coachella Valley, continued west through the Valley, and into the San Gorgonio Pass (northwest of the Project area). Within the Coachella Valley, the trail ran south of the Project area, near Mecca, and continued west and northwest to the Cahuilla village of *Mauulmii* (Toro), then turned north-northwest following the mountain alignments, as depicted on the Indio (1904) 30' USGS quadrangle. The same map (Indio 1904) depicts at least one historical road connecting numerous large Cahuilla village sites to the Cocomaricopa trail. It is possible that these historical road(s) were constructed following the long established Native American travel routes, as is the case with the Maricopa-Bradshaw route.

The Maricopa-Bradshaw route was established in the early 1850s, paralleling the old Cocomaricopa trail. The route was established to serve mining camps near La Paz, Arizona (von Till Warren et al. 1981:85). In addition, the U.S. Government promoted a railroad route to connect the east and west coasts in the 1850s. However, political, and economic considerations prevented the establishment of the Southern Pacific Railroad construction until

1877. The railroad traversed the western Colorado Desert, connecting the town of Yuma to the San Gorgonio Pass along the eastern shore of the Salton Sea.

Subsequently in 1852, Henry Washington and a small party of surveyors began the process of surveying and mapping the Colorado Desert. The process began with ascending the San Bernardino Mountains and establishing the SBBM, which is still in use today. Washington extended the line through uncharted territory, to the Colorado River during the period from 1854 to 1857 (von Till Warren 1981:94).

Additionally, in the 1850s, the U.S. Government sent Indian Commissioners into the southern California deserts. The Indian Commissioners were not authorized to make any commitments to Native Americans but did (illegally) set aside large tracts of land for reservations (von Till Warren 1981:94). Most of the designated reservation areas were never developed, but two areas (Torres Martinez and Agua Caliente [Palm Springs] reservations) were eventually set aside from the larger reserves delineated by the Indian Commission. After the Native American populations were confined to the reservations, the land was made available for ranching, mining, and other uses.

The desert regions of southern California were managed by the GLO and later the Department of Agriculture Grazing Department. The management of the desert during this period was largely non-existent until the passage of the Taylor Grazing Act of 1934. Even with the passage of the act, there was virtually no impact on the region. The first attempts of range management came when the desert was transferred to the control of the Bureau of Land management (BLM) in 1946. Since the transfer of management, the BLM has been evaluating lands for their "uses," and classifying them for different types of management (von Till Warren et al. 1981:95).

Lack of water in much of the Colorado Desert discouraged farming, and agricultural productivity was only possible when large quantities of water could be imported. The Coachella Valley water table was relatively high, which allowed for the installation of artesian wells, supporting agricultural development prior to the importation of water. In the beginning of the twentieth century, farmers in the Coachella Valley planted date, fig, and grape acreage. As a result of the agricultural growth, towns were established in the region such as Indio, Thermal, Mecca, and Coachella. The development of agriculture in the area also resulted in the depletion of the water table within the valley. The depletions required alternative water sources and fueled the formation of the Coachella Valley Water District (CVWD) to promote water conservation and replenish groundwater storage. The Boulder Canyon Project Act of 1928 was passed, which utilized the bounty of the Colorado River to irrigate the Imperial (south) and Coachella valleys. Large scale cooperation between the Imperial Irrigation District and CVWD resulted in the development of the All-American Canal and the Coachella Valley extension. A branch of the All-American Canal, the Old Coachella Canal, extends 123.5 mi north to the northern end of the Coachella Valley, providing the first imported irrigation water to the region in 1949 (Nordland 1978). The original canal base and sides were lined with clay to prevent seepage, with the exception of the last 38 miles between North Shore and Lake Cahuilla, which was a concrete-lined aqueduct (Schaefer and Ghabhláin 2003:1, 32).

The Coachella Valley was a trading route that prehistorically connected the coast to the Colorado River. When the route was rediscovered by European explorers in the 1800s, it eventually became known as the primary access between the Los Angeles Basin and gold mines in Arizona, until the establishment of the Southern Pacific Railroad in 1877. The railroad and the opening of public lands under the Homestead Act, the Desert Land Act, and other federal lands laws brought additional settlement to the Coachella Valley and what is now known as Cathedral City. Highway 111, which runs through Cathedral City, closely follows that original trade route.

Cathedral City was named for the nearby Cathedral Canyon. The first tract map was filed in 1925 in Riverside County after the land had been purchased from the Southern Pacific Railroad's Land Company (Kaplan 2017). According to the City's General Plan, the new town was "created to provide affordable low-to moderate-income housing" and "became known as the 'blue-collar neighbor' of Palm Springs" (Kaplan 2017). The original town site was on the alluvial fan created by Cathedral Canyon; the Project area is also on this alluvial fan. The Cathedral City Water Company and the Cathedral City Development Company were also established in 1925 and further contributed to the development of Cathedral City. Starting in the 1920s, Cathedral City, along with the rest of the Coachella Valley, worked to develop "a new industry that consisted of equestrian camps, resort hotels, and eventually country clubs" (Kaplan 2017). Between the 1930s and 1960s, Cathedral City established itself as an artist's colony by supporting the work of many artists who came from all over the region to exhibit their works (Kaplan 2017).

In the 1940s and 1950s, Cathedral City served as a bedroom community to the military installations during World War II that were established in the area to support the war effort. Additionally, during this time, infrastructure improvements were made, including the Coachella Canal in 1948 and 1949, which helped to supply and support the additional population that had settled in the area.

In the post-WWII era, Cathedral City had become one of the fastest growing communities in the Coachella Valley. Veterans were able to purchase homes in the city, as subdivisions were being developed rapidly. Cathedral City was the first community in Riverside County to be zoned under the County's new general zoning ordinance for incorporated cities. It wasn't until 1981 that Cathedral City was incorporated as the 18th city in Riverside County.

4 CULTURAL RESOURCES INVENTORY

On July 6, 2023, a literature review and records search was conducted at the EIC, housed at the University of California, Riverside. This inventory effort included the Project area and a 1-mi radius around the Project area, collectively termed the Project study area. The objective of this records search was to identify prehistoric or historical cultural resources that have been previously recorded within the study area during prior cultural resource investigations.

As part of the cultural resources inventory, PaleoWest staff also examined historical maps and aerial images to characterize the developmental history of the Project area and surrounding area. A summary of the results of the record search and background research are provided below.

4.1 PREVIOUS CULTURAL RESOURCES INVESTIGATIONS

The records search results indicate that no fewer than 13 previous investigations have been conducted and documented within the Project study area since 1977 (Table 4-1). None of the studies encompassed any portion the Project area. As such, it appears that none of the Project area has been previously inventoried for cultural resources.

Table 4-1. Previous Cultural Investigations within the Project Study Area

Report No.	Year	Author(s)	Title
RI-00181	1978	Jennifer Taschek-Ball	San Diego State University Foundation, San Diego State University.
RI-00284	1977	Richard A. Weaver	Cultural Resource Identification-Sundesert Nuclear Project.
RI-01129	1979	Stanley R. Berryman and Mary Lou Heuett	Final Report: Results of the Palm Springs Archaeological Survey Section 10, Township 4 South, Range 5 East.
RI-02210	1986	J. Underwood, J. Cleland, C.M. Wood, and R. Apple	Preliminary Cultural Resources Survey Report for the Us Telecom Fiber Optic Cable Project, From San Timoteo Canyon to Socorro, Texas: The California Segment.
RI-02719	1990	Robert S. White	An Archaeological Assessment of Tentative Tract 25550, A 70 Acre Parcel Located Adjacent to Da Vall Drive Between Cathedral City and Rancho Mirage, Riverside County, California.
RI-05563	2003	Greig Parker and Christopher Drover	Archaeological Survey for Cathedral City Heritage Park L.P. Parcel No. 670-110-034, Cathedral City, California.
RI-05950	2003	Michael Hogan, Bai "Tom" Tang, Josh Smallwood, Laura Hensley Shaker, and Daniel Ballester	Identification and Evaluation of Historic Properties, APNs 673-020-006, 673-030-004, 673-030-021, and 673-030-022, Dinah Shore Drive and Da Valle Drive, City of Cathedral City, Riverside County, California.
RI-06293	2004	Bai Tang, Michael Hogan, and Matthew Wetherbee	Identification and Evaluation of Historic Properties, Assessor's Parcel Numbers 670-060-017, and -025, Cathedral City, Riverside County, California.
RI-07758	2008	Bai "Tom" Tang	Historic and Archaeological Property Survey Report (District: 08, RIV-CTH/ PLHL, PM 5430, EA: Ramon Road).
RI-09172	2014	Bai "Tom" Tang and Michael Hogan	Historical/Archaeological Resources Survey Report; North Gate Community Church; Assessor's Parcel No. 670-110-042.
RI-09367	2015	Bai "Tom" Tang, Michael Hogan, Deirdre Encarnacion, and Nina Gallardo	Historical/Archaeological Resources Survey Report Ramon 14 Project City of Cathedral City Riverside County, California.
RI-09886	2016	Cheri Flores	Addendum to Historical and Archaeological Resources Survey.
RI-10838	2010	Diane F. Bonner	Cultural Resources Record Search and Archaeological Survey Results for the proposed Royal Street Communications, California, LLC, Site LA3615A (Cathedral City Soccer Park) located at 69400 30th Avenue, Cathedral City, Riverside County, California 92234.

4.2 CULTURAL RESOURCES REPORTED WITHIN 1 MILE OF THE PROJECT AREA

The records search indicated that no fewer than four cultural resources have been previously documented within the Project study area. These resources were all historic period isolated finds composed of sanitary cans. None of these resources are within the Project area. These resources are listed in Table 4-2.

Table 4-2. Previously Recorded Cultural Resources within the Project Study Area

Primary No.	Trinomial	Age	Type	Description
P-33-010953	–	Historic	Isolate	Two sanitary cans
P-33-010954	–	Historical	Isolate	Sanitary can
P-33-010956	–	Historic	Isolate	Sanitary can
P-33-010957	–	Historic	Isolate	Six sanitary cans, possibly a single "6-pack"

4.3 ADDITIONAL SOURCES

Additional sources consulted during the cultural resource literature and data review in July 2023 include the National Register of Historic Places, the Office of Historic Preservation Archaeological Determinations of Eligibility, and the Office of Historic Preservation Built Environment Resources Directory. There are no listed cultural resources recorded within the Project area or within 1 mi of the Project area.

Archival research also conducted in July 2023 on the Project site includes a review of BLM GLO records, historic topographic maps, and aerial images. The GLO records indicate that the Project area was part of a land patent that was issued in June 1905 to the Southern Pacific Railroad Company (BLM 2023); the patent included the entirety of Section 15, T4S, R5E, SBBM.

Historical topographic maps were consulted, including Indio, California (1904) 30-minute; Santa Ana, California (1947) 1 × 2 degree; Edom, California (1941) 15-minute; and Cathedral City, California (1958 and 1972) 7.5-minute USGS quadrangles. Additionally, historical aerials from NETROnline dated to 1959, 1972, 1977, 1979, 1996, 2005, 2012, and 2020 were reviewed. The only notable feature present on any of the topographic maps is Date Palm Drive, which first appears in on the 1972 Cathedral City 7.5-minute map following its present alignment. Although areas within the vicinity have been subject to development over the years, aerial photographs indicate that the Project area has never been developed, except for the addition of an unnamed asphalt road in the southern portion of the Project area that first appears in 2005 aerial imagery.

4.4 BURIED SITE SENSITIVITY ASSESSMENT

PaleoWest examined geological and geomorphic information to assess the potential of the Project area to contain significant buried archaeological deposits. The Project area is in the upper Coachella Valley, in its central portion between the Whitewater River and the former bed of Mission Creek, which is also an abandoned channel of the Whitewater River. Deposits underlying the Project area are generally fine-to-gravelly valley fills derived from flooding and debris flows down marginal alluvial fans (Lancaster et al. 2012). During wetter periods of the Holocene, this area would have been subject to periodic overbank floods of the Whitewater River. Subsequently, the area was covered by aeolian deposits. In general, deposits in this area consists of a series of interbedded alluvial and aeolian strata (Soil Survey Staff 2023). The area as a whole is moderately sensitive for buried sites. If present, buried sites will have a high degree of preservation due to low energy of deposit. Depth of deposits could be significant.

4.5 NATIVE AMERICAN COORDINATION

PaleoWest contacted the Native American Heritage Commission (NAHC) on February 28, 2023 for a review of the SLF. The objective of the SLF search was to determine if the NAHC had any knowledge of Native American cultural resources (e.g., traditional use or gathering area, place of religious or sacred activity, etc.) within the immediate vicinity of the Project area. The NAHC responded on March 2, 2023, stating that the SLF was completed with negative results. However, the NAHC suggested that 18 individuals representing 12 Native American tribal groups be contacted to elicit information regarding cultural resource issues related to the proposed Project (Appendix A). PaleoWest sent outreach letters to the 12 recommended tribal groups on July 19, 2023. These letters were followed up by phone calls on August 2, 2023.

To date six responses have been received:

The Quechan Historic Preservation Department sent an email indicating the Tribe does not wish to comment on the Project, stating they defer to more local tribes.

The Augustine Band of Cahuilla Indians sent an email indicating that the tribe is unaware of any specific resources that might be impacted by the Project and requesting contact if any resources are discovered during the Project.

The Agua Caliente Band of Cahuilla Indians (ACBCI) sent an email indicating that the Project is within the Traditional Use Area of the tribe and requesting: 1) a copy of the records search, with associated survey reports from the information center; 2) copies of all cultural resource documentation generated by the Project; 3) the presence of an ACBCI-approved monitor during all ground disturbing activities; and 4) contacting the ACBCI Tribal Historic Preservation Officer before future surveys in the area, as the tribe is interested in participating.

The Morongo Band of Mission Indians representative reached by phone stated that they need to confer further with staff and will send an official response.

The Santa Rosa Band of Cahuilla Indians representative reached by phone indicated that, if Chair Redner had not responded to the emailed letter, that the tribe has no comment on the Project.

The Torres-Martinez Desert Cahuilla Indians representative reached by phone requested that the original emailed letter be forwarded to facilitate future comment.

5 FIELD INVESTIGATION

5.1 FIELD METHODS

A cultural resource survey of the Project area was completed by PaleoWest Archaeologist Darlene Deppe, M.A., on July 17, 2023. The fieldwork effort included an intensive pedestrian survey of the Project area, totaling 7.1 acres. The intensive pedestrian survey was conducted by walking a series of parallel north-south transects spaced at 10–15-m (33–49-ft) intervals. The archaeologist carefully inspected all areas within the Project area likely to contain or exhibit sensitive cultural resources to ensure discovery and documentation of any visible, potentially significant cultural resources within the Project area.

Prehistoric site indicators may include areas of darker soil with concentrations of ash, charcoal, bits of animal bone (burned or unburned), shell, flaked stone, ground stone, or even human bone. Historical site indicators may include fence lines, ditches, standing buildings, objects or structures such as sheds, or concentrations of materials at least 45 years in age, such as domestic refuse (e.g., glass bottles, ceramics, toys, buttons or leather shoes), refuse from other pursuits such as agriculture (e.g., metal tanks, farm machinery parts, horse shoes), or structural materials (e.g., nails, glass window panes, corrugated metal, wood posts or planks, metal pipes and fittings, railroad spurs, etc.).

5.2 FIELD RESULTS

The Project area is a vacant, flat parcel within a mostly-developed area of Cathedral City (Figure 5-1). The west side of the property is bounded by Date Palm Drive, the east side is bounded by residential parcels, and the north and south sides of the property are bounded by the Northgate Community Church and a small shopping center, respectively. Vegetation within the Project area is very sparse and includes scattered creosote bushes. Ground visibility in the Project area is excellent (90–100%). Surface soils within the parcel are composed of soft sand.

Noted disturbances include an asphalt road remnant running east-west through the southern portion of the Project area (Figure 5-2), and modern glass and refuse distributed throughout.

No archaeological or built-environment resources were identified in the Project area during the survey.

Figure 5-1. Overview of the Project area, facing north.

Figure 5-2. Overview of southern portion of the Project area cut by a road, facing east.

6 MANAGEMENT RECOMMENDATIONS

As a result of the cultural resource records search and survey, no archaeological or historic period built-environment resources were identified in the Project area. Geological and geomorphic information indicates that the Project area has moderate potential to contain significant buried archaeological remains. As such, the Project area appears to be moderately sensitive for buried cultural resources. PaleoWest recommends that an archaeological monitor be retained to observe ground-disturbing activities during the initial phases of construction. If the qualified archaeologist determines that the construction activities have little or no potential to impact cultural resources (e.g., excavations are within previously disturbed, non-native soils, or within soil formations not expected to yield cultural resources deposits), then monitoring may be reduced or eliminated.

In the event that potentially significant cultural materials are encountered during Project-related ground disturbing activities, all work should be halted in the vicinity of the discovery until a qualified archaeologist can visit the site of discovery and assess the significance of the archaeological resource. In addition, Health and Safety Code 7050.5, CEQA 15064.5(e), and Public Resources Code 5097.98 mandate the process to be followed in the unlikely event of an accidental discovery of any human remains in a location other than a dedicated cemetery. Finally, should additional actions be proposed outside the currently defined Project area that have the potential for additional subsurface disturbance, further cultural resource management may be required.

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Appendix A.
Native American Coordination

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PALEOWEST

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August 9, 2023

Rich Malacoff
Principal Planner
The Altum Group
44-600 Village Court Suite 100
Palm Desert, California 92260
Transmitted via email to Rich.Malacoff@thealtumgroup.com

RE: Paleontological Resource Assessment for the Date Palm and Rosemount Storage Project, City of Cathedral City, Riverside County, California

Dear Rich Malacoff,

At the request of The Altum Group, PaleoWest, LLC (PaleoWest) conducted a paleontological resource assessment in March 2023 for the Date Palm and Rosemount Storage Project (Project) in the city of Cathedral City, Riverside County, California. The goal of the assessment was to identify the geologic units that may be impacted by the development of the Project, determine the paleontological sensitivity of geologic units within the Project area, assess the potential for impacts to paleontological resources from the development of the Project, and recommend mitigation measures to avoid or mitigate impacts to scientifically significant paleontological resources, as necessary.

This paleontological resource assessment included a fossil locality records search conducted by the Western Science Center (WSC) in Hemet, California. The records search was supplemented by a review of existing geologic maps and primary literature regarding fossiliferous geologic units within the proposed Project vicinity and region. This technical memorandum, which was written in accordance with the guidelines set forth by the Society of Vertebrate Paleontology (SVP, 2010), has been prepared to support environmental review under the California Environmental Quality Act (CEQA); Cathedral City (City) is the Lead Agency for CEQA compliance.

PROJECT LOCATION AND DESCRIPTION

The Project area consists of a proposed 1.3-acre storage warehouse that is part of a larger development of potential retail and parking space that sits on approximately 7.1 acres northeast of the intersection of McCallum Way and Date Palm Drive (Figure 1). The Project area is within Section 15 of Township 4 South, Range 5 East, Zone 11, as depicted on the 1977 Cathedral City, California 7.5-minute Quadrangle from the U.S. Geological Survey (USGS) topographic quadrangle maps (Figure 1).

Figure 1. Project area.

REGULATORY CONTEXT

Paleontological resources (i.e., fossils) are considered nonrenewable scientific resources because once destroyed, they cannot be replaced. As such, paleontological resources are afforded protection under various federal, state, and local laws and regulations. Laws pertinent to this Project are discussed below.

STATE LAWS AND REGULATIONS

California Environmental Quality Act

CEQA requires that public agencies and private interests identify the potential environmental consequences of their projects on any object or site of significance to the scientific annals of California (Division I, California Public Resources Code [PRC] Section 5020.1 [b]). Appendix G in Section 15023 provides an Environmental Checklist of questions (PRC 15023, Appendix G, Section VII, Part f) that includes the following: "Would the project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?"

CEQA does not define "a unique paleontological resource or site." However, the SVP has provided guidance specifically designed to support state and federal environmental review. The SVP broadly defines significant paleontological resources as follows (SVP, 2010):

> "Fossils and fossiliferous deposits consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are considered to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years)."

Significant paleontological resources are determined to be fossils or assemblages of fossils that are unique, unusual, rare, diagnostically important, or are common but have the potential to provide valuable scientific information for evaluating evolutionary patterns and processes, or which could improve our understanding of paleochronology, paleoecology, paleophylogeography, or depositional histories. New or unique specimens can provide new insights into evolutionary history; however, additional specimens of even well represented lineages can be equally important for studying evolutionary pattern and process, evolutionary rates, and paleophylogeography. Even unidentifiable material can provide useful data for dating geologic units if radiometric dating is possible. As such, common fossils (especially vertebrates) may be scientifically important, and therefore considered significant.

California Public Resources Code

Section 5097.5 of the Public Resources Code (PRC) states:

> "No person shall knowingly and willfully excavate upon, or remove, destroy, injure or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the

> public agency having jurisdiction over such lands. Violation of this section is a misdemeanor."

As used in this PRC section, "public lands" means lands owned by, or under the jurisdiction of, the state or any city, county, district, authority, or public corporation, or any agency thereof. Consequently, public agencies are required to comply with PRC 5097.5 for their own activities, including construction and maintenance, as well as for permit actions (e.g., encroachment permits) undertaken by others.

LOCAL

The County of Riverside (2015) provides specific protections for paleontological resources identified within its boundaries. These protections include the SABER (Safeguard Artifacts Being Excavated in Riverside County) policy. The SABER Policy, enacted in October 2011 by the Riverside County Board of Supervisors, requires that any paleontological resources found or unearthed in the county of Riverside be curated at the Western Science Center.

Cathedral City is the Lead Agency for the Project. Protections of paleontological resources fall under the Cathedral City Environmental Impact Report (EIR) for the City of Cathedral City General Plan Update (2019a) and the General Plan Update (Cathedral City, 2019b).

Cathedral City Draft Environmental Impact Report 2.8.6:

> "The City is not known to contain unique paleontological or geologic features. The majority of City soils are composed of recently deposited alluvium which has a low potential to contain paleontological resources. The planning area is largely developed south of I-10, and the urban landscape is a mix of residential, commercial, industrial, and other development, as well as roadways, utilities, and other infrastructure. Any paleontological or geologic sites or resources would likely have been disturbed already by urban development. Land north of I-10 is generally undeveloped and could harbor unknown resources."

Cathedral City defers to CEQA regulations regarding the oversight and protection of paleontological resources as defined within the Draft Environmental Impact Report Section 2.8.6:

> "Ground-disturbing activities could have the potential to damage or destroy paleontological resources that may be present below the ground surface. Any future projects that would be allowed under the General Plan Update would be subject to CEQA analysis on a project-by-project basis to identify potential impacts and establish appropriate mitigation measures, as needed. Overall, impacts will be less than significant, and no mitigation is required."

PALEONTOLOGICAL RESOURCE POTENTIAL

Absent specific agency guidelines, most professional paleontologists in California adhere to the guidelines set forth by SVP (2010) to determine the course of paleontological mitigation for a given project. These guidelines establish protocols for the assessment of the paleontological resource potential of underlying geologic units and outline measures to mitigate adverse impacts that could result from project development. Using baseline information gathered during a paleontological resource assessment, the paleontological resource potential of the geologic unit(s) (or members thereof) underlying a project area can be assigned to one of four categories defined by SVP (2010). Although these standards were written specifically to protect vertebrate paleontological resources, all fields of paleontology have adopted the following guidelines.

HIGH POTENTIAL (SENSITIVITY)

Rock units from which significant vertebrate or significant invertebrate fossils or significant suites of plant fossils have been recovered have a high potential for containing significant non-renewable fossiliferous resources. These units include sedimentary formations and some volcanic formations which contain significant nonrenewable resources.

LOW POTENTIAL (SENSITIVITY)

Sedimentary rock units that are potentially fossiliferous but have not yielded fossils in the past or contain common and/or widespread invertebrate fossils of well documented and understood taphonomic, phylogenetic species and habitat ecology. Reports in the paleontological literature or field surveys by a qualified vertebrate paleontologist may allow determination that some areas or units have low potentials for yielding significant fossils prior to the start of construction. Generally, these units will be poorly represented by specimens in institutional collections and will not require protection or salvage operations. However, as excavation for construction gets underway it is possible that significant and unanticipated paleontological resources might be encountered and require a change of classification from Low to High Potential and, thus, require monitoring and mitigation if the resources are found to be significant.

UNDETERMINED POTENTIAL (SENSITIVITY)

Specific areas underlain by sedimentary rock units for which little information is available have undetermined fossiliferous potentials. Field surveys by a qualified vertebrate paleontologist to specifically determine the potentials of the rock units are required before programs of impact mitigation for such areas may be developed.

NO POTENTIAL

Rock units of metamorphic or igneous origin are commonly classified as having no potential for containing significant paleontological resources.

METHODS

To assess whether a particular area has the potential to contain significant fossil resources at the subsurface, it is necessary to review published geologic mapping to determine the geology and stratigraphy of the area. Geologic units are considered "sensitive" for paleontological resources if they are known to contain significant fossils anywhere in their extent. Therefore, a search of pertinent local and regional museum repositories for paleontological localities within and nearby the Project area is necessary to determine whether fossil localities have been previously discovered within a particular rock unit. For this Project, a formal museum records search was conducted in March 2023 at the WSC (Stoneburg, 2023). An informal records search of the Paleobiology Database (PBDB) was also conducted in March 2023.

RESOURCE CONTEXT

GEOLOGIC SETTING

The Project area is in the Coachella Valley within the Colorado Desert geomorphic province in southern California. The Colorado Desert geomorphic province extends from the Transverse Ranges to the north and northeast, the Peninsular Range on the west, and the Gulf of California to the south. Dominant features within the Colorado Desert include the Salton Trough, the Colorado River, and the Orocopia, Chocolate, Palo Verde, and Chuckwalla Mountains. The Coachella Valley is within the Salton Trough—a large structural depression that extends from the San Gorgonio Pass in the north to the Gulf of Mexico in the south (Norris and Webb, 1976).

One of the dominant fossiliferous sediments within the Coachella Valley are the Pleistocene to Holocene Lake Cahuilla sand and silt lacustrine deposits which are overlain by younger Holocene alluvial fan sand. The depth of the contact between the Holocene fan and older Lake Cahuilla deposits in the Project area is unknown; however, is unlikely to be encountered by ground disturbance within the Project area.

SITE SPECIFIC GEOLOGY AND PALEONTOLOGY

According to the Geologic Map of the Thousand Palms & Lost Horse Mountain 15-minute quadrangle (Dibblee and Minch, 2008), the Project area is immediately underlain by loose, fine Holocene sands that were deposited by prevailing winds as dunes or thin cover over underlying deposits (Qs) of the Coachella Valley (Figure 2). Further, the nearest deposits that have the potential to directly underlay the Holocene dune deposits (Qs) encountered at the surface of the site, consist of either alluvial sand and gravel deposits of valley areas (Qa) or of stream/creek washes (Qg) (Dibblee and Minch, 2008; Figure 2). Alluvial fans typically have low fossil preservation potential due to the energy and clast distribution of the rheology of their formative depositional events (Woodburne, 1987). Late Pleistocene to Holocene sedimentary deposits derived from ancient Lake Cahuilla have proven to yield scientifically significant mollusk shells within the Coachella Valley (Whistler et al., 1995). However, these sediments are restricted farther to the south and are not expected to be encountered within the Project area (Dibblee, 1954).

According to the WSC museum records search, there are no records of significant vertebrate fossil specimens within the Project area or immediate vicinity (Stoneburg, 2023). Although the alluvial deposits within the area have a high preservation potential, any sediments likely to be encountered would be far too young (Stoneberg, 2023). Further review of online PBDB (2023) locality record databases did not produce any additional fossil records within or within one-mile of the Project area.

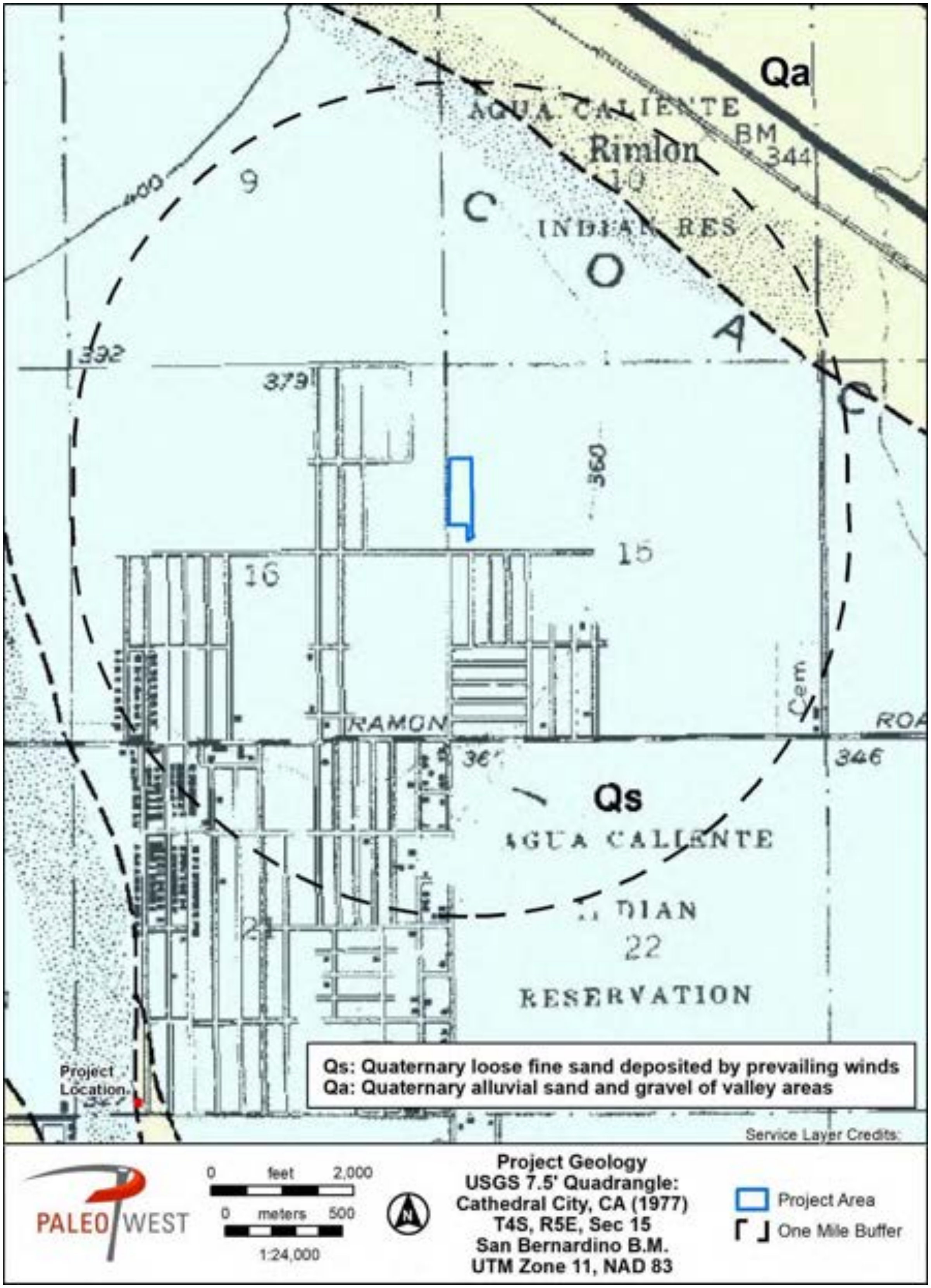

Figure 2. Geologic map of the Project area.

FINDINGS

Based on the literature review and museum records search results, the paleontological sensitivity of the Project area was determined in accordance with the SVP's (2010) sensitivity scale and in consultation with the County of Riverside Paleontological Sensitivity Map (2015). Surficial Quaternary deposits in the Project area consist of sediments deposited as dunes of loose, fine sand (Qs), which have a low potential to bear fossils and a low paleontological resource sensitivity. These sediments may be underlain at an unknown depth by older Pleistocene deposits that have proven to yield significant vertebrate fossils in the vicinity of the Project area and elsewhere (Stoneburg, 2023). The Project will most likely involve construction-related ground disturbing activities in Holocene sediments and no vertebrate fossils from Holocene or Pleistocene sediments have been found in the surrounding Project area. As a result, the potential for encountering significant fossil resources during Project development is low; therefore, impacts to paleontological resources are not anticipated and no further paleontological mitigation is recommended at this time.

RECOMMENDATIONS

In general, the potential for a given project to result in negative impacts to paleontological resources is directly proportional to the amount of ground disturbance associated with the project; thus, the higher the amount of ground disturbances within geological deposits with a known paleontological sensitivity, the greater the potential for negative impacts to paleontological resources. Since this Project entails the excavation for the proposed new development, new ground disturbances are anticipated. The underlying sediment is likely to be Holocene near the surface and Project-related ground disturbances are not anticipated to impact paleontological resources at shallow depth.

At this time, PaleoWest does not recommend paleontological monitoring for this Project. In the event that a fossil discovery is made during the course of Project development, then in accordance with SVP (2010) guidelines, a qualified professional paleontologist should be retained to examine the find and to determine if further paleontological resources mitigation is warranted.

Thank you for contacting PaleoWest for this Project. If you have any questions, please do not hesitate to contact us.

Sincerely,
PALEOWEST

Matthew Witte, Ph.D. | Associate Paleontologist

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AUGUSTINE BAND OF CAHUILLA INDIANS
84-001 AVENUE 54 COACHELLA, CA 92236 | T: 760-398-4722 F: 760-369-7161
TRIBAL CHAIRPERSON: AMANDA AUGUSTINE TRIBAL TREASURER: WILLIAM VANCE
TRIBAL COUNCIL MEMBER: RONNIE VANCE

Date: 01/23/2024

Dear: Sandra Molina
Development Services
Deputy Director

SUBJECT: Tribal Consultation Pursuant to SB 18
Specific Plan Amendment 99-58-A/CUP 23-005 Date Palm /Rosemount Storage Project, City of Cathedral City

Thank you for the opportunity to offer input concerning the development of the above-identified project. We appreciate your sensitivity to the cultural resources that may be impacted by your project and the importance of these cultural resources to the Native American peoples that have occupied the land surrounding the area of your project for thousands of years. Your invitation to consult on this project is greatly appreciated.

At this time, we are unaware of specific cultural resources that may be affected by the proposed project, however, in the event, you should discover any cultural resources during the development of this project please get in touch with our office immediately for further evaluation.

Very truly yours,

Jacobia Kirksey

Jacobia Kirksey, Tribal Operation Specialist

03-007-2023-002

February 14, 2024

[VIA EMAIL TO:smolina@cathedralcity.gov]
City of Cathedral City
Ms. Sandra Molina
68700 Avednia Lalo Guerrero
Cathedral City, CA 92234

Re: Rosemount Storage

Dear Ms. Sandra Molina,

The Agua Caliente Band of Cahuilla Indians (ACBCI) appreciates your efforts to include the Tribal Historic Preservation Office (THPO) in the Date Palm and Rosemount Storage project. The project area is not located within the boundaries of the ACBCI Reservation. However, it is within the Tribe's Traditional Use Area. For this reason, the ACBCI THPO requests the following:

*Formal government to government consultation under California Senate Bill 18 (SB-18).

*Formal government to government consultation under California Assembly Bill No. 52 (AB-52).

*The presence of an approved Agua Caliente Native American Cultural Resource Monitor(s) during any ground disturbing activities (including archaeological testing and surveys). Should buried cultural deposits be encountered, the Monitor may request that destructive construction halt and the Monitor shall notify a Qualified Archaeologist (Secretary of the Interior's Standards and Guidelines) to investigate and, if necessary, prepare a mitigation plan for submission to the State Historic Preservation Officer and the Agua Caliente Tribal Historic Preservation Office.

*Please provide the Initial Study when available.

Again, the Agua Caliente appreciates your interest in our cultural heritage. If you have questions or require additional information, please call me at (760) 423-3485. You may also email me at ACBCI-THPO@aguacaliente.net.

Cordially,

AGUA CALIENTE BAND OF CAHUILLA INDIANS

TRIBAL HISTORIC PRESERVATION

Xitlaly Madrigal
Cultural Resources Analyst
Tribal Historic Preservation Office
AGUA CALIENTE BAND
OF CAHUILLA INDIANS

Appendix D

Noise Impact Study

Date Palm Mixed Use Project
Noise Impact Study
City of Cathedral City, CA

Prepared for:

Mr. Stephen Nieto
The Altum Group
44-600 Village Court Suite 100
Palm Desert, CA 92260

Prepared by:

MD Acoustics, LLC
Robert Pearson
1197 Los Angeles Ave, Ste C-256
Simi Valley, CA 93065

Date: 3/4/2024

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1.0 Introduction

1.1 Purpose of Analysis and Study Objectives

This noise assessment was prepared to evaluate the potential noise impacts for the project study area and to recommend noise mitigation measures, if necessary, to minimize the potential noise impacts. The assessment was conducted and compared to the noise standards set forth by the Federal, State, and Local agencies. Consistent with the City's Noise Guidelines, the project must demonstrate compliance to the applicable noise criteria as outlined within the City of Cathedral City Noise Element and Municipal Code.

The following is provided in this report:

- A description of the study area and the proposed project;
- Information regarding the fundamentals of noise;
- A description of the local noise guidelines and standards;
- An analysis of traffic noise impacts to the sensitive receptors and the project site; and
- An analysis of construction noise impacts.

1.2 Site Location and Study Area

The project site is located on the southeast corner of Date Palm Drive and Rosemount Road in the City of Cathedral City, as shown in Exhibit A. The site is currently zoned as Planned Community Commercial by the City of Cathedral City. The project borders multifamily residential uses to the east, commercial uses to the south, Date Palm Drive to the west with commercial uses further, and Rosemount Road to the north with vacant land further.

1.3 Proposed Project Description

The proposed Project includes the development of approximately seven (7) acres located in the city of Cathedral City, east of Date Palm Drive, between Rosemount Road to the north and McCallum Way to the south. The project will require a recommendation from the Planning Commission and for the City Council to take final action on an entitlement and legislative action for parcels including APN: 670-110-48, 49, 50, 51, 52, 53, & 56. The proposed project includes the below:

A Design Review and Lot Merger for the construction of a 2-story indoor mini-storage facility with a total area of 115,054 square feet at 57,527 square feet per floor. The current zoning of the site is Specific Plan No. 99-58 with the underlying zone of PCC (Planned Community Commercial) District.

A Specific Plan Amendment to create Planning Unit 4 which would allow the indoor mini-storage use and a 50,000 square foot grocery store as well as changes to the development code, new streamlined architectural standards, and updated list of permitted and conditional land uses.

The Mitigated Negative Declaration was processed at full buildout so that future entitlements would not have to obtain separate Mitigated Negative Declarations. At full buildout the project could include either of two scenarios: retail uses with a 2-story indoor mini-storage facility, or a grocery store up to 50,000 square feet, 2-story indoor mini-storage facility, and retail uses. The project is currently being proposed as a phased project and each future proposal would require its own entitlement consistent with the Mitigated Negative Declaration. The Design Review only includes the indoor mini-storage facility, underground retention basin, and a minimum of 12 spaces for on-site parking.

With regard to CEQA, the proposed Project would be developed with phased construction which includes the operation of a 2-story 115,054 square foot (sf) indoor climate-controlled mini-storage facility with 57,527 square feet per floor. The indoor mini-storage facility includes climate-controlled self-storage, retail, office, and loading areas. The CEQA Analysis includes two scenarios, scenario one would include the first phase which would be an approximate two (2) story 115,054 square feet (sf) at 57,527 sf per floor, climate controlled self-storage facility with associated retail, office, and loading areas and Phase 2 would include one (1) retail building approximately 4,725 sf in size, two (2) drive through facilities with areas of 2,413 sf and 4,617 sf respectively, and two (2) retail buildings with areas of 3,217 sf each. Scenario two would include the two (2) story 115,054 square feet (sf) at 57,527 sf per floor, climate-controlled self-storage facility with associated retail, office, and loading Units and one (1) grocery store/big box building with a maximum Unit of 50,000 sf, and a retail building with an Unit of 4,725 sf. Both alternatives will have on-site landscaping, on-site parking, signage, low walls, along frontage, and underground retention for on-site water retention.
Exhibit C demonstrates the site plan for the project.

Exhibit A

Location Map

Exhibit B

Site Plan Alternative 1

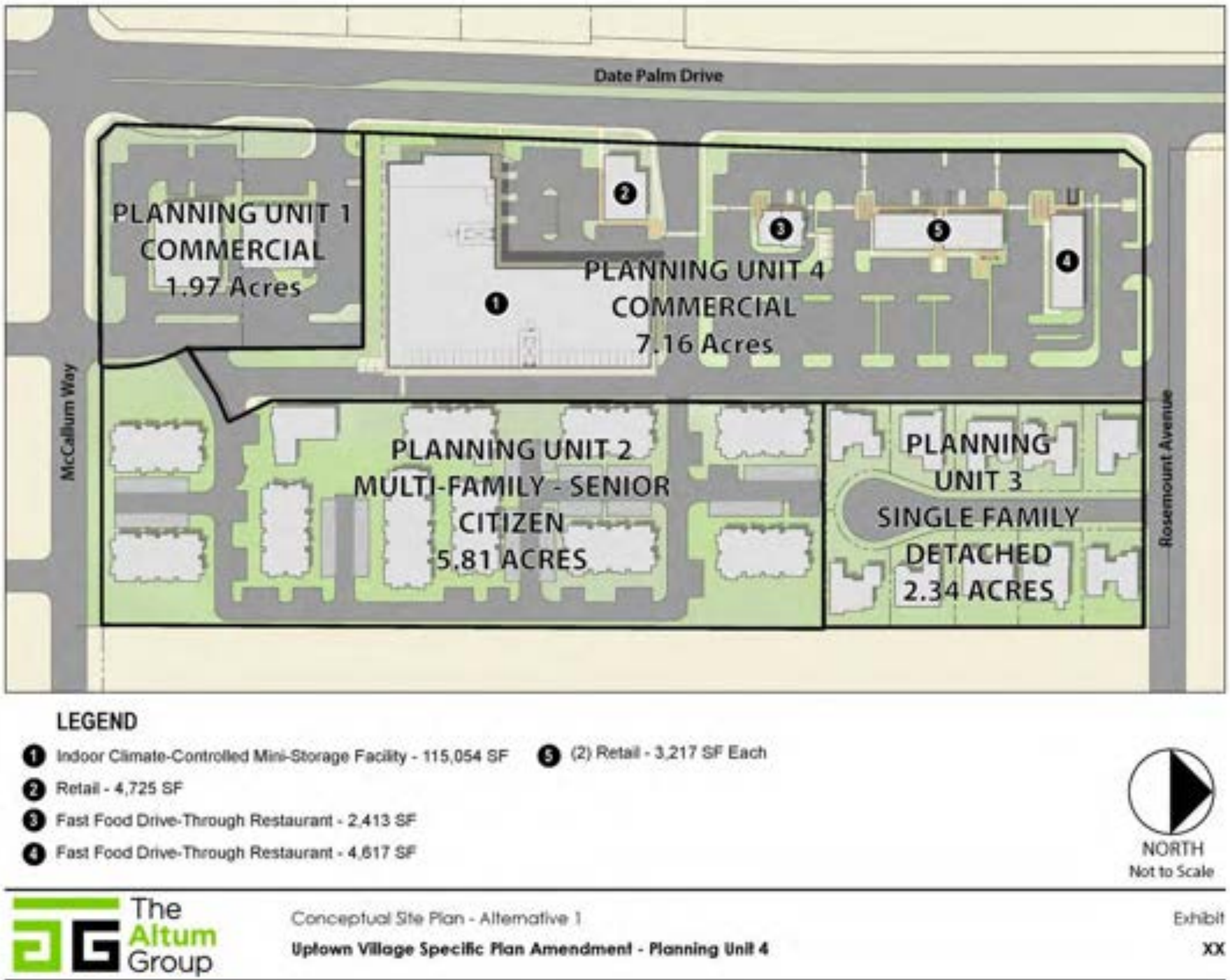
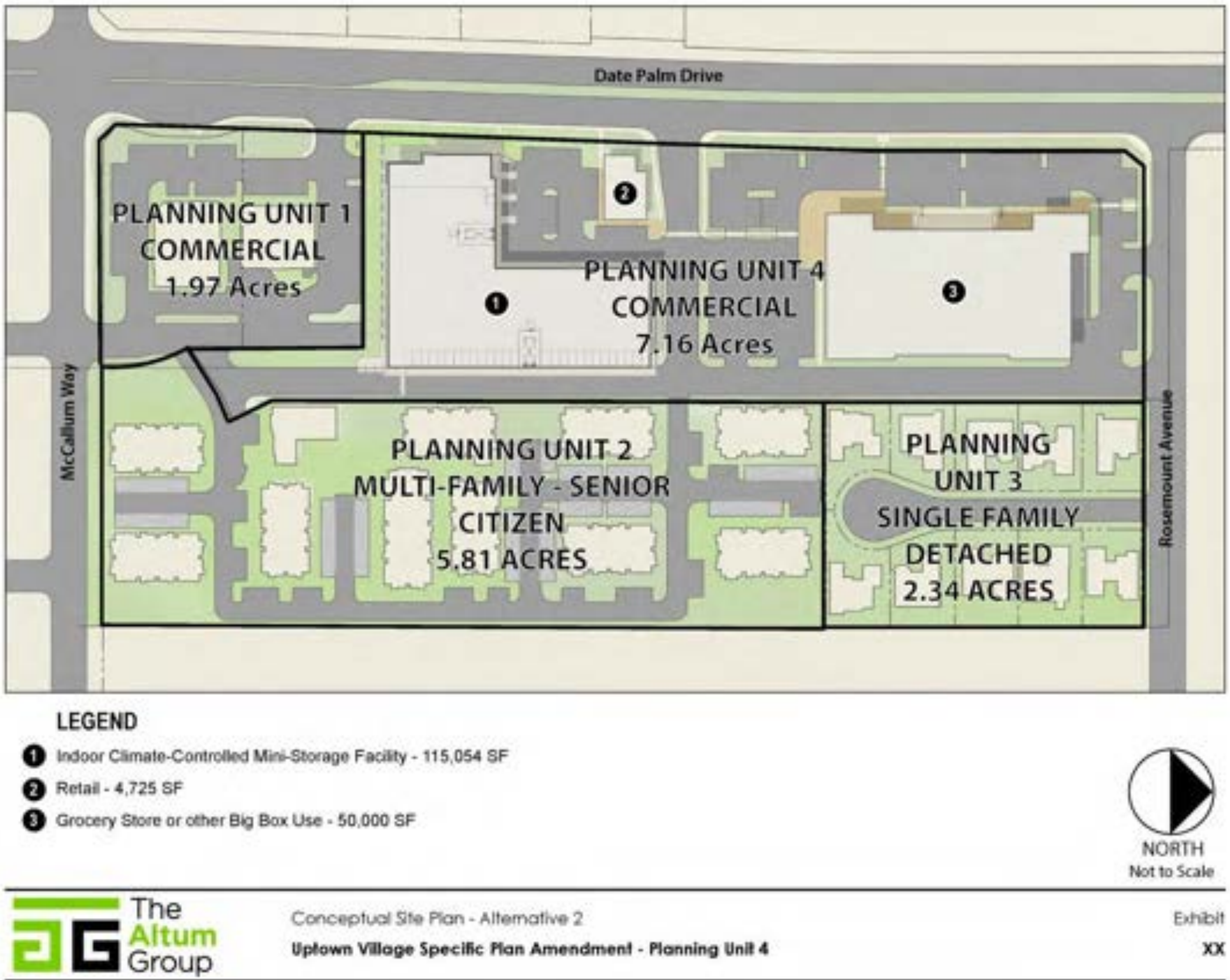


Exhibit C
Site Plan Alternative 2



2.0 Fundamentals of Noise

This section of the report provides basic information about noise and presents some of the terms used within the report.

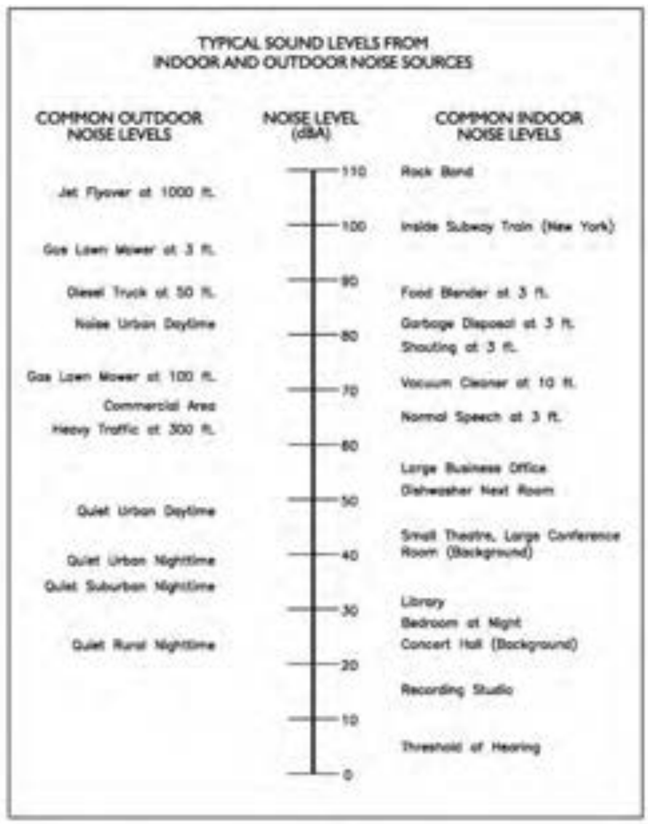
2.1 Sound, Noise, and Acoustics

Sound is a disturbance created by a moving or vibrating source and is capable of being detected by the hearing organs. Sound may be thought of as mechanical energy of a moving object transmitted by pressure waves through a medium to a human ear. For traffic or stationary noise, the medium of concern is air. *Noise* is defined as sound that is loud, unpleasant, unexpected, or unwanted.

2.2 Frequency and Hertz

A continuous sound is described by its *frequency* (pitch) and its *amplitude* (loudness). Frequency relates to the number of pressure oscillations per second. Low-frequency sounds are low in pitch (bass sounding) and high-frequency sounds are high in pitch (squeak). These oscillations per second (cycles) are commonly referred to as Hertz (Hz). The human ear can hear from the bass pitch starting at 20 Hz to the high pitch of 20,000 Hz.

Exhibit D: Typical A-Weighted Noise Levels



2.3 Sound Pressure Levels and Decibels

The *amplitude* of a sound determines its loudness. The loudness of sound increases or decreases as the amplitude increases or decreases. Sound pressure amplitude is measure in units of micro-Newton per square inch meter (N/m2), also called micro-Pascal (µPa). One µPa is approximately one hundred billionths (0.00000000001) of normal atmospheric pressure. Sound pressure level (SPL or L_p) is used to describe in logarithmic units the ratio of actual sound pressures to a reference pressure squared. These units are called decibels abbreviated dB. Exhibit C illustrates references sound levels for different noise sources.

2.4 Addition of Decibels

Because decibels are on a logarithmic scale, sound pressure levels cannot be added or subtracted by simple plus or minus addition. When two sounds or equal SPL are combined, they will produce an SPL 3 dB greater than the original single SPL. In other words, sound energy must be doubled to produce a 3 dB increase. If two sounds differ by approximately 10 dB, the higher sound level is the predominant sound.

2.5 Sensitive Receptors

Noise-sensitive land uses include residential (single and multi-family dwellings, mobile home parks, dormitories, and similar uses); transient lodging (including hotels, motels, and similar uses); hospitals, nursing homes, convalescent hospitals, and other facilities for long-term medical care; public or private educational facilities, libraries, churches, and places of public assembly.

2.6 Human Response to Changes in Noise Levels

In general, the healthy human ear is most sensitive to sounds between 1,000 Hz and 5,000 Hz, (A-weighted scale) and it perceives a sound within that range as being more intense than a sound with a higher or lower frequency with the same magnitude. For purposes of this report as well as with most environmental documents, the A-scale weighting is typically reported in terms of A-weighted decibel (dBA). Typically, the human ear can barely perceive a change in noise level of 3 dB. A change in 5 dB is readily perceptible, and a change in 10 dB is perceived as being twice or half as loud. As previously discussed, 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 highway) would result in a barely perceptible change in sound level.

Table 1: Decibel Changes and Loudness

Changes in Intensity Level, dBA	Changes in Apparent Loudness
1	Not perceptible
3	Just perceptible
5	Clearly noticeable
10	Twice (or half) as loud
Source: https://www.fhwa.dot.gov/environMent/noise/regulations_and_guidance/polguide/polguide02.cfm	

2.7 Noise Descriptors

Noise in our daily environment fluctuates over time. Some noise levels occur in regular patterns, others are random. Some noise levels are constant while others are sporadic. Noise descriptors were created to describe the different time-varying noise levels.

A-Weighted Sound Level: The sound pressure level in decibels as measured on a sound level meter using the A-weighted filter network. The A-weighting filter de-emphasizes the very low and very high-frequency components of the sound in a manner similar to the response of the human ear. A numerical method of rating human judgment of loudness.

Ambient Noise Level: The composite of noise from all sources, near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

Community Noise Equivalent Level (CNEL): The average equivalent A-weighted sound level during a 24-hour day, obtained after the addition of five (5) decibels to sound levels in the evening from 7:00 to 10:00 PM and ten (10) decibels to sound levels in the night before 7:00 AM and after 10:00 PM.

Decibel (dB): A unit for measuring the amplitude of a sound pressure wave. The range of sound audible to the average human (from the quietest to the loudest perceptible sound) is difficult to measure on a linear scale: imagine trying to measure something from inches to miles with the same ruler. Therefore, the convention is to use a logarithmic scale, measured in decibels. A decibel is a logarithmic expression comparing a pressure to a reference pressure (20 micro-pascals) that provides a useful way to compare sounds of differing amplitudes.

dB(A): A-weighted sound level (see definition above).

Equivalent Sound Level (LEQ): The sound level corresponding to a steady noise level over a given sample period with the same amount of acoustic energy as the actual time-varying noise level. The energy average noise level during the sample period.

Habitable Room: Any room meeting the requirements of the Uniform Building Code or other applicable regulations which is intended to be used for sleeping, living, cooking, or dining purposes, excluding such enclosed spaces as closets, pantries, bath or toilet rooms, service rooms, connecting corridors, laundries, unfinished attics, foyers, storage spaces, cellars, utility rooms, and similar spaces.

L(n): The A-weighted sound level exceeded during a certain percentage of the sample time. For example, L10 in the sound level exceeded 10 percent of the sample time. Similarly, L50, L90, and L99, etc.

Noise: *A*ny unwanted sound or sound which is undesirable because it interferes with speech and hearing, or is intense enough to damage hearing, or is otherwise annoying. The State Noise Control Act defines noise as "...excessive undesirable sound...".

Outdoor Living Area: Outdoor spaces that are associated with residential land uses typically used for passive recreational activities or other noise-sensitive uses. Such spaces include patio areas, barbecue areas, jacuzzi areas, etc. associated with residential uses; outdoor patient recovery or resting areas associated with hospitals, convalescent hospitals, or rest homes; outdoor areas associated with places of worship which have a significant role in services or other noise-sensitive activities; and outdoor school facilities routinely used for educational purposes which may be adversely impacted by noise. Outdoor areas usually not included in this definition are: front yard areas, driveways, greenbelts, maintenance areas and storage areas associated with residential land uses; exterior areas at hospitals that are not used for patient activities; outdoor areas associated with places of worship and principally used for short-term social gatherings; and, outdoor areas associated with school facilities that are not typically associated with educational uses prone to adverse noise impacts (for example, school play yard areas).

Percent Noise Levels: See L(n).

Sound Level (Noise Level): The weighted sound pressure level obtained by use of a sound level meter having a standard frequency filter for attenuating part of the sound spectrum.

Sound Level Meter: An instrument, including a microphone, an amplifier, an output meter, and frequency weighting networks for the measurement and determination of noise and sound levels.

Single Event Noise Exposure Level (SENEL): The dB(A) level which, if it lasted for one second, would produce the same A-weighted sound energy as the actual event.

2.8 Traffic Noise Prediction

Noise levels associated with traffic depends on a variety of factors: volume of traffic; the speed of traffic; auto, medium truck (2-axle), and heavy truck percentage (3-axle and greater); and sound propagation. Higher traffic volume, speeds, and truck percentages equate to a louder volume in noise. A doubling of the Average Daily Traffic (ADT) along a roadway will increase noise levels by approximately 3 dB; reasons for this are discussed in the sections above.

2.9 Sound Propagation

As sound propagates from a source it spreads geometrically. Sound from a small, localized source (i.e., a point source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates at a rate of 6 dB per doubling of distance. The movement of vehicles down a roadway makes the source of the sound appear to propagate from a line (i.e., line source) rather than a point source. This line source results in the noise propagating from a roadway in a cylindrical spreading versus a spherical spreading that results from a point source. The sound level attenuates for a line source at a rate of 3 dB per doubling of distance.

As noise propagates from the source, it is affected by the ground and atmosphere. Noise models use hard site (reflective surfaces) and soft site (absorptive surfaces) to help calculate predicted noise levels. Hard site conditions assume no excessive ground absorption between the noise source and the receiver. Soft site conditions such as grass, soft dirt, or landscaping attenuate noise at a rate of 1.5 dB per doubling of distance. When added to the geometric spreading, the excess ground attenuation results in an overall noise attenuation of 4.5 dB per doubling of distance for a line source and 7.5 dB per doubling of distance for a point source.

Research has demonstrated that atmospheric conditions can have a significant effect on noise levels when noise receivers are located 200 feet from a noise source. Wind, temperature, air humidity, and turbulence can further impact have far sound can travel.

3.0 Ground-Borne Vibration Fundamentals

3.1 Vibration Descriptors

Ground-borne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. The effects of ground-borne vibrations typically only cause a nuisance to people, but at extreme vibration levels, damage to buildings may occur. Although ground-borne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. Ground-borne noise is an effect of ground-borne vibration and only exists indoors since it is produced from noise radiated from the motion of the walls and floors of a room and may also consist of the rattling of windows or dishes on shelves.

Several different methods are used to quantify vibration amplitude.

PPV – Known as the peak particle velocity (PPV) which is the maximum instantaneous peak in vibration velocity, typically given in inches per second.

RMS – Known as root mean squared (RMS) can be used to denote vibration amplitude.

VdB – A commonly used abbreviation to describe the vibration level (VdB) for a vibration source.

3.2 Vibration Perception

Typically, developed areas are continuously affected by vibration velocities of 50 VdB or lower. These continuous vibrations are not noticeable to humans whose threshold of perception is around 65 VdB. Outdoor sources that may produce perceptible vibrations are usually caused by construction equipment, steel-wheeled trains, and traffic on rough roads, while smooth roads rarely produce perceptible ground-borne noise or vibration. To counter the effects of ground-borne vibration, the Federal Transit Administration (FTA) has published guidance relative to vibration impacts. According to the FTA, fragile buildings can be exposed to ground-borne vibration levels of 0.3 inches per second without experiencing structural damage. Although ground borne vibration is sometimes noticeable in outdoor environments, it is almost never annoying to people who are outdoors; therefore, the vibration level threshold is assessed at occupied structures. Therefore, all vibration impacts are assessed at the structure of an affected property.

There are three main types of vibration propagation: surface, compression, and shear waves. Surface waves, or Rayleigh waves, travel along the ground's surface. These waves carry most of their energy along an expanding circular wavefront, similar to ripples produced by throwing a rock into a pool of water. P-waves, or compression waves, are body waves that carry their energy along an expanding spherical wavefront. The particle motion in these waves is longitudinal (i.e., in a "push-pull" fashion). P-waves are analogous to airborne sound waves. S-waves, or shear waves, are also body waves that carry energy along an expanding spherical wavefront. However, unlike P-waves, the particle motion is transverse, or side-to-side and perpendicular to the direction of propagation. As vibration waves propagate from a source, the vibration energy decreases in a logarithmic nature and the vibration levels typically decrease by 6 VdB per doubling of the distance from the vibration source. As stated above, this drop-off rate can vary greatly depending on the soil but has been shown to be effective enough for screening purposes to identify potential vibration impacts that may need to be studied through actual field tests.

4.0 Regulatory Setting

The proposed project is located in the City of Cathedral City, California, and noise regulations are addressed through the efforts of various federal, state, and local government agencies. The agencies responsible for regulating noise are discussed below.

4.1 Federal Regulations

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972, which serves three purposes:

- Publicize noise emission standards for interstate commerce
- Assist state and local abatement efforts
- Promote noise education and research

The Federal Office of Noise Abatement and Control (ONAC) originally was tasked with implementing the Noise Control Act. However, it was eventually eliminated leaving other federal agencies and committees to develop noise policies and programs. Some examples of these agencies are as follows: The Department of Transportation (DOT) assumed a significant role in noise control through its various agencies. The Federal Aviation Agency (FAA) is responsible for regulating noise from aircraft and airports. The Federal Highway Administration (FHWA) is responsible for regulating noise from the interstate highway system. The Occupational Safety and Health Administration (OSHA) is responsible for the prohibition of excessive noise exposure to workers. The United States Housing and Urban Development (HUD) is responsible for establishing noise regulations as it relates to exterior/interior noise levels for new HUD-assisted housing developments near high noise areas.

The federal government advocates that local jurisdictions use their land use regulatory authority to arrange new developments in such a way that “noise sensitive” uses are either prohibited from being constructed adjacent to a highway or that the developments are planned and constructed in such a manner that potential noise impacts are minimized.

Since the federal government has preempted the setting of standards for noise levels that can be emitted by the transportation source, the City is restricted to regulating the noise generated by the transportation system through nuisance abatement ordinances and land use planning.

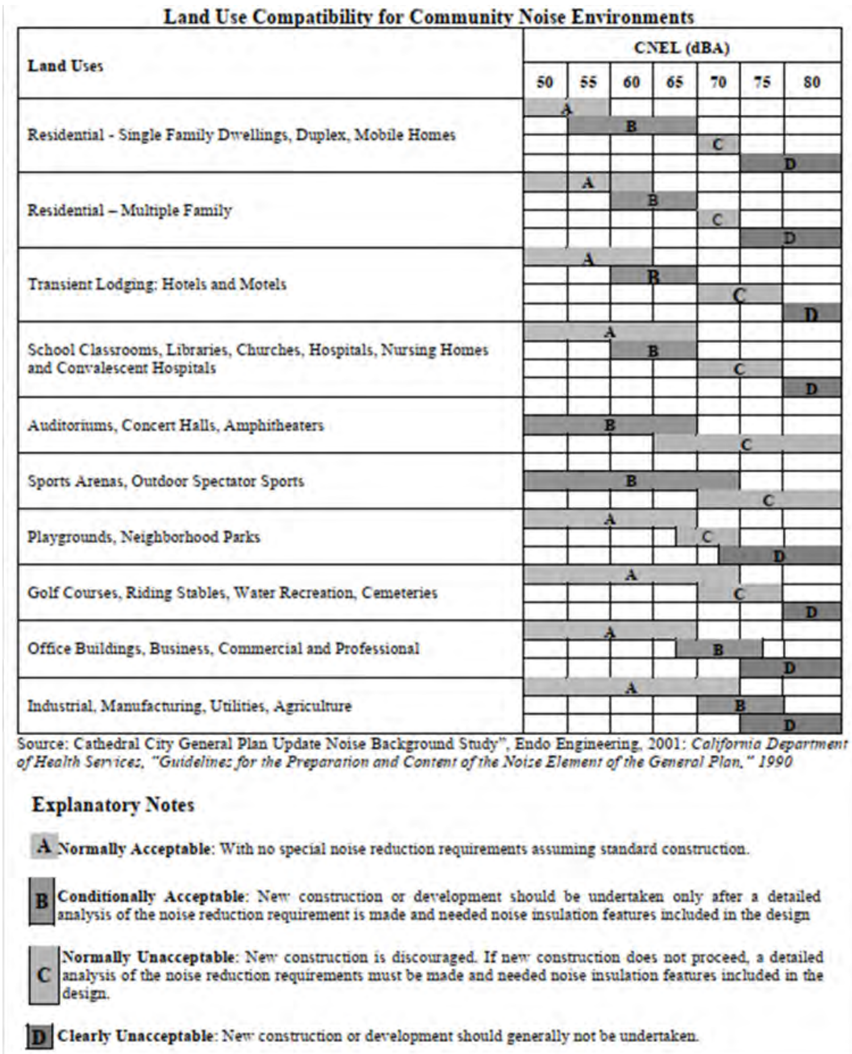
4.2 State Regulations

Established in 1973, the California Department of Health Services Office of Noise Control (ONC) was instrumental in developing regularity tools to control and abate noise for use by local agencies. One significant model is the “Land Use Compatibility for Community Noise Environments Matrix.” The matrix allows the local jurisdiction to delineate the compatibility of sensitive uses with various incremental levels of noise.

The State of California has established noise insulation standards as outlined in Title 24 and the Uniform Building Code (UBC) which in some cases requires acoustical analyses to outline exterior noise levels and to ensure interior noise levels do not exceed the interior threshold. The State mandates that the legislative body of each county and city adopt a noise element as part of its comprehensive general plan.

The local noise element must recognize the land use compatibility guidelines published by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable as illustrated in Exhibit D (City of Cathedral City Noise Element, Land Use Compatibility Matrix, Table V-2).

Exhibit E: Land Use Compatibility Guidelines



4.3 City of Cathedral City Noise Regulations

The City of Cathedral City outlines their noise regulations and standards within the City Safety and The City of Cathedral City outlines their noise regulations and standards within the Municipal Code and the Noise Element of the City of Cathedral City General Plan Chapter V Section C.

City of Cathedral City General Plan

The Noise Element outlined in Chapter V Environmental Hazards coordinates the community's land uses with the existing and future noise environment and designs measures intended to minimize or avoid community exposure to excessive noise levels. The implementation of the policies and programs contained in the Noise Element is meant to reduce or avoid current and future noise impacts.

The Noise Element identifies the major source of continuous, excessive noise in the city. Those sources are traffic noise propagating from main roadways and also freight rail service along the Southern Pacific Railroad, parallel to the I-10 highway. Airport noise can impact occasionally the noise environment. Sensitive receptors are identified as schools, libraries, and medical facilities. The City of Cathedral City has adopted their ordinance to address the State requirement outlined by the California Government Code Section 65032, subsection (f) and section 21083.1 of the California Environmental Quality Act (CEQA). Applicable noise ordinance for the City of Cathedral City is in place through Chapter 11.96 of the City Municipal Code.

The Noise Element also describes the noise contours projected for major roadways, and the data is presented in Table V-3.

In addition to the noise standards, the City has outlined goals, policies, and programs to reduce potential noise impacts and are presented below:

Goals, Policies, and Programs

Policies, goals, and programs measures from the Noise Element that would mitigate potential impacts on noise include the following.

Goal: A noise environment that complements the City's low density residential character and its various land uses.

Policy 1: Protect noise sensitive land uses, including residential neighborhoods, schools, hospitals, libraries, churches, resorts, and community open space, as well as land uses proposed in the vicinity of the railway, Interstate 10, the Mid-Valley Parkway, and Da Vall Drive from high noise levels generated by existing and future noise sources.

Program 1.A: Develop and maintain an inventory of existing noise sources and areas of incompatibility and establish procedures to reduce the noise levels in these areas, where economically and aesthetically feasible.

Program 1.B: Require building setbacks, the installation of wall and window insulation, soundwalls, earthen berms, and/or other mitigation measures in areas exceeding the City's noise limit standards for private development projects as they occur.

Program 1.C: Maintain and enforce a Noise Control ordinance that establishes community-wide noise standards and identifies measures designed to resolve noise complaints.

Program 1.D: Use Specific Plans and the development review process to encourage the use of buffers between noise sensitive land uses and incompatible land uses.

Program 1.E: Parking lots, loading zones, and large trash bins shall be located at a sufficient distance from adjacent residential properties to reduce associated noise impacts.

Policy 2: The relationship between land use designations in the Land Use Element and changes in the circulation pattern of the City, as well as individual developments shall be monitored and mitigated.

Program 2.A: The City zoning ordinance and development review standards shall be used to limit land use patterns and project designs to those that are noise compatible.

Program 2.B: Develop guidelines and minimal criteria requirements for noise analyses for future development projects. Studies shall evaluate project impacts and the effectiveness of proposed mitigation measures.

Program 2.C: Periodically review and amend the Land Use map as appropriate to assure reasonable land use/noise level compatibility.

Policy 3: Private sector project proposals shall include measures that assure that noise exposures levels comply with State of California noise insulation standards as defined in Title 25 (California Noise Insulation Standards).

Policy 4: Maintain a circulation map which maintains low levels of traffic within neighborhoods and assigns truck routes to major roadways only.

Program 4.A: Designate primary truck routes and ensure that they are clearly marked throughout the community. Except for traffic providing location-specific services and deliveries, construction trucks and delivery trucks shall be limited to East Palm Canyon Drive, Interstate-10, Date Palm Drive, Palm Drive, Varner Road, Edom Hill Road, Dinah Shore Drive, Ramon Road, and Vista Chino.

Program 4.B: Development projects which result in through-traffic in residential neighborhoods shall be discouraged through the development review process.

Policy 5: Maintain an ongoing contact with the Palm Springs Airport to ensure that flight paths and airport improvements do not impact or extend noise contours into the City.

Policy 6: Coordinate with adjoining municipalities to assure noise-compatible land uses across jurisdictional boundaries.

Policy 7: The City shall restrict grading and construction activities that may impact residential neighborhoods to specified days of the week and times of day.

City of Cathedral City – Noise Ordinance

Section 11.96.030 "Prohibited acts" from the noise ordinance outlines the City's exterior noise limits as it relates to stationary noise sources.

(A) It is unlawful for any person to engage in the following activities:

(6) To produce, suffer or allow to be produced noise or sounds that exceeds the dB(A) levels in the table below. Exterior noise shall be measured at the lot line of the lot where the noise or sounds are emanating. If the measurement location is on the boundary between two different noise zones, the lower noise level standard applicable to the noise zone shall apply. Interior noise shall be measured at least four feet from the wall, floor, or ceiling nearest to the noise source and with all windows, doors, and other openings to the exterior closed.

Noises caused by motor vehicles or trains are exempt from these standards.

In the event the ambient noise level exceeds these levels, no person shall produce, suffer or allow to be produced noise or sounds in excess of the ambient noise level.

Table 2: Allowable Exterior Noise Level

Zone	Time	dB(A) Level
Residential – Exterior Noise	7 a.m. – 10 p.m.	65
	10 p.m. - 7 a.m.	50
Residential – Interior Noise	7 a.m. – 10 p.m.	50
	10 p.m. - 7 a.m.	40
Commercial Industrial – Exterior Noise	7 a.m. – 10 p.m.	85
	10 p.m. – 7 a.m.	55

Section 11.96.060(L) of the Municipal Code enlist the exceptions from Chapter 11.96 as follows:

(L) Construction, repair or excavation work performed pursuant to a valid written agreement with the city or any of its political subdivisions which agreement provides for noise mitigation measures;

In addition, Chapter 9.86 of the Municipal Code outlines the performance standards for commercial and industrial zones. This section classifies the performance standards in A, B, and C, referring all three to Chapter 11.96 for noise limits.

Also, Chapter 9.96 "Special Provisions Applying to Miscellaneous Problem Uses" outlines the noise attenuation requirements for carwashes on Section 9.96.140.

Vibration Regulations

Chapter 9.86 states vibration standards as follows: All uses shall be so operated as not to generate vibration discernible without instruments by the average person while on or beyond the lot upon which the source is located or within an adjoining enclosed space if more than one establishment occupies a structure. Vibration caused by motor vehicles, trains, and temporary construction or demolition work is exempt from this standard.

Construction Regulations

Chapter 11.96 outlines the permitted hours for construction work in Section 11.96.070 limiting the time for construction work as stated in Subsection B of this Section.

1. October 1st through April 30th.

Monday – Friday:	7:00 a.m. to 5:30 p.m.
Saturday:	8:00 a.m. to 5:00 p.m.
Sunday:	No permissible hours
State holidays:	No permissible hours

2. May 1st through September 30th.

Monday – Friday:	6:00 a.m. to 7:00 p.m.
Saturday:	8:00 a.m. to 5:00 p.m.
Sunday:	No permissible hours
State holidays:	No permissible hours

5.0 Study Method and Procedure

The following section describes the noise modeling procedures and assumptions used for this assessment.

5.1 Noise Measurement Procedure and Criteria

Noise measurements are taken to determine the existing noise levels. A noise receiver or receptor is any location in the noise analysis in which noise might produce an impact. The following criteria are used to select measurement locations and receptors:

- Locations expected to receive the highest noise impacts, such as the first row of houses
- Locations that are acoustically representative and equivalent of the area of concern
- Human land usage
- Sites clear of major obstruction and contamination

All measurements equipment meets American National Standards Institute (ANSI) specifications for sound level meters (S1.4-1983 identified in Chapter 19.68.020.AA). MD noise measurement procedures are presented below:

- The sound level meter was calibrated (Piccolo-II) before and after the measurement
- Following the calibration of equipment, a windscreen was placed over the microphone
- Frequency weighting was set on “A” and slow response
- Results of the noise measurements were recorded on field data sheets
- Temperature and sky conditions were observed and documented

5.2 Noise Measurement Locations

The noise monitoring location was selected to obtain a baseline of the existing noise environment. One long-term noise measurement was conducted at the Project site. Appendix A includes photos, the field sheet, and measured noise data. Exhibit E illustrates the location of the measurement.

5.3 SoundPLAN Noise Model (Operational Noise)

SoundPLAN acoustical modeling software was utilized to model project operational noise at nearby sensitive receptors. The SoundPLAN software utilizes algorithms (based on the inverse square law) to calculate noise level projections. It allows the user to input specific noise sources, spectral content, sound barriers, building placement, topography, and sensitive receptor locations. It also calculates noise level increases due to the reflection of noise from hard surfaces.

The future worst-case noise level projections were modeled using referenced sound level data for the various stationary on-site sources (parking spaces, loading areas, and HVAC units). The Alternative 1 model assumes that the building facility has twenty-eight (28) exterior storage loading, three (3) rooftop HVAC units, and parking. Alternative 2 model assumes that the building facility has twenty-eight (28) exterior storage loading, five (5) rooftop HVAC units, one (1) truck loading dock and parking.

Trucks idling at the loading and unloading area were modeled as point sources with a reference noise level of 74 dBA at 10 feet.

Cars idling at the exterior storage loading a were modeled as point sources with a reference noise level of 63 dBA sound power level.

Rooftop HVAC units were modeled as point sources with a reference noise level per manufacturer cut sheets. The model does not include parapets, which are anticipated and will further reduce the noise levels.

Parking was modeled as 1 car movement per parking space per hour.

The SoundPlan model assumes that all noise sources are operating simultaneously (worst-case scenario) when in actuality the noise will be intermittent and lower in noise level.

Finally, the model is able to evaluate the noise attenuating effects of any existing or proposed property line walls. Modeling assumptions are summarized in Table 3. Input and output calculations are provided in Appendix B.

Table 3: SoundPLAN Modeling Assumptions

Noise Source	Source Type	Reference Sound Level (dBA, Leq)	Distance to Reference Source (ft)
Parking	Parking Lot Tool	1 movement per hour	--
Idling Car	Point Source	63	Sound Power
Idling Heavy Truck	Point Source	74	10 ft
Rooftop HVAC Unit	Point Source	79-83	Sound Power
Source: SoundPLAN library			

Noise levels to sensitive receptors were modeled to the nearest single family and multifamily residential uses adjacent to the project site to the east. The approximate distance from the project site to the receptors ranges from 10 to 30 feet.

5.4 Traffic Noise Prediction Modeling

The FHWA Traffic Noise Prediction Model (FHWA-RD-77-108) was utilized to model future traffic noise levels on the project site and existing and existing plus project traffic noise volumes along roadways affected by project generated vehicle traffic. The FHWA model arrives at the predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL).

Project-generated vehicle traffic will result in an incremental increase in ambient noise levels. To determine the project's noise impact to the surrounding land uses, MD generated noise contours for existing ADT, and existing plus project conditions. Table 4 indicates the roadway parameters and vehicle distribution utilized for the modeling. Noise contours are used to provide a characterization of sound levels experienced at a set distance from the centerline of a subject roadway. They are intended to represent a worst-case scenario and do not take into account structures, sound walls, topography, and/or other sound attenuating features that may further reduce the actual noise level. Noise contours are developed for comparative purposes and are used to demonstrate potential increases/decreases along subject roadways as a result of a project. The referenced traffic data and traffic noise calculation worksheets outputs are located in Appendix C.

- Roadway classification – (e.g., freeway, major arterial, arterial, secondary, collector, etc.),
- Roadway Active Width – (distance between the center of the outermost travel lanes on each side of the roadway)
- Average Daily Traffic Volumes (ADT), Speeds, Percentages of autos, medium and heavy trucks
- Roadway grade and angle of view
- Site Conditions (e.g., soft vs. hard)
- Percentage of total ADT which flows each hour throughout a 24-hour period

Table 4: Roadway Parameters and Vehicle Distribution

Roadway	Segment	Existing ADT	Existing Plus Project ADT (Alternative 1)	Existing Plus Project ADT (Alternative 2)	Speed (MPH)	Site Conditions
Date Palm Dr	McCallum Way to 30th Ave	21,246	24,903	24,522	45	Soft
Major Arterial Vehicle Distribution (Truck Mix)[2]						
Motor-Vehicle Type		**Daytime % (7AM to 7 PM)**	**Evening % (7 PM to 10 PM)**	**Night % (10 PM to 7 AM)**		**Total % of Traffic Flow**
Automobiles		75.5	14.0	10.4		92.00
Medium Trucks		48.0	2.0	50.0		3.00
Heavy Trucks		48.0	2.0	50.0		5.00
Secondary and Collector Vehicle Distribution (Truck Mix)[2]						
Motor-Vehicle Type		**Daytime % (7AM to 7 PM)**	**Evening % (7 PM to 10 PM)**	**Night % (10 PM to 7 AM)**		**Total % of Traffic Flow**
Automobiles		75.5	14.0	10.5		97.42
Medium Trucks		48.9	2.2	48.9		1.84
Heavy Trucks		47.3	5.4	47.3		0.74

Notes:
1 Existing ADT from Coachella Valley Traffic counts, Project ADT provided by GIE Transportation Planning and Engineering.
2 Vehicle distribution data is based on Cathedral City traffic counts

5.5 Construction Noise Modeling

Construction noise associated with the proposed project was calculated utilizing methodology presented in the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (2018) together with several key construction parameters including distance to each sensitive receiver, equipment usage, percent usage factor, and baseline parameters for the project site. Construction activities are anticipated to include four phases site preparation, grading, building construction, and paving.

Construction noise levels were calculated for each phase based on the CalEEMod Air Quality Model assumptions. All equipment was assumed to be situated at the center of the project site. Construction worksheets are provided in Appendix D.

6.0 Existing Noise Environment

One (1) 24-hour noise measurement was conducted at the project site to document the existing noise environment. The measurements include the 1-hour Leq, Lmin, Lmax, and other statistical data (e.g. L2, L8). The results of the noise measurement are presented in Table 5. Noise measurement field sheets are provided in Appendix A.

Table 5: Long-Term Noise Measurement Data for (LT1) (dBA)[1]

Date	Time	1-Hour dB(A)							
		L_{EQ}	L_{MAX}	L_{MIN}	L_2	L_8	L_{25}	L_{50}	L_{90}
3/8/2023	10PM-11PM	58.3	78.0	45.3	65.6	60.5	58.1	56.1	53.0
3/8/2023	11PM-12AM	57.2	81.5	43.8	52.7	58.9	56.7	55.2	52.2
3/9/2023	12AM-1AM	54.7	69.4	41.0	58.7	58.4	55.5	53.6	51.1
3/9/2023	1AM-2AM	53.7	65.4	41.5	57.0	55.8	54.5	53.5	51.1
3/9/2023	2AM-3AM	52.4	70.4	41.3	56.6	55.3	52.9	51.4	48.1
3/9/2023	3AM-4AM	53.0	69.8	41.5	57.6	56.1	53.4	51.5	48.0
3/9/2023	4AM-5AM	54.8	69.7	42.0	59.7	58.0	56.2	53.4	50.1
3/9/2023	5AM-6AM	56.7	72.5	43.0	61.5	60.0	58.1	55.6	51.5
3/9/2023	6AM-7AM	60.7	76.0	48.2	64.5	62.4	61.4	60.3	57.4
3/9/2023	7AM-8AM	61.0	76.2	48.9	64.5	63.8	61.8	60.5	57.7
3/9/2023	8AM-9AM	60.0	80.1	42.2	63.7	62.0	60.7	59.5	54.8
3/9/2023	9AM-10AM	57.5	77.6	42.5	62.2	60.2	58.3	56.7	53.3
3/9/2023	10AM-11AM	56.3	71.4	40.6	60.8	59.8	57.2	55.5	51.6
3/9/2023	11AM-12PM	54.4	68.2	41.3	59.1	57.2	55.1	53.5	50.7
3/9/2023	12PM-1PM	53.7	69.2	42.0	57.4	56.2	54.1	52.6	50.4
3/9/2023	1PM-2PM	53.8	66.0	41.6	57.5	56.4	55.0	53.2	50.0
3/9/2023	2PM-3PM	54.9	76.0	39.9	59.5	57.2	55.1	53.2	50.4
3/9/2023	3PM-4PM	56.2	76.0	39.8	62.8	59.1	56.4	54.5	50.5
3/9/2023	4PM-5PM	57.0	71.6	42.0	61.8	59.8	58.2	56.3	52.8
3/9/2023	5PM-6PM	59.6	81.9	41.9	63.4	61.5	59.4	57.3	54.3
3/9/2023	6PM-7PM	60.0	85.2	43.7	64.8	62.6	60.0	56.6	53.6
3/9/2023	7PM-8PM	59.4	83.5	41.1	64.2	59.8	58.4	56.5	53.6
3/9/2023	8PM-9PM	60.0	81.5	44.6	67.5	64.4	59.7	57.5	54.6
3/9/2023	9PM-10PM	57.7	82.5	43.9	61.1	59.7	58.3	57.0	54.1
CNEL		62.7							

Notes:
[1.] Long-term noise monitoring location (LT1) is illustrated in Exhibit E.
[2.] Quietest ambient noise level during operational hours highlighted in orange.

The data presented in Table 5 and the field notes provided in Appendix A, indicate that ambient noise levels in the project vicinity range between 54 and 61 dBA Leq during operational hours. The overall CNEL was 62.7 dBA CNEL. The field data indicates that Date Palm Road is the dominant noise source. The quietest ambient noise level during operational hours is highlighted in orange.

Exhibit F

Measurement Locations

X = Measurement location

7.0 Future Noise Environment Impacts and Mitigation

This assessment analyzes future noise impacts to sensitive receptors and the project and compares the results to the City's Noise Standards. The analysis details the estimated exterior noise levels associated with traffic from adjacent roadway sources. The City has established different significance thresholds for different types of noise impacts.

7.1 Off-Site Traffic Noise Impact

The potential off-site noise impacts caused by the increase in vehicular traffic as a result of the project were calculated at a distance of 50 feet from affected road segments. The noise levels at 50 feet both with and without project-generated vehicle traffic were compared and the increase was calculated. The distance to the 70, 65, 60, and 55 dBA CNEL noise contours are also provided for reference (Appendix C). Noise contours were calculated for the following scenarios and conditions:

- Existing Condition: This scenario refers to the existing year traffic noise condition and is demonstrated in Table 6 and Table 7.

- Existing + Project Condition: This scenario refers to the existing year plus project traffic noise condition and is demonstrated in Table 6: Alternative 1 and Table 7: Alternative 2.

As shown in Table 6, the addition of project-generated vehicle traffic to Date Palm Road due to Alternative 1would result in negligible increases in ambient noise levels and would not be significant.

Table 6: Alternative 1 Existing Scenario - Noise Levels Along Roadways (dBA CNEL)

Existing Without Project Exterior Noise Levels

Roadway	Segment	CNEL at 50 Ft (dBA)	Distance to Contour (Ft)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Date Palm Dr	McCallum Way to 30th Ave	72.1	69	149	321	691

Existing With Project Exterior Noise Levels

Roadway	Segment	CNEL at 50 Ft (dBA)	Distance to Contour (Ft)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Date Palm Dr	McCallum Way to 30th Ave	72.8	77	165	356	768

Change in Existing Noise Levels as a Result of Project

Roadway[1]	Segment	CNEL at 50 Feet dBA[2]			
		Existing Without Project	Existing With Project	Change in Noise Level	Potential Significant Impact
Date Palm Dr	McCallum Way to 30th Ave	72.1	72.8	0.7	No

Notes:
[1] Exterior noise levels calculated at 5 feet above ground level.
[2] Noise levels calculated from centerline of subject roadway.

As shown in Table 7, the addition of project-generated vehicle traffic to Date Palm Road due to Alternative 2 would result in negligible increases in ambient noise levels and would not be significant.

Table 7: Alternative 2 Existing Scenario - Noise Levels Along Roadways (dBA CNEL)

Existing Without Project Exterior Noise Levels

Roadway	Segment	CNEL at 50 Ft (dBA)	Distance to Contour (Ft)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Date Palm Dr	McCallum Way to 30th Ave	72.1	69	149	321	691

Existing With Project Exterior Noise Levels

Roadway	Segment	CNEL at 50 Ft (dBA)	Distance to Contour (Ft)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Date Palm Dr	McCallum Way to 30th Ave	72.7	76	164	353	760

Change in Existing Noise Levels as a Result of Project

Roadway[1]	Segment	CNEL at 50 Feet dBA[2]			
		Existing Without Project	Existing With Project	Change in Noise Level	Potential Significant Impact
Date Palm Dr	McCallum Way to 30th Ave	72.1	72.7	0.6	No

Notes:
[1] Exterior noise levels calculated at 5 feet above ground level.
[2] Noise levels calculated from centerline of subject roadway.

7.2 On-Site Traffic Noise Impact

Future noise levels associated with traffic were modeled using the FHWA Traffic Noise Model calculations in order to evaluate the project in light of the City's exterior standards presented in Table 3 of this report as they apply to future traffic noise impacts to the proposed project. The Project is currently within the conditionally acceptable range at 74 dBA CNEL. It will not change due to the increase in traffic levels due to the project. There are no outdoor uses for this Project.

7.3 Noise Impacts to Off-Site Receptors Due to Stationary Noise Sources

The existing residential land use located east of the project site are a sensitive receptors that may be affected by project operational noise. Worst-case operational noise was modeled using SoundPLAN acoustical modeling software. Eight (8) receptors representative of the residential adjacent sites were modeled using the SoundPLAN noise model to evaluate the proposed project's operational impact. A receptor is denoted by a yellow dot. All yellow dots represent a property line. The results are in Table 7.

Alternative 1 Project Operational Noise Levels

Worst-case "project only" exterior operational noise is presented in Exhibit G. Operational noise levels are expected to reach 43 to 50 dBA Leq at the residential receptors.

Alternative 1 Project Plus Ambient Operational Noise Levels

Existing plus project noise level projections are anticipated to reach up to 55 dBA Leq at the nearest residential receptors. The project-generated operational noise is expected to result in a maximum of 2 dB increase at the adjacent residential sites. This does not exceed the noise ordinance and therefore the impact is less than significant.

Table 8: Alternative 1 Operational Noise Levels (dBA, Leq)

Receptor[1]	Floor	Existing Ambient Noise Level (dBA, Leq)[2]	Project Noise Level (dBA, Leq)[3]	Total Combined Noise Level (dBA, Leq)	Daytime (7AM - 10PM) Stationary Noise Limit (dBA, Leq)	Change in Noise Level as Result of Project
1	1	53.7	46	54	**65.0**	1
2	1		46	54		1
3	1		47	55		1
4	1		48	55		1
5	1		48	55		1
6	1		50	55		2
7	1		45	54		1
8	1		42	54		0

Notes:
1. Receptor1- 8 represent residential uses.
2. Appendix A measured ambient noise data.
3. See Exhibit G for the operational noise level projections at said receptors.
4. Daytime noise ordinance Section 11.96.030 of the Cathedral City Municipal code.

Alternative 2 Project Operational Noise Levels

Worst-case “project only” exterior operational noise is presented in Exhibit H. Operational noise levels are expected to reach 43 to 50 dBA Leq at the residential receptors.

Alternative 2 Project Plus Ambient Operational Noise Levels

Existing plus project noise level projections are anticipated to reach up to 55 dBA Leq at the nearest residential receptors. The project-generated operational noise is expected to result in a maximum of 2 dB increase at the adjacent residential sites. This does not exceed the noise ordinance and therefore the impact is less than significant.

<Table 9 Next Page>

Table 9: Alternative 2 Operational Noise Levels (dBA, Leq)

Receptor[1]	Floor	Existing Ambient Noise Level (dBA, Leq)[2]	Project Noise Level (dBA, Leq)[3]	Total Combined Noise Level (dBA, Leq)	Daytime (7AM - 10PM) Stationary Noise Limit (dBA, Leq)	Change in Noise Level as Result of Project
1	1	53.7	47	55	**65.0**	1
2	1		48	55		1
3	1		49	55		1
4	1		50	55		2
5	1		50	55		2
6	1		50	55		2
7	1		45	54		1
8	1		43	54		0

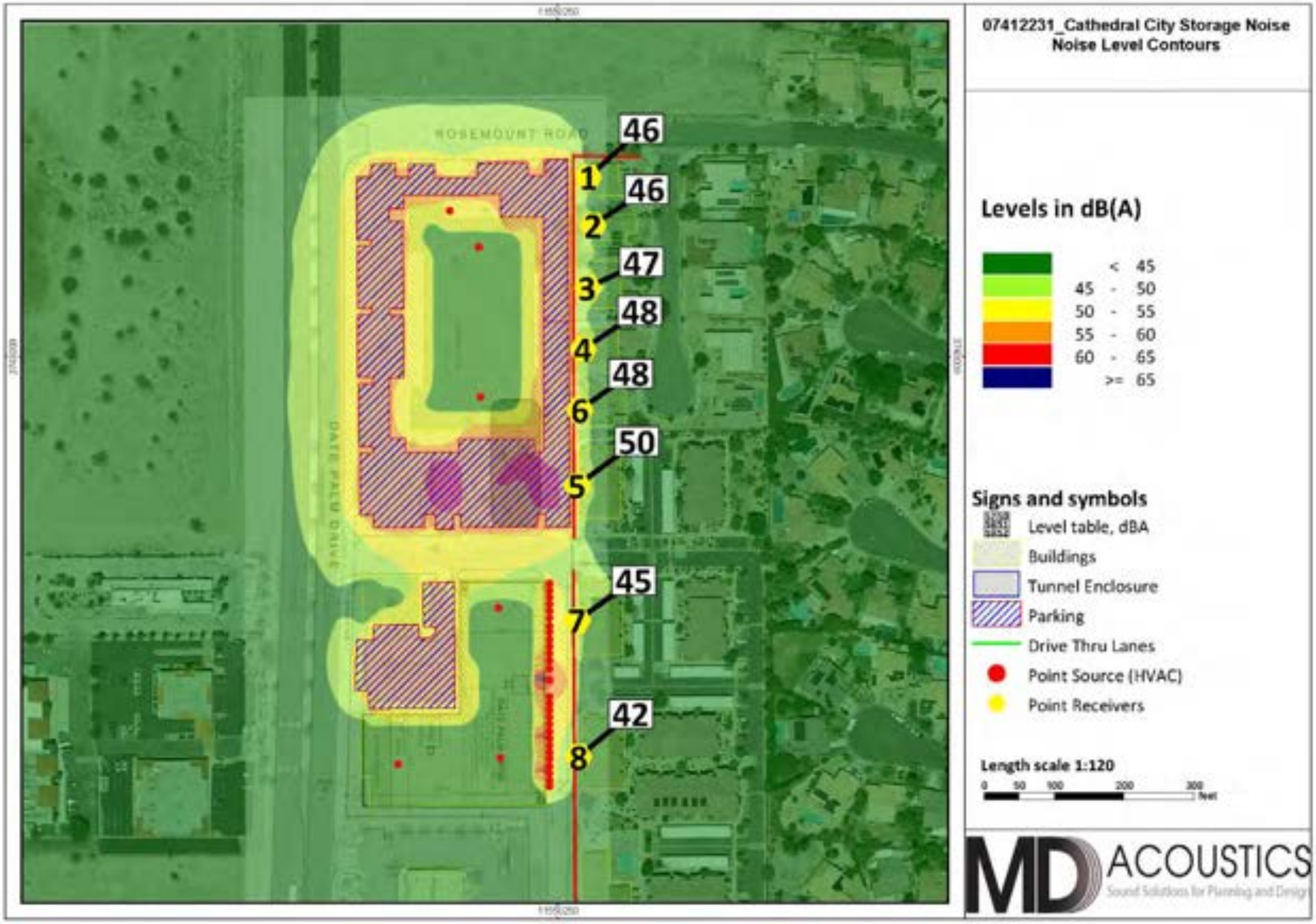
Notes:
1. Receptor1- 8 represent residential uses.
2. Appendix A measured ambient noise data.
3. See Exhibit H for the operational noise level projections at said receptors.
4. Daytime noise ordinance Section 11.96.030 of the Cathedral City Municipal code.

Exhibit G

Operational Noise Levels Alternative 1

Exhibit H

Operational Noise Levels Alternative 2



8.0 Construction Noise and Vibration Impacts

The degree of construction noise may vary for different areas of the project site and also vary depending on the construction activities. Project construction will occur in four phases, site preparation, grading, building construction, and paving. This section summarizes and discusses noise and ground-borne vibration modeling efforts, impact analysis, and mitigation, if necessary.

8.1 Construction Noise

Typical construction equipment noise levels are presented in Table 10.

Table 10: Typical Construction Equipment Noise Levels[1]

EQUIPMENT POWERED BY INTERNAL COMBUSTION ENGINES

Type	Noise Levels (dBA) at 50 Feet
Earth Moving	
Compactors (Ground)	80
Front Loaders	80
Backhoes	80
Tractors	84
Scrapers, Graders	85
Pavers	85
Trucks	84
Materials Handling	
Concrete Mixers	85
Concrete Pumps	82
Cranes	85
Stationary	
Pumps	77
Generators	82
Compressors	80

IMPACT EQUIPMENT

Type	Noise Levels (dBA) at 50 Feet
Concrete Saws	90
Vibratory Pile Driver	95

Notes:
[1] Referenced Noise Levels from the FHWA Construction Noise Handbook

Construction noise associated with each phase of the project was calculated at nearby sensitive receptors utilizing methodology presented in the Federal Highway Administration (FHWA) Construction Noise Model together with several key construction parameters including distance to each sensitive receiver, equipment usage, percent usage factor, and baseline parameters for the project site. Construction was modeled from the edge of the site to the nearest adjacent properties in use.

Construction activities are anticipated to include five phases: site preparation, grading, building construction, paving, and architectural coating. Noise levels associated with each phase are shown in Table 11. The construction noise calculation output worksheet is located in Appendix D.

Table 11: Construction Noise Level by Phase (dBA, Leq)

Activity	Noise Levels at Nearest Sensitive Receptor	
	Leq	Lmax
Site Preparation	73	79
Grading	70	80
Building Construction	72	79
Paving	68	78
Architectural Coating	59	73

Notes:
Construction Modeling Worksheets are provided in Appendix D.

As shown in Table 11, project construction noise will range between 59 to 73 dBA Leq at the nearest sensitive receptors, which are the residential uses at the eastern property line.

The Project will be required to adhere to Section 11.96.070 of the City of Cathedral City Municipal Code which outlines the allowed times for construction. Therefore, the impact is less than significant.

In addition to complying with Section 11.96.070 of the City of Cathedral City Municipal Code, the following best practices are recommended to reduce construction noise:

1. During construction, the contractor shall ensure that all construction equipment is equipped with appropriate noise attenuating devices.

2. The contractor should locate equipment staging areas that will create the greatest distance between construction-related noise/vibration sources and sensitive receptors nearest the project site during all project construction.

3. Idling equipment should be turned off when not in use.

4. Equipment shall be maintained so that vehicles and their loads are secured from rattling and banging.

8.2 Construction Vibration

Construction activities can produce vibration that may be felt by adjacent land uses. The construction of the proposed project would not require the use of equipment such as pile drivers, which are known to generate substantial construction vibration levels. The primary vibration source during construction may be from a bulldozer. A large bulldozer has a vibration impact of 0.089 inches per second peak particle velocity (PPV) at 25 feet which is perceptible but below any risk to architectural damage.

The fundamental equation used to calculate vibration propagation through average soil conditions and distance is as follows:

$$PPV_{equipment} = PPV_{ref}\ (100/D_{rec})^{n}$$

Where: PPV_{ref} *= reference PPV at 100ft.*
D_{rec} *= distance from equipment to receiver in ft.*
n = 1.5 (the value related to the attenuation rate through the ground)

The thresholds from the Caltrans Transportation and Construction Induced Vibration Guidance Manual in Table 12 (below) provides general thresholds and guidelines as to the vibration damage potential from vibratory impacts.

Table 12: Guideline Vibration Damage Potential Threshold Criteria

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: Table 19, Transportation and Construction Vibration Guidance Manual, Caltrans, Sept. 2013.
Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Table 13 gives approximate vibration levels for particular construction activities. This data provides a reasonable estimate for a wide range of soil conditions.

<Table 13, next page>

Table 13: Vibration Source Levels for Construction Equipment

Equipment	Peak Particle Velocity (inches/second) at 25 feet	Approximate Vibration Level LV (dVB) at 25 feet
Pile driver (impact)	1.518 (upper range)	112
	0.644 (typical)	104
Pile driver (sonic)	0.734 upper range	105
	0.170 typical	93
Clam shovel drop (slurry wall)	0.202	94
Hydromill	0.008 in soil	66
(slurry wall)	0.017 in rock	75
Vibratory Roller	0.21	94
Hoe Ram	0.089	87
Large bulldozer	0.089	87
Caisson drill	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58
Source: Transit Noise and Vibration Impact Assessment, Federal Transit Administration, May 2018.		

The nearest existing building is 50 feet east of the project site. At this distance, a large bulldozer would yield a worst-case 0.042 PPV (in/sec) which is not perceptible and will not result in architectural damage. The impact is not significant. The ground-borne vibration worksheet is provided in Appendix E.

9.0 CEQA Analysis

The California Environmental Quality Act Guidelines (Appendix D) establishes thresholds for noise impact analysis as presented below:

(a) Would the project result in the 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 Code, or applicable standards of other agencies?

Transportation Noise Impacts

Transportation noise impacts would be considered significant if the existing plus project levels are expected to increase by more than 3 dB. Compared to existing traffic noise levels, future traffic volumes for Alternative 1 are expected to increase 0.7 dBA CNEL at existing land uses. Future traffic volumes for Alternative 2 are expected to increase 0.6 dBA CNEL at the existing land uses. The impact is therefore less than significant for Alternative 1 and Alternative 2.

Stationary Noise Sources

Stationary noise impacts would be considered significant if they result in exceedances of Section 11.96.030 of the Municipal Code. Implementation of the proposed project may result in stationary noise related to parking, idling cars, idling heavy trucks, and rooftop HVAC units. All equipment is required to meet the stationary noise limits of 65 dBA at the adjacent sensitive receptors.

Operational noise levels for Alternative 1 are expected to reach 42 to 50 dBA Leq at the residential receptors. Operational noise levels for Alternative 2 are expected to reach 43 to 50 dBA Leq. These noise levels for Alternative 1 and Alternative 2 do not exceed the City's daytime noise standard of 65 dBA. Therefore, the impact would be less than significant.

Construction Noise and Vibration

Construction noise will be significant if construction activities occur outside of the permitted construction hours specified in Section 11.96.070 of the City of Cathedral City Municipal Code.

Noise due to construction will result in short-term noise impacts associated with construction activities.

The site preparation and building phases of on-site construction activities will generate the highest temporary noise levels. The loudest construction equipment on the site will be tractors, graders, scrapers, and dozers. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full power operation followed by 3 or 4 minutes at lower power settings. The maximum Leq level for the loudest phase of construction is expected to be 73.1 dBA Leq and 78.6 dBA Lmax at the nearest existing adjacent residential building.

b) Generate excessive ground-borne vibration or ground-borne noise levels?

Construction vibration will be significant if vibration exceeds levels that would result in structural damage to existing buildings. Construction activity is not anticipated to occur within 50 feet of sensitive receptors. At a distance of 50 feet, the nearest residential building to the project property line, a large bulldozer would yield a worst-case 0.042 PPV (in/sec) which is below the threshold of any risk of damage. The project may result in temporary daytime residential annoyance. Construction activity is not expected to fall within the limits of structural damage, and therefore, the impact is less than significant.

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?

The nearest airport to the project site is the Palm Springs International Airport. The Palm Springs International Airport is approximately 2.38 miles to the west of the project. The project would be located outside the noise contours of the Palm Springs International Airport. Therefore, no substantial noise exposure from airport noise would occur and it would have no impact.

10.0 References

Cathedral City
2021 2040 General Plan
2021 Municipal Code

California Department of Transportation (Caltrans)
2013 Transportation and Construction Induced Vibration Guidance Manual.
2018 Technical Noise Supplement to the Traffic Noise Analysis Protocol. Sept.

Federal Highway Administration (FHWA)
2006 Construction Noise Handbook

Federal Transit Administration (FTA)
2018 Transit Noise and Vibration Impact Assessment Manual

Governor's Office of Planning and Research
State of California General Plan Guidelines, 1998

Integrated Engineering Group
Scoping Agreement for Date Palm Dr Mixed Use Project (March 2023)

SoundPLAN International, LLC
2019 SoundPLAN Essential 8.1 Manual.

Appendix A:

Field Measurement Data

24-Hour Continuous Noise Measurement Datasheet

Project Name:	Date Palm Rosemount Noise		**Site Observations:**
Project: #/Name:	0741-2022-031		Mostly cloudy Temps in the 50's and 30's at night. Winds 1-15 MPH gusts.
Site Address/Location:	Date Palm Drive & Rosemount		
Date:	03/09/2023		
Field Tech/Engineer:	Jason Schuyler / Robert Pearson		
Sound Meter:	Piccolo 2, Soft dB	**SN:** P0222022803	
Settings:	A-weighted, slow, 1-min, 24-hour duration		
Site Id:	NM-1		

MD ACOUSTICS

Project Name: Date Palm Rosemount Noise

Site Address/Location: Date Palm Drive & Rosemount

Site Id: NM-1

Figure 1: NM1

24-Hour Continuous Noise Measurement Datasheet - Cont.

Project Name: Date Palm Rosemount Noise

Site Address/Location: Date Palm Drive & Rosemount

Site Id: NM-1

Site Topo: soft

Meteorological Cond.: Clear Skies, 70 degrees

Ground Type: soft

Day: 1 of 1

Noise Source(s) w/ Distance:

Road and Residential

Table 1: Baseline Noise Measurement Summary

Date	Start	Stop	Leq	Lmax	Lmin	L2	L8	L25	L50	L90
3/8/2023	10:00 PM	11:00 PM	58.3	78	45.3	65.6	60.5	58.1	56.1	53
3/8/2023	11:00 PM	12:00 AM	57.2	81.5	43.8	62.7	58.9	56.7	55.2	52.2
3/9/2023	12:00 AM	1:00 AM	54.7	69.4	41	58.7	58.4	55.5	53.6	51.1
3/9/2023	1:00 AM	2:00 AM	53.7	65.4	41.5	57	55.8	54.5	53.5	51.1
3/9/2023	2:00 AM	3:00 AM	52.4	70.4	41.3	56.6	55.3	52.9	51.4	48.1
3/9/2023	3:00 AM	4:00 AM	53	69.8	41.5	57.6	56.1	53.4	51.5	48
3/9/2023	4:00 AM	5:00 AM	54.8	69.7	42	59.7	58	56.2	53.4	50.1
3/9/2023	5:00 AM	6:00 AM	56.7	72.5	43	61.5	60	58.1	55.6	51.5
3/9/2023	6:00 AM	7:00 AM	60.7	76	48.2	64.5	62.4	61.4	60.3	57.4
3/9/2023	7:00 AM	8:00 AM	61	76.2	48.9	64.5	63.8	61.8	60.5	57.7
3/9/2023	8:00 AM	9:00 AM	60	80.1	42.2	63.7	62	60.7	59.5	54.8
3/9/2023	9:00 AM	10:00 AM	57.5	77.6	42.5	62.2	60.2	58.3	56.7	53.3
3/9/2023	10:00 AM	11:00 AM	56.3	71.4	40.6	60.8	59.8	57.2	55.5	51.6
3/9/2023	11:00 AM	12:00 PM	54.4	68.2	41.3	59.1	57.2	55.1	53.5	50.7
3/9/2023	12:00 PM	1:00 PM	53.7	69.2	42	57.4	56.2	54.1	52.6	50.4
3/9/2023	1:00 PM	2:00 PM	53.8	66	41.6	57.5	56.4	55	53.2	50
3/9/2023	2:00 PM	3:00 PM	54.9	76	39.9	59.5	57.2	55.1	53.2	50.4
3/9/2023	3:00 PM	4:00 PM	56.2	76	39.8	62.8	59.1	56.4	54.5	50.5
3/9/2023	4:00 PM	5:00 PM	57	71.6	42	61.8	59.8	58.2	56.3	52.8
3/9/2023	5:00 PM	6:00 PM	59.6	81.9	41.9	63.4	61.5	59.4	57.3	54.3
3/9/2023	6:00 PM	7:00 PM	60	85.2	43.7	64.8	62.6	60	56.6	53.6
3/9/2023	7:00 PM	8:00 PM	59.4	83.5	41.1	64.2	59.8	58.4	56.5	53.6
3/9/2023	8:00 PM	9:00 PM	60	81.5	44.6	67.5	64.4	59.7	57.5	54.6
3/9/2023	9:00 PM	10:00 PM	57.7	82.5	43.9	61.1	59.7	58.3	57	54.1

	DNL	62.7

MD ACOUSTICS

24-Hour Continuous Noise Measurement Datasheet - Cont.

Project Name: Date Palm Rosemount Noise

Site Address/Location: Date Palm Drive & Rosemount

Site Id: NM-1

Site Topo: soft

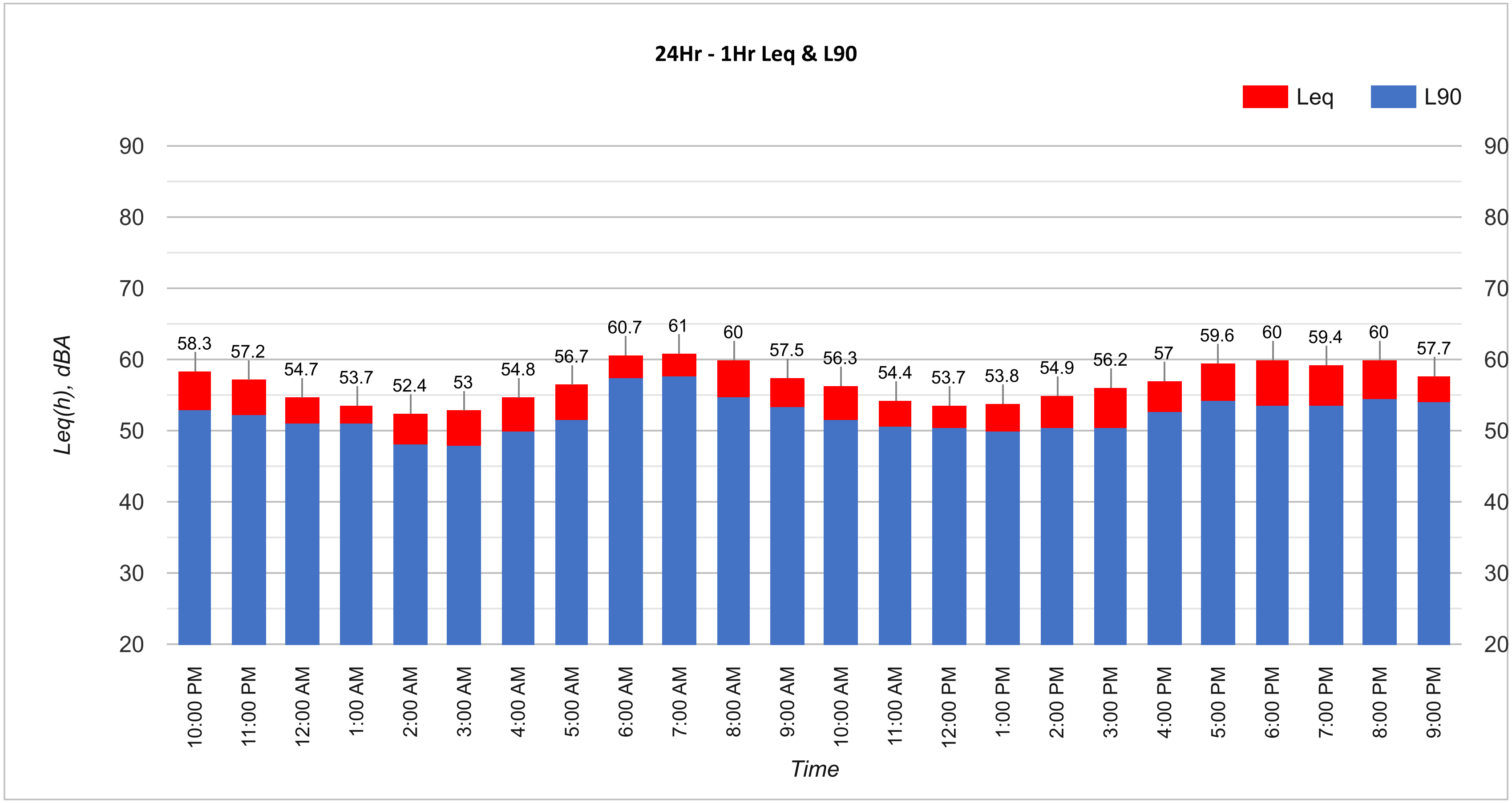
Meteorological Cond.: Clear Skies, 70 degrees

Ground Type: soft

Day: 1 of 1

Noise Source(s) w/ Distance:

Road and Residential



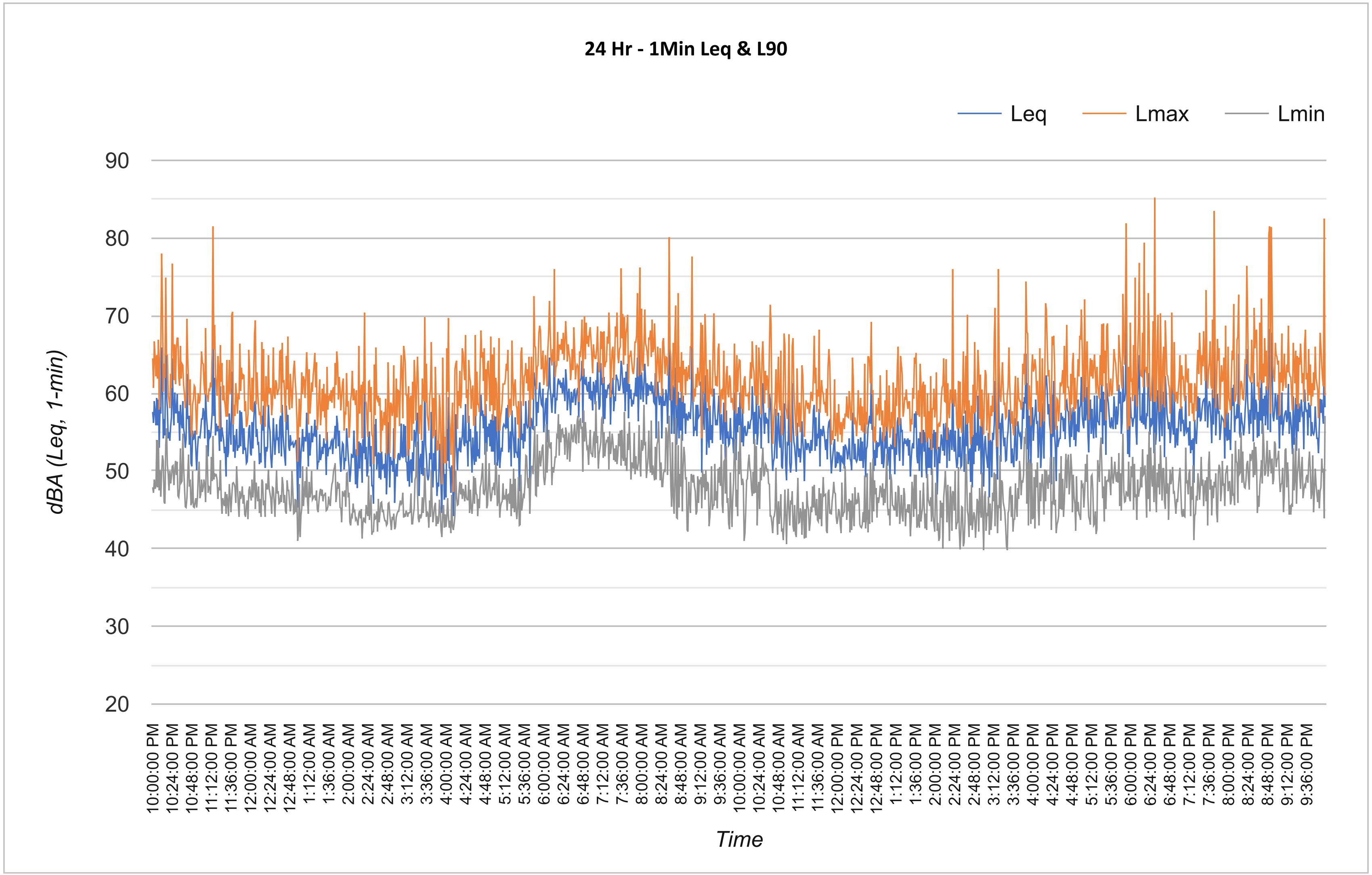
MD ACOUSTICS

24-Hour Continuous Noise Measurement Datasheet - Cont.

Project Name: Date Palm Rosemount Noise
Site Address/Location: Date Palm Drive & Rosemount
Site Id: NM-1

Site Topo: soft
Meteorological Cond.: Clear Skies, 70 degrees
Ground Type: soft

Day: 1 of 1
Noise Source(s) w/ Distance:
Road and Residential



Appendix B:

SoundPLAN Noise Modeling Data

Capacity ratings

AHRI RATINGS

COOLING MODE

50GCQ	NOM. CAPACITY (tons)	NET COOLING CAPACITY (Btuh)	TOTAL POWER (kW)	SEER	EER
M04	3	35,000	2.8	16.2	12.5
M05	4	47,500	3.9	16.2	12.2
M06	5	60,000	4.9	16.2	12.2

HEATING MODE

50GCQ	HSPF	HIGH HEATING CAPACITY (Btuh)	HIGH HEAT COP	LOW HEATING CAPACITY (Btuh)	LOW HEAT COP
M04	8.3	34,000	3.8	17,600	2.4
M05	8.3	45,500	3.7	24,400	2.3
M06	8.3	55,500	3.9	30,000	2.4

LEGEND

AHRI — Air Conditioning, Heating and Refrigeration Institute
ASHRAE — American Society of Heating, Refrigerating and Air Conditioning Engineers
COP — Coefficient of Performance
EER — Energy Efficiency Ratio
HSPF — Heating Seasonal Performance Factor
SEER — Seasonal Energy Efficiency Ratio

NOTES:
1. Rated and certified under AHRI Standard 210/240.
2. Ratings are based on:
   Cooling Standard: 80°F (27°C) db, 67°F (19°C) wb indoor air temperature and 95°F (35°C) db outdoor air temperature.
   High Temperature Heating Ratings: 47°F (8°C) db, 43°F (6°C) wb outdoor air temperature and 70°F (21°C) entering indoor coil air.
   Low Temperature Heating Ratings: 17°F (–8°C) db, 15°F (–9°C) wb outdoor air temperature and 70°F (21°C) entering indoor coil air.
3. All 50GCQ units comply with ASHRAE 90.1 Energy Standard for minimum SEER and EER requirements.

c UL US

ASHRAE 90.1 COMPLIANT

AHRI CERTIFIED™ www.ahridirectory.org
Unitary Small HP
AHRI Standard 210/240
Certification applies only when the complete system is listed with AHRI.

AHRI CERTIFIED™ www.ahridirectory.org
Unitary Small HP
AHRI Standard 210/240
Certification applies only when the complete system is listed with AHRI.

SOUND RATINGS TABLE

50GCQ UNIT	COOLING STAGES	OUTDOOR SOUND (dB) AT 60 Hz								
		A-WEIGHTED	63	125	250	500	1000	2000	4000	8000
M04	2	75.4	81.8	81.8	77.0	72.6	69.9	64.6	59.3	55.6
M05	2	79.0	85.6	84.7	80.5	76.0	72.4	68.0	62.8	59.3
M06	2	79.0	85.6	84.7	80.5	76.0	72.4	68.0	62.8	59.3

LEGEND

dB — Decibel

NOTES:
1. Outdoor sound data is measured in accordance with AHRI.
2. Measurements are expressed in terms of sound power. Do not compare these values to sound pressure values because sound pressure depends on specific environmental factors which normally do not match individual applications. Sound power values are independent of the environment and therefore more accurate.
3. A-weighted sound ratings filter out very high and very low frequencies, to better approximate the response of "average" human ear. A-weighted measurements for Carrier units are taken in accordance with AHRI.

MINIMUM - MAXIMUM AIRFLOW RATINGS (CFM) — COOLING UNITS AND ACCESSORY ELECTRIC HEAT

UNIT	COOLING				ELECTRIC HEAT*	
	MINIMUM AIRFLOW CFM	MINIMUM 2-SPEED AIRFLOW (LOW SPEED)	MINIMUM 2-SPEED AIRFLOW (HIGH SPEED)	MAXIMUM AIRFLOW CFM	MINIMUM AIRFLOW CFM	MAXIMUM ARIFLOW CFM
50GCQM04	900	675	900	1500	900	1500
50GCQM05	1200	900	1200	2000	1200	2000
50GCQM06	1500	1125	1500	2500	1500	2500

* Electric heat modules are available as both factory-installed options or field-installed accessories for 50GCQ units.

MINIMUM - MAXIMUM AIRFLOWS (CFM) COOLING AND ELECTRIC HEAT

UNIT	COOLING			ELECTRIC HEATERS		
	Minimum CFM	Minimum CFM 2-Speed Fan Motor (at High Speed)	Minimum CFM 2-Speed Fan Motor (at Low Speed)	Maximum CFM	Minimum CFM	Maximum CFM
50HCQA04	900	N/A	N/A	1500	900	1500
50HCQA05	1200	N/A	N/A	2000	1200	2000
50HCQA06	1500	N/A	N/A	2500	1500	2500
50HCQA07	1800	N/A	N/A	3000	1800	3000
50HCQD07	1800	1800	1200	3000	1800	3000
50HCQD08	2250	2250	1500	3750	2250*	3750
50HCQD09	2550	2873	1915	4250	2252*	4250
50HCQD12	3000	3380	2253	5000	3000*	5000

* Minimum electric heat CFM exceptions:

UNIT	UNIT VOLTAGE	HEATER kW	UNIT CONFIGURATION	REQUIRED MINIMUM CFM
50HCQD08 50HCQD09	575	17.0	Horizontal or Vertical	2800
		34.0		2350
50HCQD12	230	50.0	Vertical	3550
		50.0	Horizontal	3420
		43.5	Horizontal or Vertical	3040
	575	50.0	Vertical	3150
		33.5	Vertical	3520
		33.5	Horizontal	3420
		26.5	Vertical	3610

SOUND PERFORMANCE

50HCQ UNIT	OUTDOOR SOUND (dB) AT 60 Hz								
	A-Weighted	63	125	250	500	1000	2000	4000	8000
A04	76	51.8	69.0	64.6	67.8	70.7	63.8	60.9	59.0
A05	79	56.1	69.6	68.7	72.5	72.8	68.9	65.0	61.2
A06	79	57.7	66.6	68.7	72.9	74.5	71.1	67.6	62.6
A07	81	86.7	82.7	79.1	78.4	75.4	71.2	67.8	62.9
D07	81	86.7	82.7	79.1	78.4	75.4	71.2	67.8	62.9
D08	83	87.3	81.6	79.7	80.6	79.0	73.5	69.2	66.1
D09	87	61.7	74.7	77.4	82.6	84.9	81.9	78.8	75.9
D12	83	61.0	67.3	75.1	77.7	78.1	75.5	71.2	66.7

LEGEND
dB —Decibel

NOTES:
1. Outdoor sound data is measure in accordance with AHRI standard 270.
2. Measurements are expressed in terms of sound power. Do not compare these values to sound pressure values because sound pressure depends on specific environmental factors which normally do not match individual applications. Sound power values are independent of the environment and therefore more accurate.
3. A-weighted sound ratings filter out very high and very low frequencies, to better approximate the response of “average” human ear. A-weighted measurements for Carrier units are taken in accordance with AHRI standard 270.

Cathedral City Storage Noise
Contribution spectra - 001 - Cathedral City Storage: Outdoor SP

Time slice	Sum dB(A)	25Hz dB(A)	31.5Hz dB(A)	40Hz dB(A)	50Hz dB(A)	63Hz dB(A)	80Hz dB(A)	100Hz dB(A)	125Hz dB(A)	160Hz dB(A)	200Hz dB(A)	250Hz dB(A)	315Hz dB(A)	400Hz dB(A)	500Hz dB(A)	630Hz dB(A)	800Hz dB(A)	1kHz dB(A)	1.25kHz dB(A)	1.6kHz dB(A)	2kHz dB(A)	2.5kHz dB(A)	3.15kHz dB(A)	4kHz dB(A)	5kHz dB(A)	6.3kHz dB(A)	8kHz dB(A)	10kHz dB(A)	12.5kHz dB(A)	16kHz dB(A)	20kHz dB(A)
Receiver R1 Fl G Lr,lim dB(A) Leq,d 45.9 dB(A) Sigma(Leq,d) 0.0 dB(A)																															
Leq,d	45.8					32.1			41.4			32.9			37.3			37.7			38.3			33.9			23.3			1.8	
Leq,d	18.4					9.2			14.9			6.0			9.4			8.9			9.1			-1.1			-28.8			-97.1	
Leq,d	0.2	-41.8	-36.2	-32.7	-17.7	-13.4	-20.0	-12.7	-11.5	-13.4	-12.2	-13.1	-12.1	-12.0	-12.0	-9.1	-8.3	-13.5	-12.8	-11.9	-14.7	-14.8	-19.7	-21.6	-28.0	-34.9	-50.1	-70.0	-92.9		
Leq,d	12.1	-37.5	-31.4	-27.5	-14.5	-9.5	-15.5	-7.7	-5.8	-6.9	-4.9	-4.9	-3.1	-2.2	-1.3	2.5	4.2	-0.1	1.5	4.4	1.5	1.2	-4.0	-6.2	-13.1	-20.7	-36.9	-58.2	-82.9		
Leq,d	10.4	-36.8	-31.2	-27.7	-15.3	-10.9	-17.6	-10.3	-9.1	-11.0	-9.8	-10.7	-9.6	-9.6	-9.5	-6.6	-5.8	1.1	2.8	3.8	1.2	1.3	-3.2	-4.5	-5.4	-10.7	-23.6	-40.2	-58.2	-83.6	
Leq,d	20.7	-29.6	-23.6	-19.6	-6.6	-1.7	-7.7	0.3	2.2	1.1	3.0	2.9	4.8	5.6	6.5	10.2	13.6	9.4	11.0	11.9	9.3	9.5	5.4	4.7	0.3	-3.3	-13.4	-25.8	-37.8	-54.7	-76.5
Leq,d	24.0	-23.5	-17.6	-13.7	-0.8	4.0	-2.1	6.0	7.8	6.6	8.3	8.1	9.9	10.7	11.4	15.0	16.6	12.1	13.6	14.2	11.4	11.5	7.4	7.0	3.3	0.9	-7.2	-16.4	-23.9	-35.0	-49.6
Leq,d	-10.4	-23.7	-41.2	-35.7	-21.4	-21.1	-19.8	-27.3	-24.1	-28.1	-23.9	-29.8	-26.5	-22.3	-23.5	-19.8	-21.8	-23.5	-24.2	-25.8	-24.2	-24.4	-29.3	-34.2	-41.6	-51.4	-63.5	-81.3			
Leq,d	-10.2	-23.6	-41.1	-35.7	-21.3	-21.0	-19.7	-27.1	-24.0	-28.0	-23.8	-29.7	-26.4	-22.2	-23.4	-19.7	-21.7	-23.4	-24.1	-25.6	-24.0	-24.2	-29.1	-33.9	-41.3	-51.0	-63.1	-80.6			
Leq,d	-10.1	-23.5	-41.0	-35.6	-21.2	-20.9	-19.7	-27.0	-23.9	-27.9	-23.7	-29.6	-26.3	-22.1	-23.3	-19.6	-21.6	-23.3	-23.4	-25.5	-23.9	-24.1	-28.9	-33.7	-41.1	-50.7	-62.6	-80.0			
Leq,d	-10.1	-23.4	-40.9	-35.5	-21.1	-20.8	-19.6	-26.9	-23.8	-27.7	-23.6	-29.5	-24.9	-22.0	-23.2	-19.5	-21.5	-23.2	-23.9	-25.9	-24.2	-24.4	-29.2	-34.0	-41.2	-50.8	-62.6	-79.8			
Leq,d	-9.9	-23.3	-40.8	-35.4	-21.0	-20.7	-19.5	-26.8	-23.7	-27.6	-23.5	-29.4	-24.8	-21.9	-21.9	-19.3	-21.4	-23.1	-23.8	-25.7	-24.1	-24.2	-29.0	-33.8	-41.0	-50.4	-62.1	-79.1			
Leq,d	-10.6	-23.7	-41.2	-35.8	-21.5	-21.2	-19.9	-27.4	-24.3	-28.2	-24.0	-29.9	-26.6	-22.4	-23.6	-19.9	-21.9	-23.6	-24.3	-26.9	-25.3	-25.6	-30.5	-35.4	-42.9	-52.7	-64.9	-82.8			
Leq,d	18.6	-9.9	-26.9	-20.9	-3.6	-2.7	-0.7	-5.0	-1.0	-2.5	3.2	-1.8	0.2	4.4	4.4	8.4	6.5	6.4	8.3	7.4	10.1	10.8	7.2	4.3	0.1	-4.9	-9.7	-16.8	-24.4	-33.9	-44.0
Leq,d	-11.2	-24.1	-41.6	-36.2	-21.8	-21.5	-20.2	-27.8	-24.7	-28.6	-24.4	-30.3	-27.0	-24.0	-24.0	-21.4	-22.3	-24.0	-24.7	-27.9	-26.4	-26.7	-31.7	-36.7	-44.4	-54.5	-67.2	-85.8			
Leq,d	-11.1	-24.0	-41.5	-36.1	-21.7	-21.4	-20.2	-27.7	-24.6	-28.5	-24.3	-30.2	-26.9	-23.9	-23.9	-21.3	-22.2	-23.9	-24.6	-27.2	-25.7	-26.0	-31.0	-36.0	-43.6	-53.7	-66.3	-84.7			
Leq,d	-11.0	-23.9	-41.4	-36.0	-21.6	-21.4	-20.1	-27.6	-24.5	-28.4	-24.2	-30.1	-26.8	-23.8	-23.8	-21.2	-22.1	-23.8	-24.5	-27.1	-25.6	-25.8	-30.8	-35.8	-43.3	-53.4	-65.8	-84.1			
Leq,d	-10.7	-23.8	-41.3	-35.9	-21.6	-21.3	-20.0	-27.5	-24.4	-28.3	-24.1	-30.0	-26.7	-22.5	-23.7	-20.0	-22.0	-23.7	-24.4	-27.0	-25.5	-25.7	-30.7	-35.6	-43.1	-53.1	-65.4	-83.5			
Leq,d	-9.7	-23.2	-40.7	-35.3	-20.9	-20.7	-19.4	-26.7	-23.6	-27.5	-23.4	-29.3	-24.7	-21.8	-21.8	-19.2	-21.3	-23.0	-22.5	-25.6	-23.9	-24.1	-28.9	-33.6	-40.7	-50.1	-61.6	-78.5	-99.8		
Leq,d	-3.3	-21.6	-39.1	-33.7	-19.4	-19.1	-17.8	-24.7	-21.6	-25.5	-21.6	-25.1	-24.2	-21.3	-22.5	-19.9	-21.9	-11.5	-11.3	-13.2	-11.3	-11.6	-16.6	-21.2	-28.2	-37.0	-47.5	-62.6	-81.3		
Leq,d	-3.1	-21.7	-39.2	-33.8	-19.5	-19.2	-18.0	-24.8	-21.7	-25.7	-21.8	-24.0	-21.9	-18.9	-20.2	-17.6	-19.7	-11.6	-11.4	-13.3	-11.4	-11.7	-16.6	-21.2	-28.2	-37.1	-47.6	-62.8	-81.6		
Leq,d	-6.5	-21.8	-39.4	-34.0	-19.6	-19.3	-18.1	-25.0	-21.9	-25.8	-21.9	-24.1	-22.0	-19.1	-20.3	-17.7	-19.9	-16.1	-16.3	-18.7	-17.2	-18.0	-23.4	-28.5	-35.7	-44.6	-55.0	-69.9	-88.3		
Leq,d	-7.0	-21.9	-39.5	-34.1	-19.7	-19.4	-18.2	-25.1	-22.0	-25.9	-22.0	-24.2	-22.1	-19.2	-20.4	-17.8	-20.0	-16.9	-17.3	-20.0	-18.5	-19.2	-24.4	-29.2	-36.3	-45.1	-55.5	-70.5	-89.1		
Leq,d	-1.8	-21.1	-38.6	-33.2	-18.9	-18.6	-17.4	-24.1	-21.0	-24.9	-18.7	-24.6	-23.7	-20.7	-21.9	-19.3	-21.3	-10.1	-9.7	-11.6	-9.5	-9.8	-14.7	-19.2	-26.0	-34.7	-44.7	-59.3	-77.0	-99.8	
Leq,d	-1.6	-21.2	-38.7	-33.3	-19.0	-18.7	-17.5	-24.2	-21.1	-25.1	-21.2	-24.7	-23.8	-20.9	-22.1	-19.4	-21.4	-10.0	-9.5	-11.4	-9.2	-9.4	-14.2	-18.8	-25.6	-34.2	-44.4	-59.0	-77.0		
Leq,d	-1.2	-21.4	-38.9	-33.5	-19.2	-18.9	-17.6	-24.4	-21.3	-25.2	-21.4	-24.9	-23.9	-21.0	-22.2	-19.6	-21.6	-9.4	-8.9	-10.8	-8.7	-9.0	-13.9	-18.5	-25.4	-34.1	-44.4	-59.3	-77.6		
Leq,d	-3.0	-21.5	-39.0	-33.6	-19.3	-19.0	-17.7	-24.6	-21.4	-25.4	-21.5	-25.0	-24.1	-21.1	-22.3	-19.7	-21.7	-11.0	-10.9	-12.9	-11.1	-11.6	-16.6	-21.4	-28.3	-37.2	-47.6	-62.6	-81.0		
Leq,d	-9.0	-22.5	-40.0	-34.6	-20.2	-20.0	-18.7	-25.8	-22.7	-26.6	-22.6	-24.9	-23.9	-19.8	-21.1	-18.5	-20.6	-22.2	-22.9	-26.0	-24.1	-24.2	-28.8	-33.3	-40.0	-48.8	-59.5	-75.0	-94.6		
Leq,d	-9.6	-22.9	-40.4	-35.0	-20.7	-20.4	-19.1	-26.3	-23.2	-27.1	-23.1	-29.0	-24.4	-21.5	-21.5	-18.9	-21.0	-22.6	-23.4	-26.5	-24.7	-24.8	-29.5	-34.1	-41.1	-50.2	-61.3	-77.6	-98.1		
Leq,d	-9.7	-23.0	-40.5	-35.1	-20.8	-20.5	-19.2	-26.4	-23.3	-27.3	-23.2	-29.1	-24.5	-21.6	-21.6	-19.0	-21.1	-22.8	-23.5	-26.6	-24.8	-24.9	-29.7	-34.3	-41.4	-50.6	-61.8	-78.3	-99.0		
Leq,d	-9.6	-23.1	-40.6	-35.2	-20.8	-20.6	-19.3	-26.6	-23.4	-27.4	-23.3	-29.2	-24.6	-21.7	-21.7	-19.1	-21.2	-22.9	-22.3	-25.5	-23.8	-23.9	-28.7	-33.4	-40.5	-49.8	-61.2	-77.8	-98.9		
Leq,d	-8.8	-22.4	-39.9	-34.5	-20.1	-19.9	-18.6	-25.7	-22.5	-26.5	-22.5	-24.7	-23.8	-19.7	-20.9	-18.3	-20.5	-22.1	-22.8	-25.8	-23.9	-24.0	-28.6	-33.0	-39.7	-48.4	-58.9	-74.3	-93.5		
Leq,d	-8.6	-22.2	-39.7	-34.3	-19.9	-19.7	-18.4	-25.4	-22.3	-26.2	-22.3	-24.5	-22.4	-19.5	-20.7	-18.1	-20.2	-21.9	-22.5	-25.6	-23.6	-23.6	-28.2	-32.6	-39.2	-47.7	-58.0	-73.0	-91.7		
Leq,d	-7.3	-22.1	-39.6	-34.2	-19.8	-19.6	-18.3	-25.3	-22.1	-26.1	-22.1	-24.4	-22.2	-19.3	-20.6	-18.0	-20.1	-17.4	-17.9	-20.5	-19.0	-19.6	-24.7	-29.5	-36.6	-45.5	-56.0	-71.2	-90.0		
Leq,d	-8.7	-22.3	-39.8	-34.4	-20.0	-19.8	-18.5	-25.5	-22.4	-26.3	-22.4	-24.6	-23.7	-19.6	-20.8	-18.2	-20.3	-22.0	-22.7	-25.7	-23.8	-23.8	-28.4	-32.8	-39.5	-48.1	-58.4	-73.6	-92.6		

Cathedral City Storage Noise
Contribution spectra - 001 - Cathedral City Storage: Outdoor SP

Time slice	Sum	25Hz	31.5Hz	40Hz	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz	20kHz
	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Leq,d	4.6					-14.3			-11.0			-4.2			-0.4			-0.5			-3.5			-8.7			-29.4				
Receiver R2 Fl G Lr,lim dB(A) Leq,d 46.2 dB(A) Sigma(Leq,d) 0.0 dB(A)																															
Leq,d	46.1					32.0			41.5			33.2			37.7			38.2			38.7			34.6			24.3			2.2	
Leq,d	19.4					8.4			14.7			7.5			12.3			11.5			10.8			1.1			-24.7			-83.0	
Leq,d	12.6	-39.0	-32.9	-29.0	-16.0	-11.0	-17.0	-9.0	-7.1	-8.2	-6.2	-4.1	-2.1	-1.2	-0.3	3.6	5.3	1.1	2.8	3.7	1.0	0.9	-3.9	-5.6	-11.9	-18.4	-33.1	-52.1	-73.6		
Leq,d	13.2	-39.5	-33.5	-29.5	-16.5	-11.5	-17.6	-9.5	-7.6	-8.7	-6.8	-4.2	-2.3	-0.3	0.6	4.5	6.2	1.9	3.6	4.4	1.6	1.4	-3.5	-5.5	-12.0	-19.0	-34.4	-54.4	-77.2		
Leq,d	20.2	-36.2	-30.2	-26.2	-13.2	-8.2	-14.2	-6.1	-4.1	-5.2	-3.1	-1.1	0.9	1.9	3.0	8.9	10.9	7.8	10.9	12.7	11.4	11.8	7.5	6.5	1.4	-3.4	-15.5	-30.8	-47.1	-70.0	-99.5
Leq,d	21.9	-30.6	-24.6	-20.6	-7.6	-0.1	-6.2	1.9	3.8	2.7	4.6	4.6	6.5	7.4	8.4	12.2	13.9	10.3	12.0	13.0	10.8	11.2	7.2	6.5	2.1	-1.1	-10.5	-21.4	-31.4	-45.9	-64.8
Leq,d	25.4	-23.3	-17.3	-13.3	-0.4	4.6	-1.5	6.7	8.5	7.4	9.0	8.9	10.7	11.4	12.1	15.8	18.2	13.7	15.3	16.1	13.4	13.6	9.6	9.2	5.5	3.0	-5.2	-14.4	-21.8	-32.4	-46.3
Leq,d	3.6	-22.0	-39.0	-33.0	-18.0	-17.1	-15.1	-21.5	-17.6	-20.7	-16.7	-17.8	-15.1	-9.5	-9.6	-5.7	-6.6	-6.9	-6.1	-7.8	-5.0	-5.1	-9.9	-14.6	-21.8	-31.3	-42.9	-59.7	-80.9		
Leq,d	3.7	-21.9	-38.9	-32.9	-17.9	-17.0	-15.0	-21.4	-17.5	-20.6	-16.6	-17.7	-15.0	-9.4	-9.5	-5.6	-6.5	-6.7	-6.0	-7.7	-4.8	-4.9	-9.7	-14.4	-21.5	-30.9	-42.4	-59.1	-80.0		
Leq,d	4.0	-21.8	-38.8	-32.8	-17.8	-16.9	-14.9	-21.3	-17.4	-20.4	-16.4	-17.6	-14.8	-9.3	-9.4	-5.5	-6.4	-6.6	-5.9	-7.0	-4.2	-4.3	-9.1	-13.7	-20.9	-30.2	-41.6	-58.2	-79.0		
Leq,d	4.3	-21.7	-38.7	-32.7	-17.7	-16.8	-14.8	-21.2	-17.2	-20.3	-16.3	-16.6	-14.7	-9.2	-9.2	-5.4	-6.3	-6.5	-5.8	-6.9	-3.7	-3.8	-8.6	-13.2	-20.3	-29.7	-41.0	-57.5	-78.1		
Leq,d	4.4	-21.6	-38.6	-32.6	-17.6	-16.7	-14.7	-21.0	-17.1	-20.2	-16.2	-16.5	-14.6	-9.1	-9.1	-5.2	-6.2	-6.4	-5.6	-6.8	-3.6	-3.7	-8.4	-13.0	-20.1	-29.3	-40.6	-56.8	-77.2		
Leq,d	3.5	-22.1	-39.1	-33.1	-18.1	-17.2	-15.2	-21.7	-17.7	-20.8	-16.8	-17.9	-15.2	-9.6	-9.7	-5.8	-6.7	-7.0	-6.2	-7.9	-5.1	-5.2	-10.0	-14.8	-22.0	-31.6	-43.3	-60.3	-81.7		
Leq,d	11.7	-8.8	-25.9	-20.1	-3.9	-3.2	-1.5	-6.2	-2.7	-6.2	-3.5	-9.3	-8.2	-4.9	-5.6	0.2	0.7	0.3	1.0	0.0	2.5	2.8	-1.1	-4.4	-6.5	-12.1	-17.7	-25.9	-34.7	-45.2	-56.2
Leq,d	3.0	-22.5	-39.5	-33.5	-18.5	-17.5	-15.5	-22.2	-18.2	-21.3	-17.2	-18.3	-15.6	-10.1	-10.1	-6.3	-7.2	-7.4	-6.7	-8.4	-5.6	-5.7	-10.6	-15.5	-23.0	-32.8	-45.0	-62.7	-85.1		
Leq,d	3.1	-22.4	-39.4	-33.4	-18.4	-17.4	-15.5	-22.0	-18.1	-21.2	-17.1	-18.2	-15.5	-10.0	-10.0	-6.2	-7.1	-7.3	-6.6	-8.3	-5.5	-5.6	-10.5	-15.3	-22.8	-32.5	-44.6	-62.2	-84.3		
Leq,d	3.2	-22.3	-39.3	-33.3	-18.3	-17.4	-15.4	-21.9	-18.0	-21.1	-17.0	-18.1	-15.4	-9.9	-9.9	-6.1	-7.0	-7.2	-6.5	-8.2	-5.3	-5.5	-10.3	-15.1	-22.5	-32.2	-44.2	-61.5	-83.4		
Leq,d	3.3	-22.2	-39.2	-33.2	-18.2	-17.3	-15.3	-21.8	-17.9	-21.0	-16.9	-18.0	-15.3	-9.8	-9.8	-5.9	-6.9	-7.1	-6.4	-8.1	-5.2	-5.3	-10.2	-15.0	-22.3	-31.9	-43.8	-61.0	-82.6		
Leq,d	4.6	-21.5	-38.5	-32.5	-17.5	-16.5	-14.5	-20.9	-16.9	-20.0	-16.1	-16.4	-14.5	-8.9	-9.0	-5.1	-6.0	-6.2	-5.0	-6.6	-3.5	-3.5	-8.2	-12.8	-19.8	-29.0	-40.1	-56.2	-76.2		
Leq,d	6.7	-16.9	-33.9	-28.0	-13.0	-12.1	-10.2	-16.2	-12.4	-15.6	-11.4	-15.2	-13.2	-7.3	-7.4	-3.6	-3.7	-4.0	-3.2	-4.8	-1.8	-1.7	-6.0	-10.0	-16.1	-23.9	-32.2	-45.4	-60.8	-81.5	
Leq,d	7.0	-17.0	-34.0	-28.1	-13.2	-12.3	-10.4	-16.3	-12.5	-15.7	-11.6	-14.6	-12.6	-6.8	-6.8	-3.0	-3.8	-3.5	-2.8	-4.3	-1.4	-1.3	-5.7	-9.7	-15.9	-23.8	-32.5	-46.0	-61.6	-82.6	
Leq,d	6.9	-17.2	-34.2	-28.2	-13.3	-12.4	-10.5	-16.5	-12.7	-15.9	-11.8	-14.7	-12.8	-6.9	-7.0	-3.1	-4.0	-3.7	-2.9	-4.5	-1.6	-1.5	-5.9	-10.0	-16.2	-24.2	-33.7	-47.3	-63.1	-84.5	
Leq,d	6.4	-17.3	-34.3	-28.3	-13.4	-12.5	-10.6	-16.7	-12.8	-16.1	-11.9	-14.9	-12.9	-7.1	-7.1	-3.3	-4.1	-4.4	-3.6	-5.2	-2.3	-2.2	-6.6	-10.8	-17.1	-25.2	-34.7	-48.5	-64.3	-85.9	
Leq,d	6.8	-16.4	-33.4	-27.5	-12.5	-11.6	-9.7	-15.5	-11.7	-14.9	-13.3	-16.3	-14.3	-8.3	-8.4	-4.6	-3.4	-3.6	-2.9	-4.5	-1.5	-1.3	-5.6	-9.5	-15.4	-21.3	-30.0	-42.7	-58.1	-77.8	
Leq,d	6.6	-16.5	-33.5	-27.6	-12.6	-11.8	-9.8	-15.7	-11.9	-15.1	-13.4	-16.4	-14.5	-8.5	-8.6	-4.7	-3.5	-3.8	-3.0	-4.6	-1.6	-1.4	-5.8	-9.7	-15.7	-21.9	-30.5	-43.3	-58.9	-78.9	
Leq,d	6.9	-16.6	-33.7	-27.7	-12.8	-11.9	-10.0	-15.8	-12.0	-15.2	-13.6	-16.6	-14.7	-8.6	-8.7	-4.9	-3.1	-3.3	-2.6	-4.1	-1.2	-1.0	-5.3	-9.3	-15.4	-21.8	-30.0	-42.4	-58.2	-78.5	
Leq,d	6.8	-16.8	-33.8	-27.8	-12.9	-12.0	-10.1	-16.0	-12.2	-15.4	-13.8	-16.7	-14.8	-8.8	-8.9	-5.0	-3.2	-3.5	-2.7	-4.3	-1.4	-1.2	-5.5	-9.5	-15.6	-22.6	-31.0	-43.4	-59.5	-80.0	
Leq,d	5.3	-20.7	-37.7	-31.7	-16.7	-15.8	-13.8	-19.9	-16.0	-19.0	-15.2	-15.6	-13.6	-8.0	-8.1	-4.2	-5.2	-5.4	-4.6	-6.2	-2.9	-2.8	-7.4	-11.7	-18.3	-26.9	-37.1	-51.9	-69.3	-92.6	
Leq,d	4.8	-21.2	-38.2	-32.2	-17.2	-16.2	-14.2	-20.5	-16.5	-19.6	-15.7	-16.0	-14.1	-8.6	-8.6	-4.7	-5.7	-5.9	-5.1	-6.8	-3.5	-3.5	-8.1	-12.6	-19.4	-28.3	-39.0	-54.5	-73.7	-97.5	
Leq,d	4.6	-21.3	-38.3	-32.3	-17.3	-16.3	-14.3	-20.6	-16.7	-19.8	-15.8	-16.2	-14.2	-8.7	-8.7	-4.9	-5.8	-6.0	-5.3	-6.9	-3.6	-3.6	-8.3	-12.8	-19.7	-28.6	-39.5	-55.2	-74.7	-98.8	
Leq,d	4.8	-21.4	-38.4	-32.4	-17.4	-16.4	-14.4	-20.7	-16.8	-19.9	-15.9	-16.3	-14.4	-8.8	-8.9	-5.0	-5.9	-6.1	-4.9	-6.5	-3.3	-3.4	-8.1	-12.6	-19.6	-28.6	-39.6	-55.6	-75.4		
Leq,d	5.5	-20.6	-37.6	-31.6	-16.6	-15.6	-13.6	-19.7	-15.8	-18.9	-15.0	-15.4	-13.5	-7.9	-7.9	-4.0	-5.1	-5.2	-4.5	-6.1	-2.7	-2.6	-7.2	-11.5	-18.0	-26.5	-36.5	-51.2	-68.3	-91.2	
Leq,d	6.0	-17.5	-34.5	-28.6	-13.7	-12.8	-10.9	-17.0	-13.2	-16.4	-14.7	-15.1	-13.2	-7.4	-7.4	-3.6	-4.4	-4.6	-3.9	-5.5	-2.6	-2.5	-7.0	-11.2	-17.7	-25.9	-35.7	-49.0	-66.4	-87.8	
Leq,d	6.2	-17.4	-34.4	-28.5	-13.5	-12.7	-10.7	-16.8	-13.0	-16.2	-12.1	-15.0	-13.1	-7.2	-7.3	-3.4	-4.3	-4.5	-3.8	-5.4	-2.5	-2.4	-6.8	-11.0	-17.4	-25.6	-35.2	-48.4	-65.5	-86.6	

Time slice	Sum	25Hz	31.5Hz	40Hz	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz	20kHz
	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Leq,d	5.9	-17.6	-34.7	-28.7	-13.8	-12.9	-11.0	-17.1	-13.3	-16.5	-14.9	-15.3	-13.3	-7.5	-7.6	-3.7	-4.5	-4.8	-4.1	-5.7	-2.8	-2.7	-7.2	-11.5	-17.9	-26.3	-36.1	-50.5	-67.3	-89.0	
Leq,d	21.5					-10.1			-4.3			5.1			12.6			16.3			17.7			12.8			-6.7				
Receiver R3 Fl G Lr,lim dB(A) Leq,d 46.5 dB(A) Sigma(Leq,d) 0.0 dB(A)																															
Leq,d	46.4					32.4			42.0			33.7			38.0			38.4			39.0			34.5			23.9			2.1	
Leq,d	21.1					10.7			17.1			7.9			11.0			13.0			13.7			4.9			-18.7			-72.7	
Leq,d	14.1	-37.9	-31.9	-27.9	-14.9	-10.0	-16.0	-7.9	-6.0	-7.1	-5.1	-5.1	-3.2	0.3	1.2	5.1	6.9	2.7	4.4	5.4	2.8	2.8	-1.7	-3.0	-8.6	-14.2	-27.6	-44.7	-63.7	-90.3	
Leq,d	14.1	-38.5	-32.5	-28.5	-15.6	-8.1	-14.1	-6.1	-4.2	-5.3	-3.4	-3.4	-1.6	-0.7	0.2	4.0	5.6	1.2	5.0	6.6	3.7	3.4	-1.5	-3.5	-9.9	-16.5	-31.1	-50.0	-71.2		
Leq,d	20.9	-34.8	-28.7	-24.7	-11.7	-6.7	-12.7	-4.7	-0.2	-1.2	0.8	0.9	2.9	3.9	5.0	9.1	12.8	8.9	11.0	12.5	10.7	12.0	9.0	8.7	4.1	0.0	-10.9	-24.6	-38.7	-58.7	-84.5
Leq,d	24.1	-28.1	-22.1	-15.7	-2.7	2.2	-3.9	4.1	6.0	4.8	6.7	6.6	8.4	9.2	10.7	14.9	16.9	12.6	14.2	15.0	12.4	12.7	8.6	8.2	4.3	1.4	-7.5	-17.8	-26.8	-39.6	-56.0
Leq,d	23.6	-25.8	-17.4	-13.5	-0.6	4.3	-1.8	6.4	8.2	6.9	8.5	8.3	10.0	10.6	11.2	14.7	16.2	11.5	13.0	13.5	10.6	10.6	6.4	6.0	2.2	-0.2	-8.2	-17.1	-24.3	-34.8	-48.7
Leq,d	2.7	-16.3	-33.3	-27.3	-17.1	-16.1	-14.1	-20.3	-16.4	-19.5	-15.6	-18.0	-16.1	-10.5	-10.6	-6.7	-7.7	-7.8	-7.1	-8.7	-6.3	-6.2	-10.7	-15.0	-21.5	-30.0	-40.1	-55.0	-73.5	-97.6	
Leq,d	2.9	-16.2	-33.2	-27.2	-17.0	-16.0	-14.0	-20.2	-16.3	-19.3	-15.4	-17.9	-16.0	-10.4	-10.4	-6.6	-7.5	-7.7	-6.9	-8.6	-6.2	-6.1	-10.5	-14.8	-21.2	-29.6	-39.6	-54.3	-72.6	-96.3	
Leq,d	3.0	-16.1	-33.1	-27.1	-16.8	-15.9	-13.9	-20.0	-16.1	-19.2	-15.3	-17.7	-15.8	-10.3	-10.3	-6.4	-7.4	-7.6	-6.8	-8.4	-6.0	-5.9	-10.3	-14.5	-21.0	-29.2	-39.1	-53.6	-71.7	-95.0	
Leq,d	3.2	-16.0	-33.0	-27.0	-16.7	-15.8	-13.8	-19.9	-16.0	-19.1	-15.2	-17.6	-15.7	-10.1	-10.2	-6.3	-7.3	-7.4	-6.7	-8.3	-5.9	-5.7	-10.2	-14.3	-20.7	-28.9	-38.7	-53.0	-70.8	-92.8	
Leq,d	3.3	-15.9	-32.8	-26.8	-16.6	-15.7	-13.7	-19.8	-15.8	-18.9	-15.0	-17.5	-15.5	-10.0	-10.0	-6.1	-7.1	-7.3	-6.5	-8.1	-5.7	-5.5	-10.0	-14.1	-20.4	-28.5	-38.2	-52.3	-69.9	-92.6	
Leq,d	2.7	-16.4	-33.4	-27.4	-12.4	-16.2	-14.2	-20.5	-16.5	-19.6	-15.7	-18.1	-16.2	-10.7	-10.7	-6.8	-7.8	-8.0	-7.2	-8.8	-6.5	-6.4	-10.9	-15.2	-21.8	-30.3	-40.6	-55.6	-74.4	-98.7	
Leq,d	-0.9	-16.7	-32.0	-26.9	-10.6	-10.9	-10.1	-15.8	-13.1	-17.3	-13.1	-19.1	-18.2	-15.3	-16.3	-12.6	-15.3	-16.0	-15.2	-16.2	-13.5	-12.8	-16.4	-19.3	-23.6	-28.7	-33.7	-41.0	-48.8	-58.6	-69.2
Leq,d	2.1	-16.8	-33.8	-27.8	-12.8	-16.6	-14.6	-21.0	-17.1	-20.2	-16.2	-18.6	-16.7	-11.2	-11.2	-7.3	-8.3	-8.5	-7.7	-9.4	-7.0	-7.0	-11.6	-16.0	-22.8	-31.7	-42.4	-58.1	-77.9		
Leq,d	2.3	-16.7	-33.7	-27.7	-12.7	-16.5	-14.6	-20.9	-17.0	-20.0	-16.1	-18.5	-16.6	-11.1	-11.1	-7.2	-8.2	-8.4	-7.6	-9.2	-6.9	-6.9	-11.4	-15.8	-22.6	-31.4	-42.0	-57.5	-77.1		
Leq,d	2.4	-16.6	-33.6	-27.6	-12.6	-16.4	-14.4	-20.7	-16.8	-19.9	-15.9	-18.4	-16.5	-10.9	-11.0	-7.1	-8.0	-8.2	-7.5	-9.1	-6.8	-6.7	-11.3	-15.6	-22.3	-31.0	-41.5	-56.9	-76.2		
Leq,d	2.5	-16.5	-33.5	-27.5	-12.5	-16.3	-14.3	-20.6	-16.7	-19.8	-15.8	-18.3	-16.4	-10.8	-10.8	-7.0	-7.9	-8.1	-7.4	-9.0	-6.6	-6.6	-11.1	-15.4	-22.1	-30.7	-41.1	-56.3	-75.3		
Leq,d	3.5	-15.8	-32.7	-26.7	-16.5	-15.5	-13.5	-19.6	-15.7	-18.8	-14.9	-17.3	-15.4	-9.8	-9.9	-6.0	-7.0	-7.1	-6.4	-8.0	-5.5	-5.4	-9.8	-13.8	-20.1	-28.2	-37.7	-51.7	-69.0	-91.3	
Leq,d	7.0	-13.8	-31.9	-26.1	-11.4	-10.6	-8.9	-14.7	-11.0	-14.3	-9.8	-14.8	-12.8	-7.1	-7.2	-3.3	-3.4	-3.7	-2.9	-4.4	-1.9	-1.6	-5.7	-9.4	-14.0	-20.3	-27.3	-38.8	-52.6	-70.3	-90.9
Leq,d	6.3	-13.9	-32.0	-26.2	-11.4	-10.7	-8.9	-14.8	-11.1	-14.4	-10.0	-15.0	-13.0	-7.3	-7.3	-3.5	-4.4	-4.7	-3.9	-5.4	-3.0	-2.7	-6.8	-10.5	-16.1	-22.0	-28.8	-40.3	-54.2	-72.1	-92.9
Leq,d	6.1	-14.1	-31.0	-26.3	-11.5	-10.7	-9.0	-14.8	-11.2	-14.5	-10.2	-15.2	-13.3	-7.4	-7.5	-3.7	-4.6	-4.8	-4.1	-5.6	-3.1	-2.8	-7.0	-10.7	-16.3	-22.3	-30.3	-42.1	-56.3	-74.5	-95.7
Leq,d	6.0	-14.2	-31.2	-26.3	-11.5	-10.8	-9.0	-14.9	-11.2	-14.6	-10.4	-15.4	-13.4	-7.6	-7.7	-3.8	-4.8	-4.9	-4.2	-5.7	-3.3	-3.0	-7.2	-10.9	-16.6	-22.6	-30.7	-42.7	-57.0	-75.5	-97.1
Leq,d	6.9	-13.2	-32.9	-27.1	-12.2	-11.4	-9.6	-15.1	-11.4	-14.6	-11.5	-16.4	-14.5	-9.0	-9.0	-2.3	-3.5	-3.6	-2.9	-4.5	-2.0	-1.7	-5.9	-9.5	-12.6	-19.3	-26.9	-37.8	-50.9	-67.5	-86.6
Leq,d	6.9	-13.3	-31.7	-26.0	-11.2	-10.6	-8.8	-14.5	-10.8	-14.1	-11.7	-16.7	-14.7	-9.0	-9.1	-2.4	-3.5	-3.7	-3.0	-4.5	-2.0	-1.6	-5.8	-9.4	-13.7	-18.8	-26.4	-37.6	-50.9	-67.9	-87.5
Leq,d	5.6	-13.5	-31.8	-26.0	-11.3	-10.6	-8.8	-14.6	-10.9	-14.2	-11.9	-16.9	-14.9	-9.2	-9.3	-4.0	-5.1	-5.3	-4.5	-6.0	-3.6	-3.3	-7.4	-11.1	-16.7	-20.8	-28.5	-39.7	-53.1	-70.3	-90.1
Leq,d	5.6	-13.6	-31.8	-26.1	-11.3	-10.6	-8.9	-14.6	-10.9	-14.3	-12.1	-17.1	-15.1	-9.3	-9.4	-4.1	-5.0	-5.3	-4.6	-6.1	-3.6	-3.3	-7.5	-11.1	-15.3	-20.2	-27.9	-39.3	-52.9	-70.3	-90.5
Leq,d	4.6	-14.9	-31.8	-30.6	-15.6	-14.7	-12.7	-18.5	-14.6	-17.6	-11.3	-16.3	-14.3	-8.8	-8.8	-4.9	-6.0	-6.2	-5.3	-6.9	-4.4	-4.1	-8.4	-12.2	-18.1	-25.6	-34.3	-47.1	-62.7	-82.8	
Leq,d	3.9	-15.4	-32.4	-26.4	-16.1	-15.2	-13.2	-19.2	-15.2	-18.3	-14.4	-16.9	-14.9	-9.4	-9.4	-5.5	-6.6	-6.7	-5.9	-7.5	-5.1	-4.9	-9.2	-13.2	-19.3	-27.1	-36.3	-49.7	-66.3	-87.7	
Leq,d	3.8	-15.5	-32.5	-26.5	-16.3	-15.3	-13.3	-19.3	-15.4	-18.5	-14.6	-17.0	-15.1	-9.6	-9.6	-5.7	-6.7	-6.9	-6.1	-7.7	-5.2	-5.0	-9.4	-13.4	-19.6	-27.5	-36.8	-50.4	-67.2	-89.0	
Leq,d	3.6	-15.6	-32.6	-26.6	-16.4	-15.4	-13.4	-19.5	-15.5	-18.6	-14.7	-17.2	-15.2	-9.7	-9.7	-5.8	-6.8	-7.0	-6.2	-7.8	-5.4	-5.2	-9.6	-13.6	-19.8	-27.8	-37.2	-51.0	-68.1	-90.1	
Leq,d	4.8	-14.7	-31.7	-30.5	-15.5	-14.5	-12.5	-18.3	-14.4	-17.5	-11.1	-16.1	-14.1	-8.6	-8.6	-4.7	-5.8	-6.0	-5.2	-6.7	-4.2	-3.9	-8.1	-12.0	-17.8	-25.2	-32.8	-45.3	-60.7	-80.5	
Leq,d	5.7	-14.5	-31.4	-26.5	-11.7	-10.9	-9.1	-15.1	-11.4	-14.7	-10.8	-15.7	-13.8	-7.9	-8.0	-4.1	-5.0	-5.2	-4.5	-6.1	-3.6	-3.4	-7.6	-11.4	-17.1	-23.4	-31.7	-44.0	-58.8	-78.0	

Cathedral City Storage Noise
Contribution spectra - 001 - Cathedral City Storage: Outdoor SP

Time slice	Sum dB(A)	25Hz dB(A)	31.5Hz dB(A)	40Hz dB(A)	50Hz dB(A)	63Hz dB(A)	80Hz dB(A)	100Hz dB(A)	125Hz dB(A)	160Hz dB(A)	200Hz dB(A)	250Hz dB(A)	315Hz dB(A)	400Hz dB(A)	500Hz dB(A)	630Hz dB(A)	800Hz dB(A)	1kHz dB(A)	1.25kHz dB(A)	1.6kHz dB(A)	2kHz dB(A)	2.5kHz dB(A)	3.15kHz dB(A)	4kHz dB(A)	5kHz dB(A)	6.3kHz dB(A)	8kHz dB(A)	10kHz dB(A)	12.5kHz dB(A)	16kHz dB(A)	20kHz dB(A)
Leq,d	5.8	-14.3	-31.3	-26.4	-11.6	-10.9	-9.1	-15.0	-11.3	-14.6	-10.6	-15.6	-13.6	-7.7	-7.8	-4.0	-4.9	-5.1	-4.3	-5.9	-3.4	-3.2	-7.4	-11.1	-16.8	-23.0	-31.2	-43.3	-58.0	-76.8	-98.7
Leq,d	5.4	-14.6	-31.6	-27.7	-12.8	-12.0	-10.1	-16.0	-12.2	-15.4	-10.9	-15.9	-14.0	-8.1	-8.2	-4.3	-5.2	-5.4	-4.7	-6.3	-3.8	-3.6	-7.8	-11.6	-17.4	-24.8	-32.2	-44.6	-59.7	-79.2	
Leq,d	20.5					-9.0			-3.0			4.3			11.8			15.5			16.2			12.2			-4.3				
Receiver R4 Fl G Lr,lim dB(A) Leq,d 47.8 dB(A) Sigma(Leq,d) 0.0 dB(A)																															
Leq,d	47.7					33.5			43.0			34.8			39.2			39.8			40.2			36.2			26.3			6.0	
Leq,d	24.3					13.1			20.0			10.7			15.4			16.6			16.5			9.2			-9.2			-56.4	
Leq,d	15.4	-36.7	-30.7	-26.7	-13.7	-8.8	-14.8	-6.7	-4.8	-5.9	-3.9	-3.9	-2.0	1.5	2.5	6.4	8.1	3.9	5.7	6.8	4.2	4.4	0.0	-1.0	-6.1	-11.0	-23.3	-39.0	-55.8	-79.5	
Leq,d	15.6	-37.5	-31.4	-27.5	-14.5	-7.0	-13.0	-5.0	-3.0	-4.1	-2.2	-2.1	-0.2	0.7	1.7	5.6	7.3	4.3	6.0	7.7	5.0	5.0	0.5	-0.9	-6.5	-12.1	-25.2	-41.9	-60.3	-85.9	
Leq,d	22.0	-33.0	-27.0	-23.0	-10.0	-5.0	-11.0	-0.5	1.5	0.4	2.4	2.5	4.5	5.5	6.5	12.2	14.1	10.1	12.1	13.4	11.2	12.0	8.6	9.1	5.2	2.3	-7.0	-18.5	-30.3	-47.5	-69.7
Leq,d	24.3	-25.6	-17.2	-13.3	-0.3	4.6	-1.5	6.6	8.4	7.2	8.8	8.6	10.3	10.9	11.5	15.0	17.0	12.4	13.8	14.4	11.6	11.7	7.5	7.1	3.3	0.7	-7.5	-16.5	-23.5	-34.0	-47.7
Leq,d	24.3	-27.7	-21.7	-15.3	-2.3	2.6	-3.5	4.6	6.4	5.3	7.1	7.0	8.8	9.5	11.5	15.2	16.8	12.7	14.3	15.1	12.5	12.7	8.6	8.3	4.4	1.6	-7.1	-17.3	-25.9	-38.3	-54.2
Leq,d	4.1	-20.1	-37.0	-31.0	-16.0	-15.1	-13.1	-19.0	-15.1	-18.2	-14.3	-16.7	-14.8	-9.2	-9.3	-5.4	-6.4	-6.5	-5.7	-7.3	-4.8	-4.6	-8.8	-12.8	-18.8	-26.4	-35.4	-48.6	-63.1	-83.6	
Leq,d	4.3	-19.9	-36.9	-30.9	-15.9	-15.0	-13.0	-18.9	-14.9	-18.0	-14.1	-16.6	-14.6	-9.1	-9.1	-5.2	-6.2	-6.4	-5.6	-7.1	-4.7	-4.4	-8.7	-12.6	-18.5	-26.1	-35.0	-48.0	-62.6	-83.1	
Leq,d	4.4	-19.8	-36.8	-30.8	-15.8	-14.8	-12.8	-18.7	-14.8	-17.8	-14.0	-16.4	-14.5	-8.9	-9.0	-5.1	-6.1	-6.2	-5.4	-7.0	-4.5	-4.2	-8.5	-12.3	-18.3	-25.8	-34.5	-46.2	-61.9	-82.2	
Leq,d	4.6	-19.7	-36.7	-30.7	-15.7	-14.7	-12.7	-18.5	-14.6	-17.7	-13.8	-16.3	-14.3	-8.8	-8.8	-4.9	-6.0	-6.1	-5.3	-6.8	-4.3	-4.1	-8.3	-12.1	-18.0	-25.5	-34.1	-45.7	-61.2	-78.9	
Leq,d	4.8	-19.6	-36.5	-30.5	-15.5	-14.6	-12.6	-18.4	-14.4	-17.5	-13.6	-16.1	-14.1	-8.6	-8.6	-4.7	-5.8	-5.9	-5.1	-6.7	-4.2	-3.9	-8.1	-11.9	-17.7	-25.1	-33.6	-45.1	-58.0	-77.7	
Leq,d	4.0	-20.2	-37.1	-31.2	-16.2	-15.2	-13.2	-19.2	-15.2	-18.3	-14.4	-16.9	-15.0	-9.4	-9.4	-5.5	-6.5	-6.7	-5.9	-7.4	-5.0	-4.7	-9.0	-13.0	-19.0	-26.7	-35.8	-49.1	-63.3	-84.7	
Leq,d	-3.3	-17.6	-35.5	-28.5	-14.7	-15.0	-14.2	-18.0	-15.2	-19.4	-15.6	-21.7	-20.7	-17.8	-18.8	-14.6	-17.0	-17.3	-16.5	-17.3	-14.6	-14.1	-17.9	-20.9	-25.6	-31.0	-36.7	-44.9	-53.9	-65.3	-77.9
Leq,d	3.4	-20.6	-37.6	-31.6	-16.6	-15.7	-13.7	-19.8	-15.8	-18.9	-15.0	-17.5	-15.5	-10.0	-10.0	-6.1	-7.1	-7.2	-6.4	-8.0	-5.5	-5.3	-9.7	-13.8	-20.0	-28.0	-37.5	-51.5	-68.8	-91.1	
Leq,d	3.5	-20.5	-37.5	-31.5	-16.5	-15.6	-13.6	-19.6	-15.7	-18.8	-14.9	-17.3	-15.4	-9.8	-9.9	-6.0	-6.9	-7.1	-6.3	-7.9	-5.4	-5.2	-9.5	-13.6	-19.8	-27.7	-37.1	-50.9	-68.0	-90.1	
Leq,d	3.7	-20.4	-37.4	-31.4	-16.4	-15.4	-13.4	-19.5	-15.5	-18.6	-14.7	-17.2	-15.3	-9.7	-9.7	-5.8	-6.8	-7.0	-6.2	-7.7	-5.3	-5.0	-9.4	-13.4	-19.5	-27.4	-36.7	-50.3	-67.2	-88.9	
Leq,d	3.8	-20.3	-37.3	-31.3	-16.3	-15.3	-13.3	-19.3	-15.4	-18.5	-14.6	-17.0	-15.1	-9.5	-9.6	-5.7	-6.7	-6.8	-6.0	-7.6	-5.1	-4.9	-9.2	-13.2	-19.3	-27.1	-36.2	-49.7	-66.4	-87.9	
Leq,d	4.9	-19.4	-36.4	-30.4	-15.4	-14.4	-12.4	-18.2	-14.3	-17.3	-13.4	-15.9	-14.0	-8.4	-8.5	-4.6	-5.6	-5.8	-5.0	-6.5	-4.0	-3.7	-7.9	-11.7	-17.4	-24.7	-33.2	-44.5	-57.3	-76.5	-99.3
Leq,d	9.1	-12.4	-29.3	-28.1	-13.1	-12.2	-10.2	-15.3	-11.3	-11.9	-7.8	-12.8	-10.8	-5.5	-5.5	-0.3	-1.6	-1.7	-0.9	-2.3	0.4	0.9	-3.0	-6.3	-10.5	-16.6	-23.2	-33.0	-44.4	-58.9	-75.6
Leq,d	7.8	-12.5	-29.5	-28.3	-13.3	-12.3	-10.3	-15.5	-11.6	-14.6	-8.0	-13.0	-11.1	-5.7	-5.7	-1.8	-3.1	-3.2	-2.3	-3.8	-1.2	-0.7	-4.6	-7.9	-11.9	-18.1	-24.8	-34.7	-46.4	-61.2	-78.2
Leq,d	8.8	-12.7	-29.7	-23.7	-8.7	-7.7	-7.6	-12.8	-8.9	-12.0	-8.3	-13.3	-11.3	-5.5	-5.5	-1.6	-1.8	-2.0	-1.2	-2.7	-0.2	0.2	-3.9	-7.3	-12.5	-18.0	-25.0	-35.1	-47.1	-62.4	-79.9
Leq,d	8.7	-12.9	-29.8	-23.8	-8.9	-7.9	-7.7	-13.0	-9.0	-12.1	-8.5	-13.5	-11.6	-5.7	-5.7	-1.8	-1.8	-2.0	-1.2	-2.7	-0.2	0.2	-3.9	-7.4	-12.6	-17.3	-24.4	-34.7	-46.9	-62.5	-80.3
Leq,d	6.7	-11.7	-28.7	-27.4	-12.4	-11.5	-9.5	-14.4	-10.4	-13.5	-9.2	-14.2	-12.2	-7.0	-7.0	-3.1	-4.5	-4.6	-3.7	-5.2	-2.5	-2.0	-5.8	-8.9	-12.0	-17.8	-24.0	-33.1	-43.5	-56.8	-71.8
Leq,d	6.5	-11.9	-28.8	-27.6	-12.6	-11.7	-9.7	-14.6	-10.7	-13.7	-9.5	-14.5	-12.5	-7.3	-7.3	-3.4	-4.7	-4.8	-3.9	-5.4	-2.8	-2.2	-6.0	-9.2	-12.3	-18.2	-24.5	-33.7	-44.4	-58.0	-73.4
Leq,d	6.2	-12.0	-29.0	-27.8	-12.8	-11.8	-9.8	-14.8	-10.9	-14.0	-9.8	-14.7	-12.8	-7.5	-7.5	-3.6	-4.9	-5.0	-4.2	-5.7	-3.0	-2.5	-6.3	-9.5	-12.7	-18.6	-25.0	-34.4	-45.3	-59.2	-75.0
Leq,d	9.4	-12.2	-29.2	-27.9	-13.0	-12.0	-10.0	-15.1	-11.1	-11.6	-7.5	-12.5	-10.6	-5.2	-5.3	0.0	-1.4	-1.5	-0.6	-2.1	0.6	1.1	-2.8	-6.0	-10.2	-16.2	-22.7	-32.3	-43.5	-57.7	-73.9
Leq,d	6.2	-18.4	-35.4	-29.4	-14.4	-13.5	-11.5	-16.9	-13.0	-16.1	-9.7	-14.6	-12.7	-7.2	-7.2	-3.3	-4.5	-4.6	-3.8	-5.3	-2.7	-2.3	-6.4	-9.9	-15.3	-22.1	-28.4	-39.6	-53.0	-70.2	-90.1
Leq,d	5.5	-19.0	-36.0	-30.0	-15.0	-14.0	-12.0	-17.7	-13.8	-16.8	-10.4	-15.4	-13.4	-7.9	-8.0	-4.1	-5.1	-5.3	-4.5	-6.0	-3.5	-3.1	-7.3	-10.9	-16.6	-23.6	-30.7	-41.4	-55.8	-74.2	-95.7
Leq,d	5.3	-19.2	-36.1	-30.1	-15.1	-14.2	-12.2	-17.9	-13.9	-17.0	-10.6	-15.6	-13.6	-8.1	-8.1	-4.2	-5.3	-5.5	-4.6	-6.2	-3.7	-3.3	-7.5	-11.2	-16.9	-24.0	-31.2	-43.3	-56.5	-75.2	-97.0
Leq,d	5.1	-19.3	-36.3	-30.3	-15.3	-14.3	-12.3	-18.0	-14.1	-17.2	-13.3	-15.7	-13.8	-8.3	-8.3	-4.4	-5.5	-5.6	-4.8	-6.3	-3.8	-3.5	-7.7	-11.4	-17.1	-24.4	-31.7	-43.9	-57.1	-75.9	-97.7
Leq,d	6.5	-18.3	-35.2	-29.2	-14.3	-13.3	-11.3	-16.7	-12.8	-15.9	-9.4	-14.4	-12.4	-7.0	-7.0	-3.1	-4.3	-4.4	-3.6	-5.1	-2.5	-2.1	-6.1	-9.6	-15.0	-21.6	-27.8	-38.8	-51.9	-68.8	-88.2

Cathedral City Storage Noise
Contribution spectra - 001 - Cathedral City Storage: Outdoor SP

Time slice	Sum	25Hz	31.5Hz	40Hz	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz	20kHz
	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Leq,d	8.6	-13.2	-30.2	-24.2	-9.2	-8.2	-6.2	-13.3	-9.4	-12.5	-9.0	-14.0	-12.0	-6.1	-6.1	-2.2	-2.0	-2.2	-1.3	-2.9	-0.3	0.1	-3.9	-7.4	-12.7	-18.4	-25.7	-36.3	-49.0	-65.3	-84.0
Leq,d	8.7	-13.0	-30.0	-24.0	-9.0	-8.1	-6.1	-13.2	-9.2	-12.3	-8.8	-13.7	-11.8	-5.9	-5.9	-2.0	-1.9	-2.1	-1.3	-2.8	-0.2	0.1	-3.9	-7.4	-12.7	-18.2	-25.4	-35.9	-48.4	-64.3	-82.6
Leq,d	8.4	-13.3	-30.3	-24.3	-9.3	-8.4	-6.4	-13.5	-9.6	-12.7	-9.2	-14.2	-12.2	-6.3	-6.3	-2.4	-2.2	-2.3	-1.5	-3.0	-0.4	0.0	-4.0	-7.5	-12.8	-19.4	-25.9	-36.8	-49.7	-66.2	-85.3
Leq,d	22.2					-7.8			-1.5			5.9			13.3			17.0			17.8			14.5			1.3				
Receiver R5 Fl G Lr,lim dB(A) Leq,d 49.6 dB(A) Sigma(Leq,d) 0.0 dB(A)																															
Leq,d	49.5					35.5			44.9			36.2			41.5			42.1			41.7			36.7			25.7			5.1	
Leq,d	27.2					13.8			21.4			12.7			19.4			20.7			20.6			14.6			-1.2			-37.4	
Leq,d	17.6	-32.4	-26.5	-22.7	-9.8	-5.0	-8.8	-0.8	1.0	-0.2	1.7	1.6	3.4	4.2	5.0	8.7	10.3	5.9	7.4	8.1	5.3	5.2	0.8	-0.2	-5.0	-9.1	-19.8	-32.8	-45.7	-64.0	-87.6
Leq,d	17.0	-34.8	-28.8	-24.8	-9.4	-4.4	-10.5	-2.5	-0.6	-1.8	0.1	0.0	1.8	2.5	3.3	8.2	9.7	5.8	7.3	8.0	5.0	4.9	0.2	-1.1	-6.5	-11.3	-23.1	-37.7	-52.6	-73.3	-99.9
Leq,d	26.7	-27.6	-21.6	-15.1	-2.1	2.8	-3.2	5.2	7.1	6.1	7.7	7.8	9.7	10.7	12.9	16.9	18.8	14.7	16.6	17.8	15.6	16.3	12.7	13.0	9.9	8.1	0.4	-8.5	-15.8	-26.9	-41.8
Leq,d	26.0	-26.8	-18.3	-14.3	-1.4	3.6	-2.5	5.6	7.5	6.4	8.2	8.2	10.0	12.1	13.2	17.0	18.7	14.3	15.9	16.7	14.1	14.4	10.4	10.1	6.4	3.9	-4.3	-13.7	-21.4	-32.6	-47.5
Leq,d	17.7	-32.6	-26.6	-22.7	-9.7	-2.3	-8.3	-0.4	1.5	0.3	2.2	2.1	3.8	4.6	5.3	8.9	10.4	5.9	7.3	7.9	4.9	4.8	0.3	-0.7	-5.4	-9.3	-19.6	-32.1	-44.2	-61.3	-83.5
Leq,d	12.5	-17.3	-34.2	-28.3	-13.3	-12.3	-10.3	-15.4	-11.5	-14.6	-7.9	-11.6	-9.6	-2.6	-2.7	1.3	2.3	2.2	3.1	1.6	4.2	4.7	0.8	-2.4	-7.2	-13.0	-19.7	-29.6	-41.1	-55.9	-72.7
Leq,d	12.7	-17.1	-34.1	-28.1	-13.1	-12.1	-10.1	-15.2	-11.3	-14.3	-7.6	-11.3	-9.4	-2.4	-2.4	1.5	2.5	2.4	3.3	1.8	4.4	5.0	1.1	-2.2	-6.5	-12.6	-19.2	-28.9	-40.2	-54.6	-71.1
Leq,d	12.9	-16.9	-33.9	-27.9	-12.9	-12.0	-10.0	-15.0	-11.0	-14.1	-7.4	-11.1	-9.1	-2.2	-2.2	1.8	2.8	2.6	3.5	2.0	4.7	5.2	1.4	-1.9	-6.2	-12.2	-18.6	-28.2	-39.3	-53.3	-69.4
Leq,d	13.2	-16.8	-33.7	-27.8	-12.8	-11.8	-9.8	-14.8	-10.8	-13.9	-5.8	-10.8	-7.6	-1.9	-1.9	2.0	3.0	2.9	3.7	2.2	4.9	5.4	1.6	-1.6	-6.1	-12.1	-18.4	-27.7	-38.5	-52.3	-67.9
Leq,d	12.8	-16.6	-33.6	-27.6	-12.6	-11.6	-9.6	-14.5	-10.6	-11.1	-5.5	-10.5	-7.3	-1.8	-1.8	2.2	2.3	2.2	3.1	1.7	4.4	5.0	1.4	-1.5	-5.8	-11.6	-17.8	-27.0	-37.6	-51.0	-66.2
Leq,d	12.2	-17.4	-34.4	-28.4	-13.4	-12.5	-10.5	-15.6	-11.7	-14.8	-8.1	-13.1	-9.9	-4.3	-2.9	1.1	2.1	2.0	2.9	1.4	4.0	4.5	0.6	-2.7	-7.8	-13.1	-20.0	-30.0	-41.8	-56.8	-74.0
Leq,d	-10.4	-23.0	-41.1	-36.3	-22.5	-20.1	-19.3	-25.8	-22.9	-27.0	-22.9	-28.9	-28.0	-25.0	-26.0	-23.0	-24.9	-25.1	-24.2	-24.8	-22.2	-21.8	-25.8	-29.3	-34.6	-41.1	-48.5	-59.2	-72.0	-88.3	
Leq,d	10.2	-18.1	-35.0	-29.0	-14.0	-13.1	-11.1	-16.4	-12.5	-15.6	-9.0	-14.0	-12.1	-5.1	-5.1	0.0	0.0	-0.1	0.8	-0.7	1.9	2.4	-1.6	-5.0	-10.2	-15.6	-22.8	-33.4	-46.0	-61.9	-80.6
Leq,d	10.4	-17.9	-34.9	-28.9	-13.9	-12.9	-10.9	-16.3	-12.3	-15.4	-8.8	-13.8	-11.9	-4.9	-4.9	0.2	0.2	0.1	1.0	-0.5	2.1	2.5	-1.4	-4.8	-10.0	-15.3	-22.4	-32.9	-45.3	-61.1	-79.1
Leq,d	11.8	-17.8	-34.7	-28.7	-13.7	-12.8	-10.8	-16.1	-12.1	-15.2	-8.6	-13.6	-10.3	-4.7	-3.3	0.6	1.7	1.6	2.5	1.0	3.6	4.1	0.1	-3.2	-8.4	-13.9	-20.9	-31.3	-43.5	-59.1	-76.9
Leq,d	12.0	-17.6	-34.6	-28.6	-13.6	-12.6	-10.6	-15.9	-11.9	-15.0	-8.4	-13.4	-10.1	-4.5	-3.1	0.8	1.9	1.8	2.7	1.2	3.8	4.3	0.3	-3.0	-8.1	-13.6	-20.5	-30.7	-42.7	-58.1	-75.6
Leq,d	13.1	-16.4	-33.4	-27.4	-12.4	-11.4	-9.4	-14.3	-10.3	-9.6	-5.2	-10.2	-7.0	-1.5	-1.5	2.4	2.5	2.4	3.4	1.9	4.6	5.2	1.6	-1.3	-5.4	-11.1	-17.3	-26.2	-36.6	-49.6	-64.4
Leq,d	18.0	-11.5	-28.5	-22.5	-7.5	-6.6	-2.1	-4.0	0.0	-3.1	2.3	-2.6	-0.7	3.3	3.3	7.2	6.4	7.0	8.0	6.5	9.3	10.1	6.7	4.1	0.2	-4.3	-8.5	-14.5	-21.0	-29.2	-37.9
Leq,d	17.9	-9.1	-26.1	-20.1	-5.1	-4.2	-2.2	-3.4	0.6	-2.5	1.9	-3.0	-1.1	3.3	3.3	7.2	6.0	7.0	7.9	6.4	9.2	10.0	6.5	3.9	0.0	-4.4	-8.4	-14.9	-21.8	-30.2	-39.1
Leq,d	17.0	-9.5	-26.5	-20.5	-5.6	-4.6	-2.7	-3.8	0.1	-3.0	1.3	-3.7	-1.7	2.9	2.8	6.7	5.6	6.0	6.9	5.4	8.1	8.8	5.3	2.6	-1.5	-6.2	-10.6	-17.1	-24.0	-32.8	-42.3
Leq,d	16.8	-9.9	-26.9	-20.9	-5.9	-5.0	-3.0	-5.1	-0.2	-3.3	0.8	-4.1	-2.2	2.5	2.5	6.4	5.3	5.7	6.6	5.1	7.9	8.6	5.1	2.4	-1.7	-6.4	-10.8	-17.4	-24.7	-33.8	-43.5
Leq,d	18.0	-4.8	-21.7	-15.7	-5.5	-4.6	-0.1	-4.4	-0.4	-3.5	1.8	-3.1	-1.2	2.8	2.8	6.7	6.7	6.6	7.5	6.7	9.5	10.3	6.9	4.3	0.5	-3.8	-7.7	-13.5	-19.3	-26.3	-33.5
Leq,d	18.6	-5.3	-22.3	-16.3	-6.1	-5.1	0.6	-3.7	0.3	-2.8	2.5	-2.4	-0.5	3.5	3.5	7.4	7.7	7.6	8.5	7.0	9.8	10.6	7.2	4.6	0.7	-3.6	-7.7	-13.6	-19.6	-26.9	-34.6
Leq,d	18.9	-5.8	-22.8	-16.8	-6.6	-5.6	0.1	-3.0	1.0	-2.1	3.2	-1.7	0.2	4.2	4.2	8.1	7.3	7.9	8.9	7.3	10.1	10.9	7.4	4.8	0.9	-3.5	-7.7	-13.7	-20.0	-27.6	-35.5
Leq,d	18.4	-11.1	-28.0	-22.1	-7.1	-6.1	-0.4	-3.5	0.5	-2.6	2.8	-2.2	-0.2	3.7	3.7	7.7	6.8	7.5	8.4	6.9	9.7	10.5	7.0	4.4	0.5	-4.0	-8.2	-14.3	-20.6	-28.1	-36.3
Leq,d	14.9	-10.0	-28.7	-22.7	-7.7	-6.7	-4.7	-9.3	-3.0	-5.2	-1.6	-6.6	-4.6	0.6	0.6	4.6	3.9	3.8	4.7	3.3	6.0	6.8	3.2	0.5	-3.7	-8.4	-13.5	-21.1	-29.6	-40.1	-52.1
Leq,d	13.8	-15.9	-32.8	-26.9	-11.9	-10.9	-8.9	-13.5	-7.5	-8.8	-3.1	-8.1	-6.1	-0.7	-0.7	3.2	3.2	3.1	4.1	2.6	5.3	5.9	2.3	-0.7	-5.2	-10.5	-15.8	-24.3	-33.8	-45.9	-59.5
Leq,d	13.5	-16.1	-33.0	-27.0	-12.0	-11.1	-9.1	-13.8	-9.9	-9.1	-4.7	-8.4	-6.4	-1.0	-1.0	2.9	3.0	2.9	3.8	2.3	5.0	5.7	2.0	-0.9	-5.4	-10.7	-16.4	-25.0	-34.9	-47.3	-61.3
Leq,d	13.3	-16.2	-33.2	-27.2	-12.2	-11.3	-9.3	-14.0	-10.1	-9.3	-4.9	-8.7	-6.7	-1.3	-1.3	2.7	2.8	2.7	3.6	2.1	4.8	5.5	1.8	-1.1	-5.6	-11.0	-17.0	-25.8	-35.8	-48.5	-62.9

Cathedral City Storage Noise
Contribution spectra - 001 - Cathedral City Storage: Outdoor SP

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Time slice	Sum	25Hz	31.5Hz	40Hz	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz	20kHz
	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Leq,d	15.2	-9.6	-28.3	-22.3	-7.3	-6.4	-4.4	-8.9	-1.7	-4.8	-1.1	-6.1	-4.1	1.0	1.0	5.0	4.2	4.1	5.1	3.6	6.3	7.0	3.5	0.8	-3.4	-8.2	-12.8	-20.4	-28.6	-38.9	-50.1
Leq,d	16.2	-8.9	-27.6	-21.6	-6.6	-5.7	-3.7	-5.8	-1.0	-4.1	-0.2	-5.2	-3.2	1.8	1.8	5.7	4.8	5.2	6.1	4.6	7.4	8.2	4.7	2.0	-1.9	-6.7	-11.4	-18.4	-25.8	-35.6	-46.3
Leq,d	16.5	-8.5	-27.3	-21.3	-6.3	-5.3	-3.3	-5.5	-0.6	-3.7	0.3	-4.7	-2.7	2.2	2.1	6.1	5.0	5.5	6.3	4.9	7.6	8.3	4.8	2.2	-1.9	-6.4	-11.1	-18.0	-25.4	-34.6	-44.7
Leq,d	15.5	-9.2	-28.0	-22.0	-7.0	-6.0	-4.0	-8.5	-1.4	-4.4	-0.7	-5.6	-3.7	1.4	1.4	5.4	4.5	4.4	5.3	3.8	6.6	7.2	3.7	0.9	-3.3	-8.1	-12.8	-19.7	-27.7	-37.8	-48.8
Leq,d	31.1					-1.4			8.3			13.6			21.0			25.2			26.4			24.9			16.5				
Receiver R5 Fl G Lr,lim dB(A) Leq,d 48.4 dB(A) Sigma(Leq,d) 0.0 dB(A)																															
Leq,d	48.3					34.5			43.9			35.4			39.7			40.4			40.6			35.9			25.0			3.4	
Leq,d	26.8					14.3			21.7			12.3			17.8			19.7			20.2			14.1			-3.0			-43.8	
Leq,d	16.8	-35.4	-29.3	-25.4	-12.4	-7.4	-13.4	-5.4	-3.5	-4.6	-2.6	0.0	1.9	2.8	3.8	7.7	9.4	5.2	7.0	8.0	5.5	5.7	1.5	0.6	-4.3	-8.6	-20.1	-34.4	-49.4	-70.7	-98.1
Leq,d	16.3	-36.3	-30.3	-26.3	-10.8	-5.8	-11.9	-3.8	-1.9	-3.0	-1.0	-1.0	0.9	1.9	2.8	6.7	8.5	4.3	6.0	8.0	5.5	5.7	1.3	0.3	-5.1	-10.2	-22.6	-38.0	-54.4	-77.5	
Leq,d	22.7	-31.0	-24.9	-20.9	-7.9	-0.5	-6.4	1.7	3.7	2.6	4.5	4.6	6.5	7.5	8.6	12.6	14.5	10.5	12.5	13.7	11.6	12.4	9.0	9.4	6.4	4.8	-2.5	-12.9	-22.5	-36.7	-55.4
Leq,d	26.0	-21.8	-15.9	-12.1	0.8	5.6	-0.6	7.5	9.3	8.0	9.4	9.1	10.7	11.3	13.1	16.9	18.7	14.2	15.8	16.5	13.9	14.2	10.3	10.2	6.6	4.1	-4.4	-13.9	-21.3	-31.6	-44.2
Leq,d	22.3	-30.0	-24.0	-20.1	-4.6	0.3	-5.7	2.3	4.1	3.0	4.9	4.8	6.6	7.4	8.2	13.5	15.2	10.8	12.4	13.2	10.5	10.7	6.5	5.9	1.7	-1.4	-10.9	-22.0	-32.2	-46.6	-65.1
Leq,d	5.8	-18.9	-35.9	-29.9	-14.9	-13.9	-11.9	-17.6	-13.6	-16.7	-12.8	-15.2	-13.3	-7.8	-7.8	-3.8	-4.9	-5.0	-4.2	-5.7	-3.1	-2.7	-6.7	-10.2	-15.7	-22.5	-30.3	-41.6	-55.3	-72.7	-93.2
Leq,d	6.0	-18.8	-35.7	-29.8	-14.8	-13.8	-11.8	-17.4	-13.4	-16.5	-10.1	-15.0	-13.1	-7.6	-7.6	-3.7	-4.8	-4.9	-4.0	-5.5	-2.9	-2.5	-6.5	-10.0	-15.4	-22.1	-29.8	-41.0	-54.4	-71.5	-91.5
Leq,d	6.2	-18.6	-35.6	-29.6	-14.6	-13.7	-11.7	-17.2	-13.3	-16.3	-9.9	-14.8	-12.9	-7.4	-7.4	-3.5	-4.6	-4.7	-3.8	-5.3	-2.7	-2.3	-6.2	-9.7	-15.1	-21.7	-29.2	-40.3	-53.5	-70.3	-89.8
Leq,d	6.4	-18.5	-35.5	-29.5	-14.5	-13.5	-11.5	-17.0	-13.1	-16.1	-9.7	-14.6	-12.7	-7.2	-7.2	-3.3	-4.4	-4.5	-3.6	-5.1	-2.5	-2.1	-6.0	-9.5	-14.8	-21.4	-28.8	-39.6	-52.6	-69.2	-88.1
Leq,d	6.6	-18.3	-35.3	-29.3	-14.3	-13.4	-11.4	-16.8	-12.9	-15.9	-9.5	-14.4	-12.5	-7.0	-7.0	-3.1	-4.2	-4.3	-3.4	-4.9	-2.3	-1.8	-5.8	-9.2	-14.4	-21.0	-28.2	-38.9	-51.7	-67.9	-86.4
Leq,d	5.6	-19.1	-36.0	-30.0	-15.0	-14.1	-12.1	-17.7	-13.8	-16.9	-13.0	-15.4	-13.5	-7.9	-7.9	-4.0	-5.1	-5.2	-4.3	-5.8	-3.2	-2.9	-6.9	-10.5	-16.0	-22.9	-30.7	-42.2	-56.1	-73.8	-94.8
Leq,d	-6.0	-20.7	-38.7	-31.3	-17.6	-17.9	-17.1	-23.3	-20.5	-24.6	-18.0	-24.0	-23.1	-20.1	-21.1	-17.2	-19.6	-19.4	-18.6	-19.2	-16.5	-16.1	-19.9	-23.2	-28.1	-34.1	-40.5	-49.8	-60.5	-74.0	-89.2
Leq,d	5.0	-19.6	-36.5	-30.6	-15.6	-14.6	-12.6	-18.4	-14.5	-17.5	-13.7	-16.1	-14.2	-8.6	-8.6	-4.7	-5.7	-5.6	-4.8	-6.4	-3.9	-3.5	-7.7	-11.4	-17.1	-24.4	-32.7	-44.9	-59.7	-78.7	
Leq,d	5.1	-19.5	-36.4	-30.4	-15.4	-14.5	-12.5	-18.2	-14.3	-17.4	-13.5	-16.0	-14.0	-8.4	-8.5	-4.5	-5.6	-5.5	-4.7	-6.3	-3.7	-3.4	-7.5	-11.2	-16.9	-24.0	-32.2	-44.3	-58.9	-77.5	-99.8
Leq,d	5.3	-19.3	-36.3	-30.3	-15.3	-14.3	-12.3	-18.1	-14.1	-17.2	-13.3	-15.8	-13.8	-8.3	-8.3	-4.4	-5.4	-5.5	-4.6	-6.1	-3.6	-3.2	-7.3	-11.0	-16.5	-23.6	-31.7	-43.6	-57.9	-76.2	-98.1
Leq,d	5.4	-19.2	-36.2	-30.2	-15.2	-14.2	-12.2	-17.9	-14.0	-17.0	-13.2	-15.6	-13.7	-8.1	-8.1	-4.2	-5.3	-5.4	-4.5	-6.0	-3.4	-3.1	-7.1	-10.7	-16.3	-23.3	-31.2	-43.0	-57.1	-75.1	-96.6
Leq,d	6.8	-18.2	-35.2	-29.2	-14.2	-13.2	-11.2	-16.6	-12.7	-15.7	-9.2	-14.2	-12.3	-6.8	-6.8	-2.9	-4.0	-4.1	-3.2	-4.7	-2.1	-1.6	-5.5	-8.9	-14.1	-20.6	-27.7	-38.3	-50.8	-66.7	-84.8
Leq,d	12.6	-15.5	-32.5	-26.5	-11.5	-10.6	-8.6	-13.1	-9.2	-9.7	-5.2	-10.2	-6.9	-1.9	-1.9	3.3	1.8	1.7	2.6	1.2	3.9	4.6	0.9	-2.0	-6.5	-11.8	-17.3	-25.4	-34.5	-46.0	-58.7
Leq,d	12.3	-15.8	-32.7	-26.7	-11.7	-10.8	-8.8	-13.4	-9.5	-10.0	-5.5	-10.5	-8.5	-2.1	-2.1	3.0	1.5	1.4	2.3	0.9	3.7	4.3	0.6	-2.3	-6.9	-12.3	-17.9	-26.1	-35.4	-47.1	-60.2
Leq,d	12.0	-16.0	-32.9	-27.0	-12.0	-11.0	-9.0	-13.7	-9.8	-10.3	-5.9	-10.9	-8.9	-2.5	-2.5	2.7	1.2	1.2	2.1	0.6	3.4	4.0	0.3	-2.7	-7.3	-12.7	-18.5	-26.9	-36.4	-48.5	-61.9
Leq,d	10.8	-16.1	-33.1	-27.1	-12.1	-11.2	-9.2	-13.9	-10.0	-10.5	-6.2	-11.2	-9.2	-2.7	-2.7	1.2	-0.2	-0.3	0.6	-0.8	2.0	2.6	-1.1	-4.1	-8.7	-14.2	-20.0	-28.5	-38.2	-50.4	-63.9
Leq,d	11.6	-14.3	-31.3	-25.3	-10.3	-9.3	-7.3	-11.8	-7.9	-10.9	-6.0	-11.0	-9.0	-1.9	-1.9	2.0	0.6	0.5	1.4	-0.1	2.7	3.4	-0.2	-3.0	-7.3	-12.3	-17.4	-24.9	-33.0	-43.3	-54.6
Leq,d	11.3	-14.6	-31.6	-25.6	-10.6	-9.6	-7.6	-12.2	-8.2	-11.3	-6.5	-11.4	-9.5	-2.2	-2.2	1.7	0.3	0.2	1.1	-0.4	2.4	3.1	-0.5	-3.4	-7.7	-12.8	-18.0	-25.6	-34.0	-44.5	-56.1
Leq,d	12.1	-14.9	-31.9	-25.9	-10.9	-10.0	-8.0	-12.5	-8.5	-11.6	-6.9	-9.8	-7.9	-3.0	-1.3	2.7	1.2	1.1	2.0	0.6	3.3	4.0	0.4	-2.5	-6.9	-12.1	-17.4	-25.2	-33.8	-44.7	-56.7
Leq,d	13.0	-15.2	-32.2	-26.2	-11.2	-10.3	-8.3	-12.8	-8.9	-9.4	-4.8	-9.8	-6.6	-1.6	-0.3	3.6	2.1	2.0	2.9	1.5	4.2	4.9	1.3	-1.7	-6.1	-11.4	-16.8	-24.7	-33.6	-44.7	-57.1
Leq,d	9.4	-17.1	-34.0	-28.0	-13.0	-12.1	-10.1	-15.2	-11.2	-14.3	-7.6	-12.6	-10.7	-5.3	-5.3	-0.1	-1.4	-1.5	-0.6	-2.0	0.7	1.2	-2.6	-5.7	-10.6	-16.5	-22.9	-32.3	-43.1	-56.9	-72.4
Leq,d	7.4	-17.7	-34.7	-28.7	-13.7	-12.8	-10.8	-16.0	-12.1	-15.2	-8.6	-13.6	-11.6	-6.2	-6.2	-2.3	-3.5	-3.6	-2.7	-4.2	-1.5	-1.0	-4.9	-8.2	-13.2	-19.4	-26.2	-36.3	-48.1	-63.2	-80.3
Leq,d	7.2	-17.9	-34.9	-28.9	-13.9	-12.9	-10.9	-16.2	-12.3	-15.4	-8.8	-13.8	-11.8	-6.4	-6.4	-2.5	-3.7	-3.8	-2.9	-4.4	-1.7	-1.2	-5.1	-8.4	-13.5	-19.8	-26.8	-37.0	-49.0	-64.4	-81.9

Cathedral City Storage Noise
Contribution spectra - 001 - Cathedral City Storage: Outdoor SP

Time slice	Sum	25Hz	31.5Hz	40Hz	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz	20kHz
	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Leq,d	7.0	-18.0	-35.0	-29.0	-14.0	-13.1	-11.1	-16.4	-12.5	-15.6	-9.0	-14.0	-12.1	-6.6	-6.6	-2.7	-3.8	-3.9	-3.1	-4.5	-1.9	-1.4	-5.3	-8.7	-13.8	-20.2	-27.2	-37.6	-49.9	-65.5	-83.3
Leq,d	9.7	-16.9	-33.8	-27.8	-12.9	-11.9	-9.9	-14.9	-11.0	-11.5	-7.3	-12.3	-10.4	-5.0	-5.0	0.2	-1.1	-1.2	-0.3	-1.7	1.0	1.5	-2.2	-5.3	-10.1	-15.9	-22.2	-31.3	-41.9	-55.2	-70.2
Leq,d	10.2	-16.5	-33.5	-27.5	-12.5	-11.5	-9.5	-14.4	-10.5	-11.0	-6.8	-11.8	-9.8	-4.5	-3.2	0.7	-0.7	-0.8	0.1	-1.3	1.5	2.1	-1.7	-4.7	-9.4	-15.1	-21.0	-29.9	-40.0	-52.7	-66.8
Leq,d	10.5	-16.3	-33.3	-27.3	-12.3	-11.4	-9.4	-14.2	-10.2	-10.8	-6.5	-11.5	-9.5	-4.3	-3.0	1.0	-0.5	-0.5	0.4	-1.0	1.7	2.3	-1.4	-4.4	-9.0	-14.6	-20.5	-29.2	-39.0	-51.5	-65.3
Leq,d	9.9	-16.7	-33.7	-27.7	-12.7	-11.7	-9.7	-14.7	-10.7	-11.2	-7.1	-12.0	-10.1	-4.8	-4.8	0.5	-0.9	-1.0	-0.1	-1.5	1.2	1.8	-1.9	-5.0	-9.8	-15.5	-21.6	-30.6	-40.9	-53.9	-68.4
Leq,d	24.3					-6.5			0.3			7.8			15.2			18.8			19.9			17.4			5.8				
Receiver R6 Fl G Lr,lim dB(A) Leq,d 45.0 dB(A) Sigma(Leq,d) 0.0 dB(A)																															
Leq,d	41.4					27.2			35.6			26.6			32.3			34.4			35.5			30.5			17.5			-11.2	
Leq,d	24.0					14.0			19.8			9.0			12.7			16.8			16.5			9.6			-7.7			-39.0	
Leq,d	20.6	-27.8	-22.0	-15.8	-3.0	1.9	-4.3	3.6	5.4	4.1	5.8	5.5	7.1	7.7	8.3	11.7	13.0	8.3	10.1	10.6	7.6	7.6	3.1	2.4	-1.9	-4.8	-13.6	-23.6	-32.2	-44.7	-60.5
Leq,d	15.4	-29.6	-23.7	-19.9	-7.1	-2.4	-8.7	-0.9	0.6	-0.9	0.6	0.1	1.5	1.8	2.1	5.2	6.3	4.4	5.8	6.5	3.5	3.3	-1.4	-2.9	-8.4	-13.1	-23.4	-34.7	-45.0	-59.9	-79.6
Leq,d	26.0	-20.2	-14.4	-10.6	2.2	7.0	0.7	9.0	10.6	9.2	10.1	9.7	11.9	13.0	13.5	16.9	18.7	14.1	15.4	16.0	13.2	13.4	9.3	9.0	5.3	3.0	-4.8	-12.9	-18.5	-26.9	-37.9
Leq,d	21.8	-32.1	-26.0	-22.0	-6.5	-1.6	-7.6	0.5	2.4	1.3	3.3	3.4	5.3	6.3	7.3	11.2	14.3	10.2	12.1	13.2	10.9	11.4	7.6	7.5	3.6	0.8	-8.5	-19.7	-30.4	-46.0	-66.3
Leq,d	16.0	-36.1	-30.0	-26.0	-13.1	-8.1	-11.6	-3.6	-1.7	-2.7	-0.8	-0.8	1.1	2.1	3.0	6.8	8.6	4.3	6.1	7.0	4.4	4.5	0.0	-1.1	-6.3	-11.1	-23.2	-38.5	-54.7	-77.4	
Leq,d	17.2	-12.0	-29.0	-23.0	-8.0	-7.0	-2.5	-4.4	-0.5	-3.6	1.9	-3.1	-1.2	2.8	2.8	6.7	5.3	5.7	7.3	5.7	8.4	9.0	6.1	3.4	-0.8	-5.8	-10.6	-17.5	-24.9	-33.9	-43.6
Leq,d	17.6	-11.5	-28.5	-22.5	-7.5	-6.6	-0.8	-4.0	0.0	-3.1	2.3	-2.7	-0.7	3.2	3.2	7.1	5.7	6.2	7.7	6.1	8.8	9.4	6.7	3.8	-0.4	-5.3	-10.0	-16.8	-24.0	-32.7	-42.0
Leq,d	18.1	-11.1	-28.0	-22.0	-7.0	-6.1	-0.3	-3.5	0.5	-2.6	2.8	-2.2	-0.3	3.7	3.7	7.6	6.2	7.3	8.2	6.5	9.2	9.8	7.1	4.2	0.0	-4.9	-9.5	-16.1	-23.1	-31.6	-40.5
Leq,d	18.6	-10.6	-27.5	-21.6	-6.6	-3.1	1.4	-3.0	1.0	-2.1	3.2	-1.7	0.2	4.2	4.1	8.0	6.6	7.7	8.6	6.9	9.6	10.2	7.4	4.6	0.4	-4.4	-9.0	-15.5	-22.3	-30.5	-39.1
Leq,d	19.4	-10.0	-27.0	-21.0	-6.0	-2.6	1.9	-2.4	1.5	-1.6	3.8	-1.2	0.7	4.7	4.6	8.5	7.7	8.2	9.1	7.8	10.5	11.7	8.2	5.4	1.2	-3.6	-8.0	-14.4	-21.0	-28.9	-37.1
Leq,d	17.0	-12.4	-29.4	-23.4	-8.4	-7.4	-2.9	-4.8	-0.9	-4.0	1.5	-3.5	-1.2	2.8	2.8	6.7	5.2	5.7	7.2	5.5	8.2	8.8	5.9	3.2	-1.1	-6.1	-11.0	-18.1	-25.6	-34.9	-44.9
Leq,d	-13.2	-25.1	-43.3	-38.4	-24.6	-22.4	-21.5	-28.6	-25.7	-29.8	-25.8	-31.8	-30.9	-27.9	-28.9	-26.0	-27.8	-28.0	-27.3	-27.9	-25.5	-25.4	-29.8	-33.8	-40.1	-48.1	-57.6	-71.5	-88.8		
Leq,d	15.4	-13.9	-30.9	-24.9	-9.9	-8.9	-6.9	-7.6	-2.5	-5.5	-0.5	-5.5	-3.5	2.2	2.1	6.0	4.5	4.4	5.2	3.5	6.2	6.7	3.0	1.1	-3.4	-8.7	-14.1	-21.8	-30.3	-40.8	-52.3
Leq,d	15.9	-13.6	-30.5	-24.6	-9.6	-8.6	-6.6	-7.3	-2.1	-5.2	-0.1	-5.0	-2.5	2.5	2.4	6.3	4.8	4.7	6.0	4.3	7.0	7.5	3.8	1.8	-2.6	-7.9	-13.1	-20.6	-28.9	-39.1	-50.3
Leq,d	16.3	-13.2	-30.2	-24.2	-9.2	-8.2	-6.2	-5.7	-1.7	-4.8	0.4	-4.5	-1.7	2.8	2.8	6.6	5.2	5.0	6.3	4.7	7.3	7.9	4.5	2.2	-2.2	-7.4	-12.5	-20.0	-28.0	-37.9	-48.7
Leq,d	16.5	-12.8	-29.8	-23.8	-8.8	-7.9	-3.4	-5.3	-1.4	-4.4	0.9	-4.0	-1.2	2.8	2.8	6.7	5.2	5.0	6.4	4.8	7.4	8.0	5.1	2.4	-2.0	-7.1	-12.1	-19.4	-27.2	-36.9	-47.3
Leq,d	19.9	-9.5	-26.4	-20.4	-5.5	-0.8	2.4	-1.9	2.1	-1.0	4.3	-0.7	1.3	5.2	5.2	9.0	8.2	8.7	9.6	8.3	10.9	12.1	8.6	5.8	1.6	-3.1	-7.5	-13.7	-20.1	-27.7	-35.6
Leq,d	28.4	3.3	-11.9	-5.9	9.1	10.0	12.0	8.0	11.9	8.7	13.8	8.8	11.4	15.3	15.1	19.1	17.8	17.4	18.1	16.1	18.7	19.1	15.4	12.6	8.6	4.4	0.9	-3.9	-8.0	-12.6	-16.6
Leq,d	28.7	4.8	-11.6	-5.6	9.4	10.3	12.3	8.3	12.2	9.1	14.1	9.1	11.7	15.6	15.4	19.4	18.0	17.7	18.3	16.4	18.9	19.3	15.6	12.8	8.8	4.6	1.2	-3.6	-7.7	-12.3	-16.2
Leq,d	28.6	4.7	-11.7	-5.7	9.3	10.2	12.2	8.2	12.1	8.9	14.0	9.0	11.6	15.5	15.3	19.3	17.9	17.6	18.2	16.3	18.8	19.3	15.5	12.7	8.8	4.6	1.1	-3.7	-7.8	-12.4	-16.3
Leq,d	28.3	3.0	-12.1	-6.1	8.8	9.8	11.7	7.7	11.6	8.5	13.6	8.6	10.4	15.1	14.9	19.0	17.6	17.3	17.9	16.0	18.6	19.0	15.3	12.5	8.5	4.3	0.8	-4.0	-8.2	-12.8	-16.9
Leq,d	25.8	-2.6	-17.3	-9.2	5.8	6.7	8.7	4.6	8.6	5.5	10.8	5.8	7.7	12.0	12.4	16.2	15.2	14.9	15.6	13.6	16.5	17.0	13.3	10.5	6.5	2.2	-1.5	-6.6	-11.3	-16.6	-21.4
Leq,d	26.6	0.7	-16.3	-8.3	6.7	7.6	9.6	5.6	9.5	6.4	11.6	6.6	8.5	13.3	13.2	16.9	15.9	15.6	16.3	14.2	17.1	17.6	13.9	11.1	7.1	2.9	-0.7	-5.8	-10.3	-15.4	-20.0
Leq,d	27.3	1.7	-13.3	-7.4	7.6	8.5	10.5	6.5	10.4	7.3	12.4	7.5	9.3	14.1	13.9	17.7	16.7	16.3	17.0	15.2	17.7	18.2	14.5	11.7	7.7	3.5	-0.1	-5.0	-9.4	-14.3	-18.6
Leq,d	28.0	2.6	-12.5	-6.6	8.4	9.4	11.3	7.3	11.2	8.1	13.2	8.2	10.1	14.8	14.6	18.6	17.3	17.0	17.6	15.7	18.3	18.7	15.0	12.2	8.2	4.0	0.5	-4.4	-8.6	-13.3	-17.5
Leq,d	24.6	-4.4	-18.9	-11.9	4.3	5.2	7.2	3.1	7.0	3.9	9.4	4.5	6.3	10.2	11.1	14.9	13.6	13.7	14.4	12.4	15.3	16.0	12.3	9.5	5.5	1.1	-2.7	-8.1	-13.0	-18.8	-24.2
Leq,d	21.6	-7.6	-24.6	-18.6	-1.1	2.2	4.2	0.0	3.9	0.8	6.1	1.1	3.0	6.9	6.8	11.3	10.6	10.4	11.6	9.7	12.3	13.5	9.9	7.0	2.9	-1.7	-5.8	-11.7	-17.4	-24.3	-31.1

Cathedral City Storage Noise
Contribution spectra - 001 - Cathedral City Storage: Outdoor SP

Time slice	Sum	25Hz	31.5Hz	40Hz	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz	20kHz
	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Leq,d	20.9	-8.3	-25.3	-19.3	-1.8	1.6	3.6	-0.7	3.2	0.2	5.4	0.4	2.4	6.3	6.2	10.1	10.0	9.8	10.6	9.2	11.8	13.1	9.4	6.6	2.4	-2.2	-6.4	-12.4	-18.4	-25.5	-32.7
Leq,d	20.4	-8.9	-25.8	-19.9	-4.9	-0.2	3.0	-1.3	2.7	-0.4	4.9	-0.1	1.8	5.7	5.7	9.6	9.4	9.3	10.1	8.7	11.4	12.5	9.0	6.2	2.0	-2.6	-6.9	-13.1	-19.2	-26.6	-34.1
Leq,d	25.5	-3.2	-17.9	-9.7	5.3	6.2	8.2	4.1	8.1	5.0	10.3	5.4	7.3	11.1	12.0	15.8	14.5	14.6	15.3	13.3	16.3	16.8	13.1	10.3	6.3	2.0	-1.7	-6.9	-11.6	-17.1	-22.1
Leq,d	27.0	1.2	-13.8	-7.8	7.2	8.1	10.1	6.1	10.0	6.9	12.1	7.1	8.9	13.7	13.6	17.3	16.3	16.0	16.7	14.7	17.5	18.0	14.3	11.5	7.5	3.3	-0.3	-5.3	-9.7	-14.7	-19.1
Leq,d	27.6	2.1	-12.9	-6.9	8.0	9.0	11.0	6.9	10.8	7.7	12.9	7.9	9.7	14.4	14.3	18.0	17.0	16.6	17.3	15.5	18.1	18.5	14.8	12.0	8.1	3.8	0.3	-4.6	-8.9	-13.7	-17.9
Leq,d	26.3	0.2	-16.8	-8.7	6.3	7.2	9.2	5.1	9.0	5.9	11.2	6.3	8.1	12.4	12.8	16.6	15.6	15.3	16.0	14.0	16.9	17.4	13.7	11.0	7.0	2.7	-0.9	-6.0	-10.6	-15.8	-20.5
Leq,d	39.7					9.8			17.5			23.6			29.3			34.1			34.9			33.1			26.5				
Receiver R7 Fl G Lr,lim dB(A) Leq,d 42.4 dB(A) Sigma(Leq,d) 0.0 dB(A)																															
Leq,d	33.5					21.7			28.9			18.3			23.8			26.3			26.7			20.5			4.0			-39.3	
Leq,d	21.2					12.8			18.7			7.7			10.8			9.5			9.9			2.8			-11.9			-44.5	
Leq,d	25.4	-20.6	-14.7	-10.8	2.0	6.7	0.5	8.7	10.3	8.8	9.9	9.4	12.2	12.7	13.2	16.5	17.9	13.2	14.6	15.1	12.3	12.4	8.3	8.0	4.3	2.2	-5.2	-13.1	-18.6	-26.9	-37.8
Leq,d	16.8	-27.9	-22.0	-18.3	-5.6	-0.9	-7.3	0.3	1.8	0.2	1.6	1.0	2.3	3.5	5.1	8.4	9.6	4.7	5.9	6.6	3.5	3.2	-1.4	-2.3	-6.5	-9.4	-18.3	-28.5	-37.3	-50.2	-67.0
Leq,d	20.1	-28.4	-22.6	-18.8	-3.6	1.2	-4.9	3.2	4.9	3.6	5.1	4.8	6.4	7.0	7.5	11.0	12.3	8.4	9.8	10.3	7.4	7.3	2.8	2.0	-2.5	-5.7	-14.9	-25.3	-34.3	-47.1	-63.6
Leq,d	16.6	-33.2	-27.3	-23.4	-10.6	-5.8	-12.0	-2.5	-0.7	-1.9	-0.4	-0.6	1.2	2.0	2.7	6.4	7.9	5.9	7.5	8.3	5.6	5.6	1.0	-0.1	-5.3	-10.1	-22.1	-37.3	-53.4	-76.1	
Leq,d	13.1	-37.6	-31.7	-27.9	-15.0	-10.2	-16.3	-8.4	-4.1	-5.2	-3.4	-3.4	-1.5	-0.6	0.3	4.1	5.8	1.5	3.2	4.0	1.2	1.0	-3.8	-5.5	-11.6	-17.9	-32.2	-50.6	-71.2		
Leq,d	28.5	5.0	-12.0	-6.0	9.0	9.9	11.9	7.8	11.7	8.6	13.8	8.7	10.6	15.2	15.1	18.8	17.9	17.6	18.2	16.2	18.9	19.4	15.7	13.0	9.1	4.9	1.5	-3.3	-7.4	-12.1	-16.1
Leq,d	28.2	4.6	-12.4	-6.4	8.5	9.5	11.5	7.4	11.3	8.2	13.4	8.4	10.2	14.9	14.7	18.5	17.6	17.3	18.0	15.9	18.6	19.1	15.5	12.7	8.8	4.7	1.2	-3.6	-7.8	-12.5	-16.6
Leq,d	27.7	-0.2	-13.1	-7.1	7.9	8.8	10.8	6.7	10.6	7.5	12.8	7.7	9.6	14.3	14.2	18.0	17.0	16.7	17.5	15.5	18.2	18.7	15.1	12.3	8.4	4.2	0.8	-4.1	-8.4	-13.2	-17.6
Leq,d	27.1	-1.1	-13.9	-7.9	7.1	8.0	10.0	5.9	9.8	6.7	12.0	7.0	8.9	13.6	13.5	17.3	16.1	16.1	16.9	14.8	17.7	18.2	14.6	11.9	7.9	3.7	0.2	-4.7	-9.1	-14.2	-18.7
Leq,d	26.3	-2.2	-14.8	-8.8	6.2	7.1	9.1	5.0	8.9	5.8	11.2	6.2	8.1	12.3	12.8	16.6	15.3	15.4	16.2	14.1	17.1	17.6	14.0	11.3	7.4	3.1	-0.5	-5.5	-10.0	-15.3	-20.0
Leq,d	28.6	5.0	-11.9	-6.0	9.0	9.9	11.9	7.9	11.8	8.7	13.8	8.8	10.6	15.3	15.1	18.9	17.9	17.6	18.3	16.2	18.9	19.4	15.7	13.0	9.1	4.9	1.5	-3.3	-7.4	-12.0	-16.1
Leq,d	-16.4	-28.1	-46.2	-41.2	-27.3	-27.3	-26.3	-31.5	-28.6	-32.7	-28.4	-34.3	-33.4	-30.5	-31.5	-28.6	-30.2	-30.5	-29.8	-30.5	-28.3	-28.4	-33.2	-38.0	-45.2	-54.8	-66.6	-83.8			
Leq,d	26.6	-1.8	-14.5	-8.5	6.5	7.4	9.4	5.4	9.3	6.2	11.5	6.5	8.4	12.6	13.1	16.9	15.6	15.7	16.4	14.4	17.3	17.8	14.2	11.5	7.6	3.3	-0.2	-5.2	-9.7	-14.8	-19.5
Leq,d	27.2	-0.9	-13.7	-7.7	7.3	8.2	10.2	6.2	10.1	7.0	12.2	7.2	9.1	13.8	13.7	17.5	16.2	16.3	17.0	15.0	17.8	18.3	14.7	12.0	8.1	3.9	0.4	-4.6	-8.9	-13.9	-18.4
Leq,d	27.9	4.1	-12.9	-6.9	8.1	9.0	11.0	7.0	10.9	7.8	13.0	7.9	9.8	14.5	14.4	18.2	17.2	16.9	17.6	15.5	18.3	18.9	15.2	12.5	8.6	4.4	0.9	-3.9	-8.2	-13.0	-17.3
Leq,d	28.3	4.7	-12.3	-6.3	8.7	9.6	11.6	7.5	11.4	8.3	13.5	8.5	10.3	15.0	14.8	18.6	17.6	17.3	18.0	16.0	18.7	19.2	15.5	12.8	8.9	4.7	1.3	-3.5	-7.7	-12.4	-16.5
Leq,d	25.6	-3.2	-20.2	-9.7	5.3	6.2	8.2	4.1	8.0	4.9	10.2	5.4	7.2	11.1	12.0	15.8	14.6	14.7	15.4	13.5	16.4	17.0	13.4	10.7	6.7	2.5	-1.2	-6.3	-11.0	-16.5	-21.5
Leq,d	16.5	-12.8	-29.8	-23.8	-8.8	-7.8	-5.8	-6.5	-1.3	-4.4	0.9	-4.1	-1.8	2.3	2.3	6.2	4.7	5.1	6.5	5.0	7.7	8.3	5.3	2.6	-1.7	-6.8	-11.8	-19.1	-26.9	-36.5	-46.9
Leq,d	16.7	-12.4	-29.4	-23.4	-8.4	-7.4	-5.4	-4.8	-0.9	-4.0	1.4	-3.6	-1.6	2.4	2.4	6.3	4.8	5.3	6.8	5.3	8.0	8.6	5.7	3.0	-1.3	-6.3	-11.2	-18.3	-25.9	-35.2	-45.3
Leq,d	17.2	-11.9	-28.9	-22.9	-7.9	-6.9	-4.9	-4.3	-0.4	-3.5	1.9	-3.0	-1.1	2.9	2.9	6.8	5.3	5.8	7.3	5.7	8.4	9.1	6.1	3.5	-0.8	-5.7	-10.5	-17.4	-24.7	-33.7	-43.3
Leq,d	17.7	-11.5	-28.5	-22.5	-7.5	-6.5	-2.5	-3.9	0.0	-3.1	2.3	-2.6	-0.7	3.3	3.3	7.2	5.7	6.8	7.7	6.1	8.8	9.5	6.7	3.9	-0.3	-5.2	-9.9	-16.6	-23.7	-32.5	-41.7
Leq,d	14.9	-14.2	-31.2	-25.2	-10.2	-9.3	-7.3	-11.8	-2.8	-5.9	-1.0	-6.0	-4.0	1.3	1.5	5.3	3.7	3.5	4.8	3.3	5.9	6.4	2.7	0.7	-3.8	-9.2	-14.6	-22.5	-31.2	-42.1	-54.1
Leq,d	15.2	-13.9	-30.9	-24.9	-9.9	-8.9	-6.9	-11.4	-2.5	-5.5	-0.6	-5.5	-3.6	1.9	1.8	5.6	4.1	3.9	5.2	3.6	6.2	6.8	3.0	1.1	-3.4	-8.7	-14.0	-21.8	-30.2	-40.8	-52.4
Leq,d	15.4	-13.5	-30.5	-24.5	-9.5	-8.6	-6.6	-11.1	-2.1	-5.2	-0.1	-5.1	-3.1	2.0	1.9	5.7	4.2	4.0	5.4	3.8	6.5	7.0	3.8	1.4	-3.0	-8.2	-13.4	-21.0	-29.3	-39.5	-50.7
Leq,d	16.2	-13.2	-30.1	-24.2	-9.2	-8.2	-6.2	-6.9	-1.7	-4.8	0.4	-4.6	-2.6	2.3	2.2	6.1	4.5	4.4	6.3	4.8	7.4	8.0	5.0	2.3	-2.1	-7.3	-12.4	-19.8	-27.8	-37.8	-48.6
Leq,d	20.7	-8.7	-25.7	-19.7	-4.7	-0.1	3.1	-1.1	2.8	-0.3	5.0	0.0	2.0	5.9	5.9	9.8	9.7	9.5	10.4	9.1	11.8	12.9	9.5	6.7	2.6	-1.9	-6.1	-12.1	-18.1	-25.3	-32.7

Cathedral City Storage Noise
Contribution spectra - 001 - Cathedral City Storage: Outdoor SP

Time slice	Sum dB(A)	25Hz dB(A)	31.5Hz dB(A)	40Hz dB(A)	50Hz dB(A)	63Hz dB(A)	80Hz dB(A)	100Hz dB(A)	125Hz dB(A)	160Hz dB(A)	200Hz dB(A)	250Hz dB(A)	315Hz dB(A)	400Hz dB(A)	500Hz dB(A)	630Hz dB(A)	800Hz dB(A)	1kHz dB(A)	1.25kHz dB(A)	1.6kHz dB(A)	2kHz dB(A)	2.5kHz dB(A)	3.15kHz dB(A)	4kHz dB(A)	5kHz dB(A)	6.3kHz dB(A)	8kHz dB(A)	10kHz dB(A)	12.5kHz dB(A)	16kHz dB(A)	20kHz dB(A)
Leq,d	23.4	-5.9	-22.8	-16.9	2.8	3.8	5.8	1.6	5.5	2.5	7.9	3.0	4.9	8.8	8.7	13.6	12.3	12.1	13.3	11.4	14.4	15.2	11.5	8.8	4.8	0.4	-3.4	-9.0	-14.2	-20.4	-26.3
Leq,d	24.2	-5.0	-22.0	-14.2	3.6	4.6	6.6	2.4	6.4	3.3	8.6	3.9	5.8	9.7	10.0	14.4	13.2	12.9	14.1	12.2	15.1	15.8	12.2	9.5	5.5	1.1	-2.6	-8.0	-13.1	-19.0	-24.6
Leq,d	24.9	-4.2	-21.1	-10.6	4.4	5.4	7.4	3.2	7.2	4.1	9.4	4.6	6.5	10.4	11.3	15.1	13.8	14.0	14.7	12.8	15.7	16.4	12.8	10.1	6.1	1.8	-1.9	-7.2	-12.0	-17.7	-23.1
Leq,d	20.2	-9.4	-26.4	-20.4	-5.4	-2.4	2.5	-1.8	2.1	-0.9	4.4	-0.6	1.3	5.3	5.3	9.2	9.1	8.9	9.8	8.5	11.2	12.4	9.0	6.2	2.1	-2.5	-6.7	-12.9	-19.1	-26.6	-34.4
Leq,d	19.0	-10.5	-27.5	-21.5	-6.5	-5.5	1.4	-2.9	1.0	-2.1	3.3	-1.7	0.3	4.2	4.2	8.1	7.3	7.8	8.7	7.1	10.2	11.4	8.0	5.2	1.0	-3.7	-8.2	-14.6	-21.3	-29.4	-37.9
Leq,d	18.2	-11.0	-28.0	-22.0	-7.0	-6.0	-0.3	-3.4	0.5	-2.5	2.8	-2.1	-0.2	3.8	3.7	7.7	6.2	7.3	8.2	6.6	9.3	10.0	7.2	4.4	0.2	-4.6	-9.2	-15.8	-22.6	-31.0	-39.9
Leq,d	19.5	-10.0	-26.9	-21.0	-6.0	-5.0	1.9	-2.4	1.5	-1.5	3.8	-1.2	0.8	4.7	4.7	8.6	7.8	8.4	9.2	7.5	10.7	11.9	8.5	5.7	1.6	-3.1	-7.5	-13.8	-20.3	-28.1	-36.2
Leq,d	38.3					8.0			15.7			21.9			27.7			32.3			33.4			32.2			25.6				

Cathedral City Storage Noise
Contribution level - 001 - Cathedral City Storage: Outdoor SP

Source group	Source type	Tr. lane	Leq,d dB(A)	A dB
Receiver R1 Fl G Lr,lim dB(A) Leq,d 45.9 dB(A) Sigma(Leq,d) 0.0 dB(A)				
Default industrial noise	Point		-1.8	0.0
Default industrial noise	Point		-1.6	0.0
Default industrial noise	Point		-1.2	0.0
Default industrial noise	Point		-3.0	0.0
Default industrial noise	Point		-3.3	0.0
Default industrial noise	Point		-3.1	0.0
Default industrial noise	Point		-6.5	0.0
Default industrial noise	Point		-7.0	0.0
Default industrial noise	Point		-7.3	0.0
Default industrial noise	Point		-8.6	0.0
Default industrial noise	Point		-8.7	0.0
Default industrial noise	Point		-8.8	0.0
Default industrial noise	Point		-9.0	0.0
Default industrial noise	Point		-9.6	0.0
Default industrial noise	Point		-9.7	0.0
Default industrial noise	Point		-9.6	0.0
Default industrial noise	Point		-9.7	0.0
Default industrial noise	Point		-9.9	0.0
Default industrial noise	Point		-10.1	0.0
Default industrial noise	Point		-10.1	0.0
Default industrial noise	Point		-10.2	0.0
Default industrial noise	Point		-10.4	0.0
Default industrial noise	Point		-10.6	0.0
Default industrial noise	Point		-10.7	0.0
Default industrial noise	Point		-11.0	0.0
Default industrial noise	Point		-11.1	0.0
Default industrial noise	Point		-11.2	0.0
Default industrial noise	Point		4.6	0.0
Default industrial noise	Point		10.4	0.0
Default industrial noise	Point		12.1	0.0
Default industrial noise	Point		0.2	0.0
Default parking lot noise	PLot		18.4	0.0
Default industrial noise	Point		18.6	0.0
Default industrial noise	Point		24.0	0.0
Default industrial noise	Point		20.7	0.0
Default parking lot noise	PLot		45.8	0.0
Receiver R2 Fl G Lr,lim dB(A) Leq,d 46.2 dB(A) Sigma(Leq,d) 0.0 dB(A)				
Default industrial noise	Point		6.8	0.0
Default industrial noise	Point		6.6	0.0
Default industrial noise	Point		6.9	0.0
Default industrial noise	Point		6.8	0.0
Default industrial noise	Point		6.7	0.0
Default industrial noise	Point		7.0	0.0

Source group	Source type	Tr. lane	Leq,d dB(A)	A dB	
Default industrial noise	Point		6.9	0.0	
Default industrial noise	Point		6.4	0.0	
Default industrial noise	Point		6.2	0.0	
Default industrial noise	Point		6.0	0.0	
Default industrial noise	Point		5.9	0.0	
Default industrial noise	Point		5.5	0.0	
Default industrial noise	Point		5.3	0.0	
Default industrial noise	Point		4.8	0.0	
Default industrial noise	Point		4.6	0.0	
Default industrial noise	Point		4.8	0.0	
Default industrial noise	Point		4.6	0.0	
Default industrial noise	Point		4.4	0.0	
Default industrial noise	Point		4.3	0.0	
Default industrial noise	Point		4.0	0.0	
Default industrial noise	Point		3.7	0.0	
Default industrial noise	Point		3.6	0.0	
Default industrial noise	Point		3.5	0.0	
Default industrial noise	Point		3.3	0.0	
Default industrial noise	Point		3.2	0.0	
Default industrial noise	Point		3.1	0.0	
Default industrial noise	Point		3.0	0.0	
Default industrial noise	Point		21.5	0.0	
Default industrial noise	Point		20.2	0.0	
Default industrial noise	Point		13.2	0.0	
Default industrial noise	Point		12.6	0.0	
Default parking lot noise	PLot		19.4	0.0	
Default industrial noise	Point		11.7	0.0	
Default industrial noise	Point		25.4	0.0	
Default industrial noise	Point		21.9	0.0	
Default parking lot noise	PLot		46.1	0.0	
Receiver R3 Fl G Lr,lim dB(A) Leq,d 46.5 dB(A) Sigma(Leq,d) 0.0 dB(A)					
Default industrial noise	Point		6.9	0.0	
Default industrial noise	Point		6.9	0.0	
Default industrial noise	Point		5.6	0.0	
Default industrial noise	Point		5.6	0.0	
Default industrial noise	Point		7.0	0.0	
Default industrial noise	Point		6.3	0.0	
Default industrial noise	Point		6.1	0.0	
Default industrial noise	Point		6.0	0.0	
Default industrial noise	Point		5.8	0.0	
Default industrial noise	Point		5.7	0.0	
Default industrial noise	Point		5.4	0.0	
Default industrial noise	Point		4.8	0.0	
Default industrial noise	Point		4.6	0.0	
Default industrial noise	Point		3.9	0.0	

Source group	Source type	Tr. lane	Leq,d dB(A)	A dB
Default industrial noise	Point		3.8	0.0
Default industrial noise	Point		3.6	0.0
Default industrial noise	Point		3.5	0.0
Default industrial noise	Point		3.3	0.0
Default industrial noise	Point		3.2	0.0
Default industrial noise	Point		3.0	0.0
Default industrial noise	Point		2.9	0.0
Default industrial noise	Point		2.7	0.0
Default industrial noise	Point		2.7	0.0
Default industrial noise	Point		2.5	0.0
Default industrial noise	Point		2.4	0.0
Default industrial noise	Point		2.3	0.0
Default industrial noise	Point		2.1	0.0
Default industrial noise	Point		20.5	0.0
Default industrial noise	Point		20.9	0.0
Default industrial noise	Point		14.1	0.0
Default industrial noise	Point		14.1	0.0
Default parking lot noise	PLot		21.1	0.0
Default industrial noise	Point		-0.9	0.0
Default industrial noise	Point		23.6	0.0
Default industrial noise	Point		24.1	0.0
Default parking lot noise	PLot		46.4	0.0
Receiver R4 Fl G Lr,lim dB(A) Leq,d 47.8 dB(A) Sigma(Leq,d) 0.0 dB(A)				
Default industrial noise	Point		6.7	0.0
Default industrial noise	Point		6.5	0.0
Default industrial noise	Point		6.2	0.0
Default industrial noise	Point		9.4	0.0
Default industrial noise	Point		9.1	0.0
Default industrial noise	Point		7.8	0.0
Default industrial noise	Point		8.8	0.0
Default industrial noise	Point		8.7	0.0
Default industrial noise	Point		8.7	0.0
Default industrial noise	Point		8.6	0.0
Default industrial noise	Point		8.4	0.0
Default industrial noise	Point		6.5	0.0
Default industrial noise	Point		6.2	0.0
Default industrial noise	Point		5.5	0.0
Default industrial noise	Point		5.3	0.0
Default industrial noise	Point		5.1	0.0
Default industrial noise	Point		4.9	0.0
Default industrial noise	Point		4.8	0.0
Default industrial noise	Point		4.6	0.0
Default industrial noise	Point		4.4	0.0
Default industrial noise	Point		4.3	0.0
Default industrial noise	Point		4.1	0.0

Cathedral City Storage Noise
Contribution level - 001 - Cathedral City Storage: Outdoor SP

Source group	Source type	Tr. lane	Leq,d dB(A)	A dB
Default industrial noise	Point		4.0	0.0
Default industrial noise	Point		3.8	0.0
Default industrial noise	Point		3.7	0.0
Default industrial noise	Point		3.5	0.0
Default industrial noise	Point		3.4	0.0
Default industrial noise	Point		22.2	0.0
Default industrial noise	Point		22.0	0.0
Default industrial noise	Point		15.6	0.0
Default industrial noise	Point		15.4	0.0
Default parking lot noise	PLot		24.3	0.0
Default industrial noise	Point		-3.3	0.0
Default industrial noise	Point		24.3	0.0
Default industrial noise	Point		24.3	0.0
Default parking lot noise	PLot		47.7	0.0
Receiver R5 Fl G Lr,lim dB(A) Leq,d 49.6 dB(A) Sigma(Leq,d) 0.0 dB(A)				
Default industrial noise	Point		18.0	0.0
Default industrial noise	Point		18.6	0.0
Default industrial noise	Point		18.9	0.0
Default industrial noise	Point		18.4	0.0
Default industrial noise	Point		18.0	0.0
Default industrial noise	Point		17.9	0.0
Default industrial noise	Point		17.0	0.0
Default industrial noise	Point		16.8	0.0
Default industrial noise	Point		16.5	0.0
Default industrial noise	Point		16.2	0.0
Default industrial noise	Point		15.5	0.0
Default industrial noise	Point		15.2	0.0
Default industrial noise	Point		14.9	0.0
Default industrial noise	Point		13.8	0.0
Default industrial noise	Point		13.5	0.0
Default industrial noise	Point		13.3	0.0
Default industrial noise	Point		13.1	0.0
Default industrial noise	Point		12.8	0.0
Default industrial noise	Point		13.2	0.0
Default industrial noise	Point		12.9	0.0
Default industrial noise	Point		12.7	0.0
Default industrial noise	Point		12.5	0.0
Default industrial noise	Point		12.2	0.0
Default industrial noise	Point		12.0	0.0
Default industrial noise	Point		11.8	0.0
Default industrial noise	Point		10.4	0.0
Default industrial noise	Point		10.2	0.0
Default industrial noise	Point		31.1	0.0
Default industrial noise	Point		26.7	0.0
Default industrial noise	Point		17.0	0.0

Source group	Source type	Tr. lane	Leq,d dB(A)	A dB
Default industrial noise	Point		17.6	0.0
Default parking lot noise	PLot		27.2	0.0
Default industrial noise	Point		-10.4	0.0
Default industrial noise	Point		17.7	0.0
Default industrial noise	Point		26.0	0.0
Default parking lot noise	PLot		49.5	0.0
Receiver R5 Fl G Lr,lim dB(A) Leq,d 48.4 dB(A) Sigma(Leq,d) 0.0 dB(A)				
Default industrial noise	Point		11.6	0.0
Default industrial noise	Point		11.3	0.0
Default industrial noise	Point		12.1	0.0
Default industrial noise	Point		13.0	0.0
Default industrial noise	Point		12.6	0.0
Default industrial noise	Point		12.3	0.0
Default industrial noise	Point		12.0	0.0
Default industrial noise	Point		10.8	0.0
Default industrial noise	Point		10.5	0.0
Default industrial noise	Point		10.2	0.0
Default industrial noise	Point		9.9	0.0
Default industrial noise	Point		9.7	0.0
Default industrial noise	Point		9.4	0.0
Default industrial noise	Point		7.4	0.0
Default industrial noise	Point		7.2	0.0
Default industrial noise	Point		7.0	0.0
Default industrial noise	Point		6.8	0.0
Default industrial noise	Point		6.6	0.0
Default industrial noise	Point		6.4	0.0
Default industrial noise	Point		6.2	0.0
Default industrial noise	Point		6.0	0.0
Default industrial noise	Point		5.8	0.0
Default industrial noise	Point		5.6	0.0
Default industrial noise	Point		5.4	0.0
Default industrial noise	Point		5.3	0.0
Default industrial noise	Point		5.1	0.0
Default industrial noise	Point		5.0	0.0
Default industrial noise	Point		24.3	0.0
Default industrial noise	Point		22.7	0.0
Default industrial noise	Point		16.3	0.0
Default industrial noise	Point		16.8	0.0
Default parking lot noise	PLot		26.8	0.0
Default industrial noise	Point		-6.0	0.0
Default industrial noise	Point		22.3	0.0
Default industrial noise	Point		26.0	0.0
Default parking lot noise	PLot		48.3	0.0
Receiver R6 Fl G Lr,lim dB(A) Leq,d 45.0 dB(A) Sigma(Leq,d) 0.0 dB(A)				

Source group	Source type	Tr. lane	Leq,d dB(A)	A dB
Default industrial noise	Point		25.8	0.0
Default industrial noise	Point		26.6	0.0
Default industrial noise	Point		27.3	0.0
Default industrial noise	Point		28.0	0.0
Default industrial noise	Point		28.4	0.0
Default industrial noise	Point		28.7	0.0
Default industrial noise	Point		28.6	0.0
Default industrial noise	Point		28.3	0.0
Default industrial noise	Point		27.6	0.0
Default industrial noise	Point		27.0	0.0
Default industrial noise	Point		26.3	0.0
Default industrial noise	Point		25.5	0.0
Default industrial noise	Point		24.6	0.0
Default industrial noise	Point		21.6	0.0
Default industrial noise	Point		20.9	0.0
Default industrial noise	Point		20.4	0.0
Default industrial noise	Point		19.9	0.0
Default industrial noise	Point		19.4	0.0
Default industrial noise	Point		18.6	0.0
Default industrial noise	Point		18.1	0.0
Default industrial noise	Point		17.6	0.0
Default industrial noise	Point		17.2	0.0
Default industrial noise	Point		17.0	0.0
Default industrial noise	Point		16.5	0.0
Default industrial noise	Point		16.3	0.0
Default industrial noise	Point		15.9	0.0
Default industrial noise	Point		15.4	0.0
Default industrial noise	Point		39.7	0.0
Default industrial noise	Point		26.0	0.0
Default industrial noise	Point		15.4	0.0
Default industrial noise	Point		20.6	0.0
Default parking lot noise	PLot		24.0	0.0
Default industrial noise	Point		-13.2	0.0
Default industrial noise	Point		16.0	0.0
Default industrial noise	Point		21.8	0.0
Default parking lot noise	PLot		41.4	0.0
Receiver R7 Fl G Lr,lim dB(A) Leq,d 42.4 dB(A) Sigma(Leq,d) 0.0 dB(A)				
Default industrial noise	Point		14.9	0.0
Default industrial noise	Point		15.2	0.0
Default industrial noise	Point		15.4	0.0
Default industrial noise	Point		16.2	0.0
Default industrial noise	Point		16.5	0.0
Default industrial noise	Point		16.7	0.0
Default industrial noise	Point		17.2	0.0
Default industrial noise	Point		17.7	0.0

Cathedral City Storage Noise
Contribution level - 001 - Cathedral City Storage: Outdoor SP

Source group	Source type	Tr. lane	Leq,d dB(A)	A dB
Default industrial noise	Point		18.2	0.0
Default industrial noise	Point		19.0	0.0
Default industrial noise	Point		19.5	0.0
Default industrial noise	Point		20.2	0.0
Default industrial noise	Point		20.7	0.0
Default industrial noise	Point		23.4	0.0
Default industrial noise	Point		24.2	0.0
Default industrial noise	Point		24.9	0.0
Default industrial noise	Point		25.6	0.0
Default industrial noise	Point		26.3	0.0
Default industrial noise	Point		27.1	0.0
Default industrial noise	Point		27.7	0.0
Default industrial noise	Point		28.2	0.0
Default industrial noise	Point		28.5	0.0
Default industrial noise	Point		28.6	0.0
Default industrial noise	Point		28.3	0.0
Default industrial noise	Point		27.9	0.0
Default industrial noise	Point		27.2	0.0
Default industrial noise	Point		26.6	0.0
Default industrial noise	Point		38.3	0.0
Default industrial noise	Point		20.1	0.0
Default industrial noise	Point		16.8	0.0
Default industrial noise	Point		25.4	0.0
Default parking lot noise	PLot		21.2	0.0
Default industrial noise	Point		-16.4	0.0
Default industrial noise	Point		13.1	0.0
Default industrial noise	Point		16.6	0.0
Default parking lot noise	PLot		33.5	0.0

Cathedral City Storage Noise
Octave spectra of the sources in dB(A) - 001 - Cathedral City Storage: Outdoor SP

Name	Source type	I or A	Li	R'w	L'w	Lw	KI	KT	LwMax	DO-Wall	Time histogram	Emission spectrum	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	16kHz
		m,m²	dB(A)	dB	dB(A)	dB(A)	dB	dB	dB(A)	dB			dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
	PLot	7524.30			55.5	94.3	0.0	0.0		0	100%/24h	Typical spectrum	77.6	89.2	81.7	86.2	86.3	86.7	84.0	77.8	65.0
Auto Parking	PLot	1682.55			51.7	84.0	0.0	0.0		0	100%/24h	Typical spectrum	67.3	78.9	71.4	75.9	76.0	76.4	73.7	67.5	54.7
HVAC	Point				74.9	74.9	0.0	0.0		0	100%/24h	HVAC: 67.7dB @ 3ft - Carrier 50TFQ0006 -	52.0	60.5	62.9	67.2	69.5	69.1	66.1	61.2	48.9
HVAC	Point				74.9	74.9	0.0	0.0		0	100%/24h	HVAC: 67.7dB @ 3ft - Carrier 50TFQ0006 -	52.0	60.5	62.9	67.2	69.5	69.1	66.1	61.2	48.9
HVAC	Point				74.9	74.9	0.0	0.0		0	100%/24h	HVAC: 67.7dB @ 3ft - Carrier 50TFQ0006 -	52.0	60.5	62.9	67.2	69.5	69.1	66.1	61.2	48.9
HVAC	Point				74.9	74.9	0.0	0.0		0	100%/24h	HVAC: 67.7dB @ 3ft - Carrier 50TFQ0006 -	52.0	60.5	62.9	67.2	69.5	69.1	66.1	61.2	48.9
HVAC	Point				74.9	74.9	0.0	0.0		0	100%/24h	HVAC: 67.7dB @ 3ft - Carrier 50TFQ0006 -	52.0	60.5	62.9	67.2	69.5	69.1	66.1	61.2	48.9
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5

Cathedral City Storage Noise
Octave spectra of the sources in dB(A) - 001 - Cathedral City Storage: Outdoor SP

Name	Source type	I or A	Li	R'w	L'w	Lw	KI	KT	LwMax	DO-Wall	Time histogram	Emission spectrum	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	16kHz
		m,m²	dB(A)	dB	dB(A)	dB(A)	dB	dB	dB(A)	dB			dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5

Cathedral City Storage Noise
Octave spectra of the sources in dB(A) - 001 - Cathedral City Storage: Outdoor SP

Name	Source type	I or A	Li	R'w	L'w	Lw	KI	KT	LwMax	DO-Wall	Time histogram	Emission spectrum	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	16kHz
		m,m²	dB(A)	dB	dB(A)	dB(A)	dB	dB	dB(A)	dB			dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Truck: loading general cargo	Point				80.0	80.0	0.0	0.0		0	100%/24h	Truck: loading general cargo	47.0	57.0	64.1	70.1	73.0	74.0	74.1	72.0	

Cathedral City Storage Noise
Contribution spectra - 002 - Cathedral City Storage: Outdoor SP

Time slice	Sum	25Hz	31.5Hz	40Hz	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz	20kHz
	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Receiver R1 Fl G Lr,lim dB(A) Leq,d 46.7 dB(A) Sigma(Leq,d) 0.0 dB(A)																															
Leq,d	46.7					33.0			42.1			33.6			38.1			38.7			39.4			34.9			23.8			1.8	
Leq,d	21.9					9.9			16.5			7.5			14.0			15.1			15.1			8.0			-16.8			-81.3	
Leq,d	14.2	-34.1	-28.4	-24.7	-12.0	-7.4	-13.7	-6.2	-4.7	-6.3	-6.4	-7.0	-5.7	-4.5	-4.2	-1.0	7.2	2.8	6.0	6.9	4.1	4.1	-0.6	-2.0	-4.5	-10.0	-23.1	-39.9	-58.1	-83.6	
Leq,d	11.8	-37.5	-31.4	-27.4	-14.5	-9.5	-15.5	-7.6	-5.7	-6.8	-4.8	-4.9	-2.9	-2.0	-1.1	2.8	4.5	0.3	2.0	2.9	0.0	-0.2	-5.1	-7.1	-13.8	-19.8	-35.6	-56.4	-80.4		
Leq,d	0.3	-41.5	-36.0	-32.5	-17.6	-13.3	-19.9	-12.6	-11.4	-13.3	-12.2	-13.1	-12.0	-12.0	-12.0	-9.0	-8.3	-13.4	-12.7	-11.9	-14.6	-14.8	-19.7	-21.5	-28.0	-34.8	-50.1	-70.0	-92.8		
Leq,d	-10.2	-23.4	-40.9	-35.5	-21.1	-20.8	-19.6	-26.9	-23.8	-27.7	-23.6	-29.5	-24.9	-22.0	-23.2	-19.5	-21.5	-23.2	-23.9	-27.0	-25.4	-25.5	-30.4	-35.1	-42.4	-51.9	-63.7	-80.8			
Leq,d	-10.3	-23.5	-41.0	-35.6	-21.2	-20.9	-19.7	-27.0	-23.9	-27.9	-23.7	-29.6	-26.3	-22.1	-23.3	-19.6	-21.6	-23.3	-24.0	-27.1	-25.5	-25.7	-30.5	-35.3	-42.6	-52.3	-64.1	-81.4			
Leq,d	-10.4	-23.6	-41.1	-35.7	-21.3	-21.0	-19.7	-27.1	-24.0	-28.0	-23.8	-29.7	-26.4	-22.2	-23.4	-19.7	-21.7	-23.4	-24.1	-27.3	-25.6	-25.8	-30.7	-35.5	-42.9	-52.6	-64.6	-82.1			
Leq,d	-9.6	-23.1	-40.6	-35.2	-20.8	-20.6	-19.3	-26.6	-23.4	-27.4	-23.3	-29.2	-24.6	-21.7	-21.7	-19.1	-21.2	-22.9	-22.8	-25.6	-23.8	-23.9	-28.7	-33.4	-40.6	-50.0	-61.5	-78.3	-99.5		
Leq,d	-9.7	-23.2	-40.7	-35.3	-20.9	-20.7	-19.4	-26.7	-23.6	-27.5	-23.4	-29.3	-24.7	-21.8	-21.8	-19.2	-21.3	-23.0	-22.9	-25.7	-23.9	-24.1	-28.9	-33.6	-40.9	-50.3	-62.0	-79.0			
Leq,d	-10.0	-23.3	-40.8	-35.4	-21.0	-20.7	-19.5	-26.8	-23.7	-27.6	-23.5	-29.4	-24.8	-21.9	-21.9	-19.3	-21.4	-23.1	-23.8	-26.9	-25.2	-25.4	-30.2	-34.9	-42.1	-51.6	-63.2	-80.1			
Leq,d	-11.0	-23.9	-41.4	-36.0	-21.6	-21.4	-20.1	-27.6	-24.5	-28.4	-24.2	-30.1	-26.8	-23.8	-23.8	-21.2	-22.1	-23.8	-24.5	-27.7	-26.1	-26.4	-31.4	-36.3	-43.9	-53.9	-66.4	-84.6			
Leq,d	-10.6	-24.0	-41.5	-36.1	-21.7	-21.4	-20.2	-27.7	-24.6	-28.5	-24.3	-30.2	-26.9	-23.9	-23.9	-21.3	-22.2	-23.9	-24.6	-23.8	-22.5	-23.3	-28.9	-34.4	-42.6	-53.1	-66.1	-84.8			
Leq,d	-10.7	-24.1	-41.6	-36.2	-21.8	-21.5	-20.2	-27.8	-24.7	-28.6	-24.4	-30.3	-27.0	-24.0	-24.0	-21.4	-22.3	-24.0	-24.7	-23.8	-22.5	-23.4	-29.0	-34.5	-42.8	-53.4	-66.5	-85.4			
Leq,d	-10.5	-23.7	-41.2	-35.7	-21.4	-21.1	-19.8	-27.3	-24.1	-28.1	-23.9	-29.8	-26.5	-22.3	-23.5	-19.8	-21.8	-23.5	-24.2	-27.4	-25.8	-26.0	-30.9	-35.8	-43.2	-52.9	-65.0	-82.7			
Leq,d	-10.6	-23.7	-41.2	-35.8	-21.5	-21.2	-19.9	-27.4	-24.3	-28.2	-24.0	-29.9	-26.6	-22.4	-23.6	-19.9	-21.9	-23.6	-24.3	-27.5	-25.9	-26.1	-31.0	-35.9	-43.4	-53.2	-65.5	-83.3			
Leq,d	-10.7	-23.8	-41.3	-35.9	-21.6	-21.3	-20.0	-27.5	-24.4	-28.3	-24.1	-30.0	-26.7	-22.5	-23.7	-20.0	-22.0	-23.7	-24.4	-27.6	-26.0	-26.3	-31.2	-36.2	-43.7	-53.6	-65.9	-84.0			
Leq,d	-8.6	-21.6	-39.1	-33.7	-19.4	-19.1	-17.8	-24.7	-21.6	-25.5	-21.6	-25.1	-24.2	-21.3	-22.5	-19.9	-21.9	-23.4	-24.1	-27.0	-25.1	-24.5	-29.0	-18.7	-25.7	-34.8	-45.9	-62.2	-82.4		
Leq,d	-8.0	-21.7	-39.2	-33.8	-19.5	-19.2	-18.0	-24.8	-21.7	-25.7	-21.8	-24.0	-21.9	-18.9	-20.2	-17.6	-19.7	-21.4	-22.0	-25.0	-23.0	-22.6	-27.1	-31.3	-29.1	-38.2	-49.3	-65.3	-85.0		
Leq,d	-4.9	-21.8	-39.4	-34.0	-19.6	-19.3	-18.1	-25.0	-21.9	-25.8	-21.9	-24.1	-22.0	-19.1	-20.3	-17.7	-19.9	-21.5	-12.7	-14.9	-13.1	-13.7	-19.0	-24.1	-27.7	-37.2	-48.7	-65.2	-85.5		
Leq,d	-9.0	-21.5	-39.0	-33.6	-19.3	-19.0	-17.7	-24.6	-21.4	-25.4	-21.5	-25.0	-24.1	-21.1	-22.3	-19.7	-21.7	-23.3	-23.9	-26.9	-24.9	-24.9	-29.4	-33.6	-39.9	-48.0	-57.5	-71.4	-88.7		
Leq,d	-8.4	-21.1	-38.6	-33.2	-18.9	-18.6	-17.4	-24.1	-21.0	-24.9	-18.7	-24.6	-23.7	-20.7	-21.9	-19.3	-21.3	-22.9	-23.5	-26.4	-24.4	-24.3	-28.8	-32.9	-39.0	-46.9	-56.0	-69.5	-86.0		
Leq,d	-8.7	-21.2	-38.7	-33.3	-19.0	-18.7	-17.5	-24.2	-21.1	-25.1	-21.2	-24.7	-23.8	-20.9	-22.1	-19.4	-21.4	-23.0	-23.6	-26.6	-24.5	-24.5	-29.0	-33.1	-39.3	-47.2	-56.5	-70.1	-86.9		
Leq,d	-8.8	-21.4	-38.9	-33.5	-19.2	-18.9	-17.6	-24.4	-21.3	-25.2	-21.4	-24.9	-23.9	-21.0	-22.2	-19.6	-21.6	-23.2	-23.8	-26.8	-24.7	-24.7	-29.2	-33.3	-39.6	-47.6	-57.0	-70.8	-87.8		
Leq,d	-8.3	-21.9	-39.5	-34.1	-19.7	-19.4	-18.2	-25.1	-22.0	-25.9	-22.0	-24.2	-22.1	-19.2	-20.4	-17.8	-20.0	-21.6	-22.3	-25.3	-23.3	-22.9	-27.5	-31.8	-38.3	-46.8	-56.8	-71.5	-89.8		
Leq,d	-8.8	-22.5	-40.0	-34.6	-20.2	-20.0	-18.7	-25.8	-22.7	-26.6	-22.6	-24.9	-23.9	-19.8	-21.1	-18.5	-20.6	-22.2	-22.1	-24.9	-23.0	-23.0	-27.7	-32.2	-39.1	-48.0	-58.8	-74.6	-94.3		
Leq,d	-9.4	-22.9	-40.4	-35.0	-20.7	-20.4	-19.1	-26.3	-23.2	-27.1	-23.1	-29.0	-24.4	-21.5	-21.5	-18.9	-21.0	-22.6	-22.6	-25.4	-23.5	-23.6	-28.4	-33.0	-40.1	-49.4	-60.6	-77.1	-97.8		
Leq,d	-9.5	-23.0	-40.5	-35.1	-20.8	-20.5	-19.2	-26.4	-23.3	-27.3	-23.2	-29.1	-24.5	-21.6	-21.6	-19.0	-21.1	-22.8	-22.7	-25.5	-23.6	-23.8	-28.6	-33.2	-40.4	-49.7	-61.1	-77.7	-98.7		
Leq,d	-8.7	-22.4	-39.9	-34.5	-20.1	-19.9	-18.6	-25.7	-22.5	-26.5	-22.5	-24.7	-23.8	-19.7	-20.9	-18.3	-20.5	-22.1	-22.0	-24.8	-22.8	-22.8	-27.5	-32.0	-38.8	-47.6	-58.3	-73.8	-93.3		
Leq,d	-6.3	-22.1	-39.6	-34.2	-19.8	-19.6	-18.3	-25.3	-22.1	-26.1	-22.1	-24.4	-22.2	-19.3	-20.6	-18.0	-20.1	-21.7	-15.6	-17.4	-15.5	-16.0	-21.2	-26.3	-33.8	-43.4	-54.8	-70.9	-90.2		
Leq,d	-8.6	-22.2	-39.7	-34.3	-19.9	-19.7	-18.4	-25.4	-22.3	-26.2	-22.3	-24.5	-22.4	-19.5	-20.7	-18.1	-20.2	-21.9	-22.5	-25.6	-23.6	-23.6	-28.2	-32.6	-39.2	-47.7	-58.0	-73.0	-91.7		
Leq,d	-8.6	-22.3	-39.8	-34.4	-20.0	-19.8	-18.5	-25.5	-22.4	-26.3	-22.4	-24.6	-23.7	-19.6	-20.8	-18.2	-20.3	-22.0	-21.9	-24.6	-22.6	-22.7	-27.3	-31.8	-38.5	-47.3	-57.8	-73.2	-92.3		
Leq,d	4.9					-14.3			-11.0			-4.2			-0.4			-0.5			-2.3			-7.7			-28.7				
Leq,d																															
Leq,d																															

Cathedral City Storage Noise
Contribution spectra - 002 - Cathedral City Storage: Outdoor SP

Time slice	Sum	25Hz	31.5Hz	40Hz	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz	20kHz
	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
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Receiver R2 Fl G Lr,lim dB(A) Leq,d 47.7 dB(A) Sigma(Leq,d) 0.0 dB(A)																															
Leq,d	47.6					33.6			42.8			34.4			39.2			40.0			40.4			36.2			25.4			3.0	
Leq,d	23.4					10.2			17.2			9.0			16.1			16.9			16.9			9.4			-14.1			-73.8	
Leq,d	20.2	-36.2	-30.2	-26.2	-13.2	-8.2	-14.2	-6.1	-4.1	-5.2	-3.1	-1.0	1.0	2.1	3.2	9.1	11.2	7.4	10.6	12.6	11.3	11.7	7.4	6.4	1.3	-3.5	-15.7	-31.0	-47.3	-70.2	-99.6
Leq,d	14.5	-36.5	-30.5	-26.5	-13.6	-8.6	-14.6	-7.0	-5.1	-6.2	-5.2	-3.3	-1.4	0.7	1.6	5.4	7.4	3.2	4.8	5.7	2.9	2.8	-2.0	-3.7	-9.7	-16.7	-32.1	-52.1	-74.9		

Cathedral City Storage Noise
Contribution spectra - 002 - Cathedral City Storage: Outdoor SP

Time slice	Sum	25Hz	31.5Hz	40Hz	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz	20kHz
	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Leq,d	13.9	-39.0	-32.9	-29.0	-16.0	-11.0	-17.0	-9.0	-7.1	-8.2	-6.2	-4.1	-2.1	-1.2	-0.3	3.6	5.3	3.5	5.2	6.1	3.4	3.3	-1.5	-3.3	-9.5	-16.2	-31.0	-50.3	-72.2		
Leq,d	4.1	-21.7	-38.7	-32.7	-17.7	-16.8	-14.8	-21.2	-17.2	-20.3	-16.3	-16.6	-14.7	-9.2	-9.2	-5.4	-6.3	-6.5	-5.8	-7.4	-4.2	-4.2	-9.0	-13.6	-20.7	-30.0	-41.3	-57.7	-78.2		
Leq,d	3.8	-21.8	-38.8	-32.8	-17.8	-16.9	-14.9	-21.3	-17.4	-20.4	-16.4	-17.6	-14.8	-9.3	-9.4	-5.5	-6.4	-6.6	-5.9	-7.6	-4.7	-4.8	-9.5	-14.2	-21.3	-30.6	-41.9	-58.4	-79.1		
Leq,d	3.7	-21.9	-38.9	-32.9	-17.9	-17.0	-15.0	-21.4	-17.5	-20.6	-16.6	-17.7	-15.0	-9.4	-9.5	-5.6	-6.5	-6.7	-6.0	-7.7	-4.8	-4.9	-9.7	-14.4	-21.5	-30.9	-42.4	-59.1	-80.0		
Leq,d	4.5	-21.4	-38.4	-32.4	-17.4	-16.4	-14.4	-20.7	-16.8	-19.9	-15.9	-16.3	-14.4	-8.8	-8.9	-5.0	-5.9	-6.1	-5.4	-7.0	-3.7	-3.8	-8.4	-13.0	-19.9	-29.0	-39.9	-55.8	-75.5		
Leq,d	4.4	-21.5	-38.5	-32.5	-17.5	-16.5	-14.5	-20.9	-16.9	-20.0	-16.1	-16.4	-14.5	-8.9	-9.0	-5.1	-6.0	-6.2	-5.5	-7.2	-3.9	-3.9	-8.6	-13.2	-20.2	-29.3	-40.3	-56.4	-76.4		
Leq,d	4.2	-21.6	-38.6	-32.6	-17.6	-16.7	-14.7	-21.0	-17.1	-20.2	-16.2	-16.5	-14.6	-9.1	-9.1	-5.2	-6.2	-6.4	-5.6	-7.3	-4.0	-4.1	-8.8	-13.4	-20.4	-29.6	-40.8	-57.0	-77.3		
Leq,d	3.3	-22.3	-39.3	-33.3	-18.3	-17.4	-15.4	-21.9	-18.0	-21.1	-17.0	-18.1	-15.4	-9.9	-9.9	-6.1	-7.0	-7.2	-6.2	-8.0	-5.2	-5.4	-10.2	-15.1	-22.5	-32.2	-44.2	-61.5	-83.4		
Leq,d	3.2	-22.4	-39.4	-33.4	-18.4	-17.4	-15.5	-22.0	-18.1	-21.2	-17.1	-18.2	-15.5	-10.0	-10.0	-6.2	-7.1	-7.3	-6.2	-8.0	-5.3	-5.5	-10.4	-15.2	-22.7	-32.5	-44.6	-62.2	-84.3		
Leq,d	3.1	-22.5	-39.5	-33.5	-18.5	-17.5	-15.5	-22.2	-18.2	-21.3	-17.2	-18.3	-15.6	-10.1	-10.1	-6.3	-7.2	-7.4	-6.4	-8.2	-5.4	-5.6	-10.5	-15.4	-22.9	-32.8	-45.0	-62.7	-85.1		
Leq,d	3.6	-22.0	-39.0	-33.0	-18.0	-17.1	-15.1	-21.5	-17.6	-20.7	-16.7	-17.8	-15.1	-9.5	-9.6	-5.7	-6.6	-6.9	-6.1	-7.8	-5.0	-5.1	-9.9	-14.6	-21.8	-31.3	-42.9	-59.7	-80.9		
Leq,d	3.5	-22.1	-39.1	-33.1	-18.1	-17.2	-15.2	-21.7	-17.7	-20.8	-16.8	-17.9	-15.2	-9.6	-9.7	-5.8	-6.7	-7.0	-6.2	-7.9	-5.1	-5.2	-10.0	-14.8	-22.0	-31.6	-43.3	-60.3	-81.7		
Leq,d	3.3	-22.2	-39.2	-33.2	-18.2	-17.3	-15.3	-21.8	-17.9	-21.0	-16.9	-18.0	-15.3	-9.8	-9.8	-5.9	-6.9	-7.1	-6.4	-8.1	-5.2	-5.3	-10.2	-15.0	-22.3	-31.9	-43.8	-61.0	-82.6		
Leq,d	6.2	-16.9	-33.9	-28.0	-13.0	-12.1	-10.2	-16.2	-12.4	-15.6	-11.4	-15.2	-13.2	-7.3	-7.4	-3.6	-4.4	-4.6	-3.9	-5.5	-2.4	-2.3	-6.6	-10.7	-16.8	-24.6	-33.7	-46.9	-61.8	-82.3	
Leq,d	6.7	-17.0	-34.0	-28.1	-13.2	-12.3	-10.4	-16.3	-12.5	-15.7	-11.6	-14.6	-12.6	-6.8	-6.8	-3.0	-3.8	-4.0	-3.3	-4.9	-2.0	-1.8	-6.2	-10.3	-16.5	-24.4	-33.7	-47.2	-62.5	-83.4	
Leq,d	6.5	-17.2	-34.2	-28.2	-13.3	-12.4	-10.5	-16.5	-12.7	-15.9	-11.8	-14.7	-12.8	-6.9	-7.0	-3.1	-4.0	-4.2	-3.5	-5.1	-2.1	-2.0	-6.4	-10.5	-16.8	-24.8	-34.2	-47.9	-63.5	-84.8	
Leq,d	5.0	-16.8	-33.8	-27.8	-12.9	-12.0	-10.1	-16.0	-12.2	-15.4	-13.8	-16.7	-14.8	-8.8	-8.9	-5.0	-5.7	-6.0	-5.3	-6.9	-3.7	-3.6	-7.9	-12.0	-18.1	-26.0	-35.1	-46.6	-62.5	-82.8	
Leq,d	5.5	-16.4	-33.4	-27.5	-12.5	-11.6	-9.7	-15.5	-11.7	-14.9	-13.3	-16.3	-14.3	-8.3	-8.4	-4.6	-5.3	-5.5	-4.8	-6.4	-3.2	-3.0	-6.8	-10.8	-16.8	-24.5	-33.3	-46.1	-61.5	-81.0	
Leq,d	5.3	-16.5	-33.5	-27.6	-12.6	-11.8	-9.8	-15.7	-11.9	-15.1	-13.4	-16.4	-14.5	-8.5	-8.6	-4.7	-5.4	-5.7	-5.0	-6.6	-3.4	-3.2	-7.5	-11.5	-17.6	-25.2	-34.1	-46.9	-62.5	-82.2	
Leq,d	5.1	-16.6	-33.7	-27.7	-12.8	-11.9	-10.0	-15.8	-12.0	-15.2	-13.6	-16.6	-14.7	-8.6	-8.7	-4.9	-5.6	-5.8	-5.1	-6.8	-3.5	-3.4	-7.7	-11.8	-17.9	-25.6	-34.6	-45.9	-61.6	-81.5	
Leq,d	6.4	-17.3	-34.3	-28.3	-13.4	-12.5	-10.6	-16.7	-12.8	-16.1	-11.9	-14.9	-12.9	-7.1	-7.1	-3.3	-4.1	-4.3	-3.6	-5.2	-2.3	-2.2	-6.6	-10.8	-17.1	-25.2	-34.7	-48.5	-64.3	-85.9	
Leq,d	5.3	-20.7	-37.7	-31.7	-16.7	-15.8	-13.8	-19.9	-16.0	-19.0	-15.2	-15.6	-13.6	-8.0	-8.1	-4.2	-5.2	-5.4	-4.6	-6.2	-2.9	-2.8	-7.4	-11.7	-18.3	-26.9	-37.1	-51.9	-69.3	-92.6	
Leq,d	4.8	-21.2	-38.2	-32.2	-17.2	-16.2	-14.2	-20.5	-16.5	-19.6	-15.7	-16.0	-14.1	-8.6	-8.6	-4.7	-5.7	-5.9	-5.1	-6.7	-3.4	-3.4	-8.1	-12.6	-19.4	-28.3	-39.0	-54.5	-73.7	-97.5	
Leq,d	4.6	-21.3	-38.3	-32.3	-17.3	-16.3	-14.3	-20.6	-16.7	-19.8	-15.8	-16.2	-14.2	-8.7	-8.7	-4.9	-5.8	-6.0	-5.3	-6.9	-3.6	-3.6	-8.3	-12.8	-19.7	-28.6	-39.5	-55.2	-74.7	-98.8	
Leq,d	5.5	-20.6	-37.6	-31.6	-16.6	-15.6	-13.6	-19.7	-15.8	-18.9	-15.0	-15.4	-13.5	-7.9	-7.9	-4.0	-5.1	-5.2	-4.5	-6.0	-2.7	-2.6	-7.2	-11.4	-18.0	-26.5	-36.5	-51.1	-68.3	-91.2	
Leq,d	6.2	-17.4	-34.4	-28.5	-13.5	-12.7	-10.7	-16.8	-13.0	-16.2	-12.1	-15.0	-13.1	-7.2	-7.3	-3.4	-4.3	-4.5	-3.8	-5.4	-2.5	-2.4	-6.8	-11.0	-17.4	-25.5	-35.2	-48.4	-65.5	-86.5	
Leq,d	6.0	-17.5	-34.5	-28.6	-13.7	-12.8	-10.9	-17.0	-13.2	-16.4	-14.7	-15.1	-13.2	-7.4	-7.4	-3.6	-4.4	-4.6	-3.9	-5.5	-2.6	-2.5	-7.0	-11.2	-17.6	-25.9	-35.7	-49.0	-66.4	-87.8	
Leq,d	5.9	-17.6	-34.7	-28.7	-13.8	-12.9	-11.0	-17.1	-13.3	-16.5	-14.9	-15.3	-13.3	-7.5	-7.6	-3.7	-4.5	-4.8	-4.0	-5.6	-2.8	-2.7	-7.2	-11.4	-17.9	-26.3	-36.1	-50.5	-67.3	-89.0	
Leq,d	21.5					-10.1			-4.3			5.1			12.6			16.3			17.7			12.8			-7.0				
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Cathedral City Storage Noise
Contribution spectra - 002 - Cathedral City Storage: Outdoor SP

Time slice	Sum	25Hz	31.5Hz	40Hz	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz	20kHz
	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
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Receiver R3 Fl G Lr,lim dB(A) Leq,d 48.6 dB(A) Sigma(Leq,d) 0.0 dB(A)																															
Leq,d	48.6					34.5			43.8			35.4			40.0			40.7			41.5			37.1			26.4			5.0	
Leq,d	24.4					12.5			19.5			10.1			16.1			17.3			17.3			10.2			-10.9			-63.7	
Leq,d	19.6	-34.8	-28.7	-24.7	-11.7	-6.7	-12.7	-4.7	-0.2	-1.2	0.8	0.9	2.9	3.9	5.0	9.1	11.0	7.2	9.3	10.9	9.1	10.5	7.6	7.0	2.5	-1.4	-12.3	-25.7	-39.6	-59.3	-84.9
Leq,d	15.1	-35.7	-29.7	-25.8	-12.9	-6.4	-12.5	-4.7	-2.9	-4.1	-2.6	-2.7	-0.8	0.2	1.1	4.9	6.7	4.3	6.0	7.0	4.3	4.4	-0.2	-1.6	-7.4	-13.1	-26.7	-45.3	-66.0	-94.9	
Leq,d	15.3	-37.9	-31.9	-27.9	-14.9	-10.0	-16.0	-7.9	-6.0	-7.1	-5.1	-5.1	-3.2	0.3	1.2	5.1	6.9	4.8	6.5	7.5	4.9	4.9	0.3	-1.1	-6.8	-12.6	-26.2	-43.7	-63.0	-89.9	
Leq,d	3.2	-16.0	-33.0	-27.0	-16.7	-15.8	-13.8	-19.9	-16.0	-19.1	-15.2	-17.6	-15.7	-10.1	-10.2	-6.3	-7.3	-7.4	-6.7	-8.3	-5.9	-5.7	-10.2	-14.3	-20.7	-28.9	-38.7	-53.0	-70.8	-92.8	
Leq,d	3.0	-16.1	-33.1	-27.1	-16.8	-15.9	-13.9	-20.0	-16.1	-19.2	-15.3	-17.7	-15.8	-10.3	-10.3	-6.4	-7.4	-7.6	-6.8	-8.4	-6.0	-5.9	-10.3	-14.5	-21.0	-29.2	-39.1	-53.6	-71.7	-95.0	
Leq,d	2.9	-16.2	-33.2	-27.2	-17.0	-16.0	-14.0	-20.2	-16.3	-19.3	-15.4	-17.9	-16.0	-10.4	-10.4	-6.6	-7.5	-7.7	-6.9	-8.6	-6.2	-6.1	-10.5	-14.8	-21.2	-29.6	-39.6	-54.3	-72.6	-96.3	
Leq,d	3.6	-15.6	-32.6	-26.6	-16.4	-15.4	-13.4	-19.5	-15.5	-18.6	-14.7	-17.2	-15.2	-9.7	-9.7	-5.8	-6.8	-7.0	-6.2	-7.8	-5.4	-5.2	-9.6	-13.6	-19.8	-27.8	-37.2	-51.0	-68.1	-90.1	

Cathedral City Storage Noise
Contribution spectra - 002 - Cathedral City Storage: Outdoor SP

Time slice	Sum dB(A)	25Hz dB(A)	31.5Hz dB(A)	40Hz dB(A)	50Hz dB(A)	63Hz dB(A)	80Hz dB(A)	100Hz dB(A)	125Hz dB(A)	160Hz dB(A)	200Hz dB(A)	250Hz dB(A)	315Hz dB(A)	400Hz dB(A)	500Hz dB(A)	630Hz dB(A)	800Hz dB(A)	1kHz dB(A)	1.25kHz dB(A)	1.6kHz dB(A)	2kHz dB(A)	2.5kHz dB(A)	3.15kHz dB(A)	4kHz dB(A)	5kHz dB(A)	6.3kHz dB(A)	8kHz dB(A)	10kHz dB(A)	12.5kHz dB(A)	16kHz dB(A)	20kHz dB(A)
Leq,d	3.5	-15.8	-32.7	-26.7	-16.5	-15.5	-13.5	-19.6	-15.7	-18.8	-14.9	-17.3	-15.4	-9.8	-9.9	-6.0	-7.0	-7.2	-6.4	-8.0	-5.5	-5.4	-9.8	-13.9	-20.1	-28.2	-37.7	-51.7	-69.0	-91.3	
Leq,d	3.3	-15.9	-32.8	-26.8	-16.6	-15.7	-13.7	-19.8	-15.8	-18.9	-15.0	-17.5	-15.5	-10.0	-10.0	-6.1	-7.1	-7.3	-6.5	-8.1	-5.7	-5.6	-10.0	-14.1	-20.4	-28.5	-38.2	-52.3	-69.9	-92.6	
Leq,d	2.4	-16.6	-33.6	-27.6	-12.6	-16.4	-14.4	-20.7	-16.8	-19.9	-15.9	-18.4	-16.5	-10.9	-11.0	-7.1	-8.0	-8.2	-7.5	-9.1	-6.8	-6.7	-11.3	-15.6	-22.3	-31.0	-41.5	-56.9	-76.2		
Leq,d	2.3	-16.7	-33.7	-27.7	-12.7	-16.5	-14.6	-20.9	-17.0	-20.0	-16.1	-18.5	-16.6	-11.1	-11.1	-7.2	-8.2	-8.4	-7.6	-9.3	-6.9	-6.9	-11.5	-15.9	-22.6	-31.4	-42.0	-57.5	-77.1		
Leq,d	2.1	-16.8	-33.8	-27.8	-12.8	-16.6	-14.6	-21.0	-17.1	-20.2	-16.2	-18.6	-16.7	-11.2	-11.2	-7.3	-8.3	-8.5	-7.7	-9.4	-7.0	-7.0	-11.6	-16.0	-22.8	-31.7	-42.4	-58.1	-77.9		
Leq,d	2.7	-16.3	-33.3	-27.3	-17.1	-16.1	-14.1	-20.3	-16.4	-19.5	-15.6	-18.0	-16.1	-10.5	-10.6	-6.7	-7.7	-7.9	-7.1	-8.7	-6.3	-6.2	-10.7	-15.0	-21.5	-30.0	-40.1	-55.0	-73.5	-97.6	
Leq,d	2.7	-16.4	-33.4	-27.4	-12.4	-16.2	-14.2	-20.5	-16.5	-19.6	-15.7	-18.1	-16.2	-10.7	-10.7	-6.8	-7.8	-8.0	-7.2	-8.8	-6.5	-6.4	-10.9	-15.2	-21.8	-30.3	-40.6	-55.6	-74.4	-98.7	
Leq,d	2.5	-16.5	-33.5	-27.5	-12.5	-16.3	-14.3	-20.6	-16.7	-19.8	-15.8	-18.3	-16.4	-10.8	-10.8	-7.0	-7.9	-8.1	-7.4	-9.0	-6.6	-6.6	-11.1	-15.4	-22.1	-30.7	-41.1	-56.3	-75.3		
Leq,d	6.4	-13.8	-31.9	-26.1	-11.4	-10.6	-8.9	-14.7	-11.0	-14.3	-9.8	-14.8	-12.8	-7.1	-7.2	-3.3	-4.3	-4.5	-3.7	-5.3	-2.8	-2.5	-6.6	-10.3	-14.7	-21.6	-28.3	-39.7	-53.4	-71.0	-91.4
Leq,d	6.3	-13.9	-32.0	-26.2	-11.4	-10.7	-8.9	-14.8	-11.1	-14.4	-10.0	-15.0	-13.0	-7.3	-7.3	-3.5	-4.4	-4.6	-3.9	-5.4	-2.9	-2.6	-6.3	-10.0	-15.7	-21.7	-28.6	-40.3	-54.2	-72.1	-92.9
Leq,d	6.2	-14.1	-31.0	-26.3	-11.5	-10.7	-9.0	-14.8	-11.2	-14.5	-10.2	-15.2	-13.3	-7.4	-7.5	-3.7	-4.6	-4.8	-4.0	-5.6	-3.1	-2.8	-5.9	-9.7	-15.5	-21.8	-30.0	-41.9	-56.2	-74.5	-95.7
Leq,d	4.6	-13.6	-31.8	-26.1	-11.3	-10.6	-8.9	-14.6	-10.9	-14.3	-12.1	-17.1	-15.1	-9.3	-9.4	-5.6	-6.3	-6.6	-5.9	-7.5	-5.1	-4.8	-8.9	-12.6	-16.3	-21.5	-29.2	-40.4	-53.9	-71.1	-91.1
Leq,d	6.5	-13.2	-32.9	-27.1	-12.2	-11.4	-9.6	-15.1	-11.4	-14.6	-11.5	-16.4	-14.5	-9.0	-9.0	-5.2	-3.7	-3.8	-3.1	-4.6	-2.1	-1.9	-6.0	-9.7	-13.8	-20.7	-28.3	-39.4	-52.4	-68.9	-87.9
Leq,d	4.8	-13.3	-31.7	-26.0	-11.2	-10.6	-8.8	-14.5	-10.8	-14.1	-11.7	-16.7	-14.7	-9.0	-9.1	-5.3	-6.2	-6.5	-5.7	-7.3	-4.8	-4.5	-8.6	-12.2	-17.7	-22.1	-29.6	-40.5	-53.5	-70.2	-89.4
Leq,d	4.6	-13.5	-31.8	-26.0	-11.3	-10.6	-8.8	-14.6	-10.9	-14.2	-11.9	-16.9	-14.9	-9.2	-9.3	-5.4	-6.4	-6.6	-5.9	-7.5	-5.0	-4.7	-8.8	-12.4	-17.9	-22.4	-30.0	-41.1	-54.3	-71.3	-90.9
Leq,d	6.4	-14.2	-31.2	-26.3	-11.5	-10.8	-9.0	-14.9	-11.2	-14.6	-10.4	-15.4	-13.4	-7.6	-7.7	-3.8	-4.7	-4.4	-3.6	-5.2	-2.8	-2.5	-5.7	-9.6	-15.5	-22.0	-30.3	-42.4	-57.0	-75.5	-97.1
Leq,d	4.7	-14.9	-31.8	-30.6	-15.6	-14.7	-12.7	-18.5	-14.6	-17.6	-11.3	-16.3	-14.3	-8.8	-8.8	-4.9	-6.0	-5.8	-5.1	-6.7	-4.2	-4.0	-8.3	-12.2	-18.1	-25.6	-34.3	-47.1	-62.7	-82.8	
Leq,d	4.0	-15.4	-32.4	-26.4	-16.1	-15.2	-13.2	-19.2	-15.2	-18.3	-14.4	-16.9	-14.9	-9.4	-9.4	-5.5	-6.6	-6.6	-5.8	-7.5	-5.0	-4.8	-9.2	-13.2	-19.3	-27.1	-36.3	-49.7	-66.3	-87.7	
Leq,d	3.8	-15.5	-32.5	-26.5	-16.3	-15.3	-13.3	-19.3	-15.4	-18.5	-14.6	-17.0	-15.1	-9.6	-9.6	-5.7	-6.7	-6.9	-6.1	-7.7	-5.2	-5.0	-9.4	-13.4	-19.6	-27.5	-36.8	-50.4	-67.2	-89.0	
Leq,d	5.2	-14.7	-31.7	-30.5	-15.5	-14.5	-12.5	-18.3	-14.4	-17.5	-11.1	-16.1	-14.1	-8.6	-8.6	-4.7	-5.8	-5.1	-4.4	-6.0	-3.5	-3.3	-7.6	-11.5	-17.4	-24.9	-32.6	-45.3	-60.7	-80.5	
Leq,d	6.6	-14.3	-31.3	-26.4	-11.6	-10.9	-9.1	-15.0	-11.3	-14.6	-10.6	-15.6	-13.6	-7.7	-7.8	-4.0	-4.9	-3.9	-3.2	-4.8	-2.3	-2.1	-5.5	-9.1	-15.2	-22.0	-30.6	-43.0	-57.8	-76.7	-98.7
Leq,d	6.6	-14.5	-31.4	-26.5	-11.7	-10.9	-9.1	-15.1	-11.4	-14.7	-10.8	-15.7	-13.8	-7.9	-8.0	-4.1	-5.0	-3.7	-2.9	-4.5	-2.1	-1.9	-6.2	-9.8	-15.8	-22.6	-31.2	-43.7	-58.7	-77.9	
Leq,d	6.1	-14.6	-31.6	-27.7	-12.8	-12.0	-10.1	-16.0	-12.2	-15.4	-10.9	-15.9	-14.0	-8.1	-8.2	-4.3	-5.2	-4.1	-3.4	-5.0	-2.6	-2.4	-6.7	-10.7	-16.7	-24.2	-31.9	-44.5	-59.7	-79.1	
Leq,d	20.7					-9.0			-3.0			4.3			11.8			15.7			16.3			12.3			-4.2				
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Cathedral City Storage Noise
Contribution spectra - 002 - Cathedral City Storage: Outdoor SP

Time slice	Sum dB(A)	25Hz dB(A)	31.5Hz dB(A)	40Hz dB(A)	50Hz dB(A)	63Hz dB(A)	80Hz dB(A)	100Hz dB(A)	125Hz dB(A)	160Hz dB(A)	200Hz dB(A)	250Hz dB(A)	315Hz dB(A)	400Hz dB(A)	500Hz dB(A)	630Hz dB(A)	800Hz dB(A)	1kHz dB(A)	1.25kHz dB(A)	1.6kHz dB(A)	2kHz dB(A)	2.5kHz dB(A)	3.15kHz dB(A)	4kHz dB(A)	5kHz dB(A)	6.3kHz dB(A)	8kHz dB(A)	10kHz dB(A)	12.5kHz dB(A)	16kHz dB(A)	20kHz dB(A)
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Receiver R4 Fl G Lr,lim dB(A) Leq,d 49.7 dB(A) Sigma(Leq,d) 0.0 dB(A)																															
Leq,d	49.6					35.4			44.8			36.3			41.1			42.0			42.5			38.6			29.1			10.2	
Leq,d	25.4					13.6			20.7			11.2			16.8			18.2			18.1			11.6			-7.2			-53.7	
Leq,d	20.7	-33.0	-27.0	-23.0	-10.0	-5.0	-11.0	-0.5	1.5	0.4	2.4	2.5	4.5	5.5	6.5	10.5	12.4	8.4	10.4	11.8	9.7	10.6	7.3	8.0	4.2	1.2	-8.0	-19.4	-31.1	-48.0	-70.1
Leq,d	16.2	-37.5	-31.4	-27.5	-14.5	-7.0	-13.0	-5.0	-3.0	-4.1	-2.2	-2.1	-0.2	0.7	1.7	5.6	7.3	5.0	7.6	8.6	5.9	6.0	1.4	0.1	-5.5	-11.1	-24.3	-41.2	-59.6	-85.4	
Leq,d	15.4	-36.7	-30.7	-26.7	-13.7	-8.8	-14.8	-6.7	-4.8	-5.9	-3.9	-3.9	-2.0	1.5	2.5	6.4	8.1	3.9	5.7	6.8	4.2	4.4	0.0	-1.0	-6.1	-11.0	-23.3	-39.0	-55.8	-79.5	
Leq,d	4.6	-19.7	-36.7	-30.7	-15.7	-14.7	-12.7	-18.5	-14.6	-17.7	-13.8	-16.3	-14.3	-8.8	-8.8	-4.9	-6.0	-6.1	-5.3	-6.8	-4.3	-4.1	-8.3	-12.1	-18.0	-25.5	-34.1	-45.7	-61.2	-78.9	
Leq,d	4.4	-19.8	-36.8	-30.8	-15.8	-14.8	-12.8	-18.7	-14.8	-17.8	-14.0	-16.4	-14.5	-8.9	-9.0	-5.1	-6.1	-6.2	-5.4	-7.0	-4.5	-4.2	-8.5	-12.3	-18.3	-25.8	-34.5	-46.2	-61.9	-82.2	
Leq,d	4.3	-19.9	-36.9	-30.9	-15.9	-15.0	-13.0	-18.9	-14.9	-18.0	-14.1	-16.6	-14.6	-9.1	-9.1	-5.2	-6.2	-6.4	-5.6	-7.1	-4.7	-4.4	-8.7	-12.6	-18.5	-26.1	-35.0	-48.0	-62.6	-83.1	
Leq,d	5.1	-19.3	-36.3	-30.3	-15.3	-14.3	-12.3	-18.0	-14.1	-17.2	-13.3	-15.7	-13.8	-8.3	-8.3	-4.4	-5.5	-5.6	-4.8	-6.3	-3.8	-3.5	-7.7	-11.4	-17.1	-24.4	-31.7	-43.9	-57.1	-75.9	-97.7
Leq,d	4.9	-19.4	-36.4	-30.4	-15.4	-14.4	-12.4	-18.2	-14.3	-17.3	-13.4	-15.9	-14.0	-8.4	-8.5	-4.6	-5.6	-5.8	-5.0	-6.5	-4.0	-3.7	-7.9	-11.7	-17.4	-24.7	-33.2	-44.5	-57.3	-76.5	-99.3
Leq,d	4.8	-19.6	-36.5	-30.5	-15.5	-14.6	-12.6	-18.4	-14.4	-17.5	-13.6	-16.1	-14.1	-8.6	-8.6	-4.7	-5.8	-5.9	-5.1	-6.7	-4.2	-3.9	-8.1	-11.9	-17.7	-25.1	-33.6	-45.1	-58.0	-77.7	
Leq,d	3.7	-20.4	-37.4	-31.4	-16.4	-15.4	-13.4	-19.5	-15.5	-18.6	-14.7	-17.2	-15.3	-9.7	-9.7	-5.8	-6.8	-6.9	-6.1	-7.7	-5.2	-5.0	-9.3	-13.3	-19.5	-27.4	-36.6	-50.3	-67.2	-88.9	
Leq,d	3.5	-20.5	-37.5	-31.5	-16.5	-15.6	-13.6	-19.6	-15.7	-18.8	-14.9	-17.3	-15.4	-9.8	-9.9	-6.0	-6.9	-7.1	-6.3	-7.8	-5.4	-5.2	-9.5	-13.6	-19.7	-27.7	-37.1	-50.9	-68.0	-90.1	
Leq,d	3.4	-20.6	-37.6	-31.6	-16.6	-15.7	-13.7	-19.8	-15.8	-18.9	-15.0	-17.5	-15.5	-10.0	-10.0	-6.1	-7.1	-7.2	-6.4	-8.0	-5.5	-5.3	-9.7	-13.7	-20.0	-28.0	-37.5	-51.5	-68.8	-91.1	

Cathedral City Storage Noise
Contribution spectra - 002 - Cathedral City Storage: Outdoor SP

Time slice	Sum dB(A)	25Hz dB(A)	31.5Hz dB(A)	40Hz dB(A)	50Hz dB(A)	63Hz dB(A)	80Hz dB(A)	100Hz dB(A)	125Hz dB(A)	160Hz dB(A)	200Hz dB(A)	250Hz dB(A)	315Hz dB(A)	400Hz dB(A)	500Hz dB(A)	630Hz dB(A)	800Hz dB(A)	1kHz dB(A)	1.25kHz dB(A)	1.6kHz dB(A)	2kHz dB(A)	2.5kHz dB(A)	3.15kHz dB(A)	4kHz dB(A)	5kHz dB(A)	6.3kHz dB(A)	8kHz dB(A)	10kHz dB(A)	12.5kHz dB(A)	16kHz dB(A)	20kHz dB(A)
Leq,d	4.1	-20.1	-37.0	-31.0	-16.0	-15.1	-13.1	-19.0	-15.1	-18.2	-14.3	-16.7	-14.8	-9.2	-9.3	-5.4	-6.4	-6.5	-5.7	-7.3	-4.8	-4.6	-8.8	-12.8	-18.8	-26.4	-35.4	-48.6	-63.1	-83.6	
Leq,d	4.0	-20.2	-37.1	-31.2	-16.2	-15.2	-13.2	-19.2	-15.2	-18.3	-14.4	-16.9	-15.0	-9.4	-9.4	-5.5	-6.5	-6.7	-5.9	-7.4	-4.9	-4.7	-9.0	-12.9	-19.0	-26.7	-35.8	-49.1	-63.3	-84.7	
Leq,d	3.8	-20.3	-37.3	-31.3	-16.3	-15.3	-13.3	-19.3	-15.4	-18.5	-14.6	-17.0	-15.1	-9.5	-9.6	-5.7	-6.7	-6.8	-6.0	-7.6	-5.1	-4.9	-9.2	-13.1	-19.2	-27.0	-36.2	-49.7	-66.4	-87.9	
Leq,d	9.6	-12.4	-29.3	-28.1	-13.1	-12.2	-10.2	-15.3	-11.3	-11.9	-7.8	-12.8	-10.8	-5.5	-5.5	-0.3	-1.0	-1.1	-0.3	-1.7	0.8	1.3	-2.0	-5.2	-9.8	-16.1	-23.0	-32.9	-44.4	-58.9	-75.5
Leq,d	8.7	-12.5	-29.5	-28.3	-13.3	-12.3	-10.3	-15.5	-11.6	-14.6	-8.0	-13.0	-11.1	-5.7	-5.7	-1.8	-1.9	-2.0	-1.2	-2.7	-0.1	0.3	-3.0	-6.2	-10.8	-17.3	-24.4	-34.5	-46.3	-61.2	-78.2
Leq,d	9.5	-12.7	-29.7	-23.7	-8.7	-7.7	-7.6	-12.8	-8.9	-12.0	-8.3	-13.3	-11.3	-5.5	-5.5	-1.6	-0.9	-1.1	-0.3	-1.8	0.6	0.9	-2.5	-5.9	-11.4	-17.3	-24.5	-34.9	-47.0	-62.4	-79.9
Leq,d	9.4	-12.2	-29.2	-27.9	-13.0	-12.0	-10.0	-15.1	-11.1	-11.6	-7.5	-12.5	-10.6	-5.2	-5.3	0.0	-1.4	-1.5	-0.6	-2.1	0.6	1.1	-2.1	-5.2	-9.6	-15.8	-22.5	-32.2	-43.5	-57.7	-73.9
Leq,d	8.2	-11.7	-28.7	-27.4	-12.4	-11.5	-9.5	-14.4	-10.4	-13.5	-9.2	-14.2	-12.2	-7.0	-7.0	-3.1	-2.2	-2.3	-1.5	-3.0	-0.4	0.1	-3.8	-7.1	-10.9	-17.0	-23.4	-32.8	-43.4	-56.8	-71.8
Leq,d	6.8	-11.9	-28.8	-27.6	-12.6	-11.7	-9.7	-14.6	-10.7	-13.7	-9.5	-14.5	-12.5	-7.3	-7.3	-3.4	-4.7	-4.8	-3.9	-5.4	-2.8	-0.8	-4.7	-8.0	-11.7	-17.7	-24.2	-33.6	-44.4	-58.0	-73.4
Leq,d	6.5	-12.0	-29.0	-27.8	-12.8	-11.8	-9.8	-14.8	-10.9	-14.0	-9.8	-14.7	-12.8	-7.5	-7.5	-3.6	-4.9	-5.0	-4.2	-5.7	-3.0	-1.8	-4.9	-7.9	-11.7	-18.0	-24.6	-34.2	-45.3	-59.2	-75.0
Leq,d	9.3	-12.9	-29.8	-23.8	-8.9	-7.9	-7.7	-13.0	-9.0	-12.1	-8.5	-13.5	-11.6	-5.7	-5.7	-1.8	-0.9	-1.1	-0.4	-1.9	0.6	0.9	-3.2	-6.5	-11.9	-17.0	-24.2	-34.6	-46.9	-62.5	-80.3
Leq,d	6.2	-18.4	-35.4	-29.4	-14.4	-13.5	-11.5	-16.9	-13.0	-16.1	-9.7	-14.6	-12.7	-7.2	-7.2	-3.3	-4.5	-4.6	-3.8	-5.3	-2.7	-2.3	-6.4	-9.9	-15.3	-22.1	-28.4	-39.6	-53.0	-70.2	-90.1
Leq,d	5.5	-19.0	-36.0	-30.0	-15.0	-14.0	-12.0	-17.7	-13.8	-16.8	-10.4	-15.4	-13.4	-7.9	-8.0	-4.1	-5.1	-5.3	-4.5	-6.0	-3.5	-3.1	-7.3	-10.9	-16.6	-23.6	-30.7	-41.4	-55.8	-74.2	-95.7
Leq,d	5.3	-19.2	-36.1	-30.1	-15.1	-14.2	-12.2	-17.9	-13.9	-17.0	-10.6	-15.6	-13.6	-8.1	-8.1	-4.2	-5.3	-5.5	-4.6	-6.2	-3.7	-3.3	-7.5	-11.2	-16.9	-24.0	-31.2	-43.3	-56.5	-75.2	-97.0
Leq,d	6.5	-18.3	-35.2	-29.2	-14.3	-13.3	-11.3	-16.7	-12.8	-15.9	-9.4	-14.4	-12.4	-7.0	-7.0	-3.1	-4.3	-4.4	-3.6	-5.1	-2.5	-2.1	-6.1	-9.6	-15.0	-21.6	-27.8	-38.8	-51.9	-68.8	-88.2
Leq,d	9.2	-13.0	-30.0	-24.0	-9.0	-8.1	-6.1	-13.2	-9.2	-12.3	-8.8	-13.7	-11.8	-5.9	-5.9	-2.0	-1.5	-1.3	-0.5	-2.0	0.5	0.8	-3.3	-6.9	-12.3	-18.0	-25.3	-35.9	-48.4	-64.3	-82.6
Leq,d	8.8	-13.2	-30.2	-24.2	-9.2	-8.2	-6.2	-13.3	-9.4	-12.5	-9.0	-14.0	-12.0	-6.1	-6.1	-2.2	-2.0	-1.8	-1.0	-2.5	0.1	0.4	-3.6	-7.2	-12.5	-18.2	-25.6	-36.3	-49.0	-65.3	-84.0
Leq,d	8.5	-13.3	-30.3	-24.3	-9.3	-8.4	-6.4	-13.5	-9.6	-12.7	-9.2	-14.2	-12.2	-6.3	-6.3	-2.4	-2.2	-2.3	-1.4	-2.9	-0.4	0.0	-4.0	-7.5	-12.8	-19.4	-25.9	-36.8	-49.7	-66.2	-85.3
Leq,d	22.2					-7.8			-1.5			5.9			13.3			17.0			17.8			14.5			1.3				
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Time slice	Sum dB(A)	25Hz dB(A)	31.5Hz dB(A)	40Hz dB(A)	50Hz dB(A)	63Hz dB(A)	80Hz dB(A)	100Hz dB(A)	125Hz dB(A)	160Hz dB(A)	200Hz dB(A)	250Hz dB(A)	315Hz dB(A)	400Hz dB(A)	500Hz dB(A)	630Hz dB(A)	800Hz dB(A)	1kHz dB(A)	1.25kHz dB(A)	1.6kHz dB(A)	2kHz dB(A)	2.5kHz dB(A)	3.15kHz dB(A)	4kHz dB(A)	5kHz dB(A)	6.3kHz dB(A)	8kHz dB(A)	10kHz dB(A)	12.5kHz dB(A)	16kHz dB(A)	20kHz dB(A)
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Receiver R5 Fl G Lr,lim dB(A) Leq,d 49.9 dB(A) Sigma(Leq,d) 0.0 dB(A)																														
Leq,d	49.8					35.6			45.0			36.4			41.6			42.6			42.4			37.5			26.7			6.1	
Leq,d	26.9					13.8			21.4			12.7			19.0			20.1			20.1			14.2			-1.3			-37.4	
Leq,d	26.7	-27.6	-21.6	-15.1	-2.1	2.8	-3.2	5.2	7.1	6.1	7.7	7.8	9.7	10.7	12.9	16.9	18.8	14.7	16.6	17.8	15.6	16.3	12.7	13.0	9.9	8.1	0.4	-8.5	-15.8	-26.9	-41.8
Leq,d	16.6	-34.8	-28.8	-24.8	-9.4	-4.4	-10.5	-2.5	-0.6	-1.8	0.1	0.0	1.8	2.5	3.3	8.2	9.7	5.2	6.6	7.2	4.2	4.0	-0.7	-2.0	-7.3	-12.0	-23.6	-38.0	-52.7	-73.3	-99.9
Leq,d	17.6	-32.4	-26.5	-22.7	-9.8	-5.0	-8.8	-0.8	1.0	-0.2	1.7	1.6	3.4	4.2	5.0	8.7	10.3	5.9	7.4	8.1	5.3	5.2	0.8	-0.2	-5.0	-9.1	-19.8	-32.8	-45.7	-64.0	-87.6
Leq,d	13.2	-16.8	-33.7	-27.8	-12.8	-11.8	-9.8	-14.8	-10.8	-13.9	-5.8	-10.8	-7.6	-1.9	-1.9	2.0	3.0	2.9	3.7	2.2	4.9	5.4	1.6	-1.6	-6.1	-12.1	-18.4	-27.7	-38.5	-52.3	-67.9
Leq,d	12.9	-16.9	-33.9	-27.9	-12.9	-12.0	-10.0	-15.0	-11.0	-14.1	-7.4	-11.1	-9.1	-2.2	-2.2	1.8	2.8	2.6	3.5	2.0	4.7	5.2	1.4	-1.9	-6.2	-12.2	-18.6	-28.2	-39.3	-53.3	-69.4
Leq,d	12.7	-17.1	-34.1	-28.1	-13.1	-12.1	-10.1	-15.2	-11.3	-14.3	-7.6	-11.3	-9.4	-2.4	-2.4	1.5	2.5	2.4	3.3	1.8	4.4	5.0	1.1	-2.2	-6.5	-12.6	-19.2	-28.9	-40.2	-54.6	-71.1
Leq,d	13.3	-16.2	-33.2	-27.2	-12.2	-11.3	-9.3	-14.0	-10.1	-9.3	-4.9	-8.7	-6.7	-1.3	-1.3	2.7	2.8	2.7	3.6	2.1	4.8	5.5	1.8	-1.1	-5.6	-11.0	-17.0	-25.8	-35.8	-48.5	-62.9
Leq,d	13.1	-16.4	-33.4	-27.4	-12.4	-11.4	-9.4	-14.3	-10.3	-9.6	-5.2	-10.2	-7.0	-1.5	-1.5	2.4	2.5	2.4	3.4	1.9	4.6	5.2	1.6	-1.3	-5.4	-11.1	-17.3	-26.2	-36.6	-49.6	-64.4
Leq,d	12.8	-16.6	-33.6	-27.6	-12.6	-11.6	-9.6	-14.5	-10.6	-11.1	-5.5	-10.5	-7.3	-1.8	-1.8	2.2	2.3	2.2	3.1	1.7	4.4	5.0	1.4	-1.5	-5.8	-11.6	-17.8	-27.0	-37.6	-51.0	-66.2
Leq,d	11.8	-17.8	-34.7	-28.7	-13.7	-12.8	-10.8	-16.1	-12.1	-15.2	-8.6	-13.6	-10.3	-4.7	-3.3	0.6	1.7	1.6	2.5	1.0	3.6	4.0	0.1	-3.2	-8.4	-13.9	-20.9	-31.3	-43.5	-59.1	-76.9
Leq,d	10.4	-17.9	-34.9	-28.9	-13.9	-12.9	-10.9	-16.3	-12.3	-15.4	-8.8	-13.8	-11.9	-4.9	-4.9	0.2	0.2	0.1	1.0	-0.5	2.1	2.5	-1.4	-4.8	-10.0	-15.3	-22.4	-32.9	-45.3	-61.1	-79.1
Leq,d	10.2	-18.1	-35.0	-29.0	-14.0	-13.1	-11.1	-16.4	-12.5	-15.6	-9.0	-14.0	-12.1	-5.1	-5.1	0.0	0.0	-0.1	0.8	-0.7	1.9	2.4	-1.6	-5.0	-10.2	-15.6	-22.8	-33.4	-46.0	-61.9	-80.6
Leq,d	12.5	-17.3	-34.2	-28.3	-13.3	-12.3	-10.3	-15.4	-11.5	-14.6	-7.9	-11.6	-9.6	-2.6	-2.7	1.3	2.3	2.2	3.1	1.6	4.2	4.7	0.8	-2.4	-7.2	-13.0	-19.7	-29.6	-41.1	-55.9	-72.7
Leq,d	12.2	-17.4	-34.4	-28.4	-13.4	-12.5	-10.5	-15.6	-11.7	-14.8	-8.1	-13.1	-9.9	-4.3	-2.9	1.1	2.1	2.0	2.9	1.4	4.0	4.5	0.6	-2.7	-7.8	-13.1	-20.0	-30.0	-41.8	-56.8	-74.0
Leq,d	12.0	-17.6	-34.6	-28.6	-13.6	-12.6	-10.6	-15.9	-11.9	-15.0	-8.4	-13.4	-10.1	-4.5	-3.1	0.8	1.9	1.8	2.7	1.2	3.8	4.3	0.3	-3.0	-8.1	-13.6	-20.5	-30.7	-42.7	-58.1	-75.6
Leq,d	18.0	-11.5	-28.5	-22.5	-7.5	-6.6	-2.1	-4.0	0.0	-3.1	2.3	-2.6	-0.7	3.3	3.3	7.2	6.4	7.0	8.0	6.5	9.3	10.1	6.7	4.1	0.2	-4.3	-8.5	-14.5	-21.0	-29.2	-37.9
Leq,d	17.9	-9.1	-26.1	-20.1	-5.1	-4.2	-2.2	-3.4	0.6	-2.5	1.9	-3.0	-1.1	3.3	3.3	7.2	6.0	7.0	7.9	6.4	9.2	10.0	6.5	3.9	0.0	-4.4	-8.4	-14.9	-21.8	-30.2	-39.1

Cathedral City Storage Noise
Contribution spectra - 002 - Cathedral City Storage: Outdoor SP

Time slice	Sum dB(A)	25Hz dB(A)	31.5Hz dB(A)	40Hz dB(A)	50Hz dB(A)	63Hz dB(A)	80Hz dB(A)	100Hz dB(A)	125Hz dB(A)	160Hz dB(A)	200Hz dB(A)	250Hz dB(A)	315Hz dB(A)	400Hz dB(A)	500Hz dB(A)	630Hz dB(A)	800Hz dB(A)	1kHz dB(A)	1.25kHz dB(A)	1.6kHz dB(A)	2kHz dB(A)	2.5kHz dB(A)	3.15kHz dB(A)	4kHz dB(A)	5kHz dB(A)	6.3kHz dB(A)	8kHz dB(A)	10kHz dB(A)	12.5kHz dB(A)	16kHz dB(A)	20kHz dB(A)
Leq,d	17.0	-9.5	-26.5	-20.5	-5.6	-4.6	-2.7	-3.8	0.1	-3.0	1.3	-3.7	-1.7	2.9	2.8	6.7	5.6	6.0	6.9	5.4	8.1	8.8	5.3	2.6	-1.5	-6.2	-10.6	-17.1	-24.0	-32.8	-42.3
Leq,d	18.4	-11.1	-28.0	-22.1	-7.1	-6.1	-0.4	-3.5	0.5	-2.6	2.8	-2.2	-0.2	3.7	3.7	7.7	6.8	7.5	8.4	6.9	9.7	10.5	7.0	4.4	0.5	-4.0	-8.2	-14.3	-20.6	-28.1	-36.3
Leq,d	18.0	-4.8	-21.7	-15.7	-5.5	-4.6	-0.1	-4.4	-0.4	-3.5	1.8	-3.1	-1.2	2.8	2.8	6.7	6.7	6.6	7.5	6.7	9.5	10.3	6.9	4.3	0.5	-3.8	-7.7	-13.5	-19.3	-26.3	-33.5
Leq,d	18.6	-5.3	-22.3	-16.3	-6.1	-5.1	0.6	-3.7	0.3	-2.8	2.5	-2.4	-0.5	3.5	3.5	7.4	7.7	7.6	8.5	7.0	9.8	10.6	7.2	4.6	0.7	-3.6	-7.7	-13.6	-19.6	-26.9	-34.6
Leq,d	18.9	-5.8	-22.8	-16.8	-6.6	-5.6	0.1	-3.0	1.0	-2.1	3.2	-1.7	0.2	4.2	4.2	8.1	7.3	7.9	8.9	7.3	10.1	10.9	7.4	4.8	0.9	-3.5	-7.7	-13.7	-20.0	-27.6	-35.5
Leq,d	16.8	-9.9	-26.9	-20.9	-5.9	-5.0	-3.0	-5.1	-0.2	-3.3	0.8	-4.1	-2.2	2.5	2.5	6.4	5.3	5.7	6.6	5.1	7.9	8.6	5.1	2.4	-1.7	-6.4	-10.8	-17.4	-24.7	-33.8	-43.5
Leq,d	14.9	-10.0	-28.7	-22.7	-7.7	-6.7	-4.7	-9.3	-3.0	-5.2	-1.6	-6.6	-4.6	0.6	0.6	4.6	3.9	3.8	4.7	3.3	6.0	6.8	3.2	0.5	-3.7	-8.4	-13.5	-21.1	-29.6	-40.1	-52.1
Leq,d	13.8	-15.9	-32.8	-26.9	-11.9	-10.9	-8.9	-13.5	-7.5	-8.8	-3.1	-8.1	-6.1	-0.7	-0.7	3.2	3.2	3.1	4.1	2.6	5.3	5.9	2.3	-0.7	-5.2	-10.5	-15.8	-24.3	-33.8	-45.9	-59.5
Leq,d	13.5	-16.1	-33.0	-27.0	-12.0	-11.1	-9.1	-13.8	-9.9	-9.1	-4.7	-8.4	-6.4	-1.0	-1.0	2.9	3.0	2.9	3.8	2.3	5.0	5.7	2.0	-0.9	-5.4	-10.7	-16.4	-25.0	-34.9	-47.3	-61.3
Leq,d	15.2	-9.6	-28.3	-22.3	-7.3	-6.4	-4.4	-8.9	-1.7	-4.8	-1.1	-6.1	-4.1	1.0	1.0	5.0	4.2	4.1	5.1	3.6	6.4	7.1	3.5	0.8	-3.4	-8.2	-12.8	-20.4	-28.6	-38.9	-50.1
Leq,d	16.5	-8.5	-27.3	-21.3	-6.3	-5.3	-3.3	-5.5	-0.6	-3.7	0.3	-4.7	-2.7	2.2	2.1	6.1	5.0	5.5	6.3	4.9	7.6	8.3	4.8	2.2	-1.9	-6.4	-11.1	-18.0	-25.4	-34.6	-44.7
Leq,d	16.2	-8.9	-27.6	-21.6	-6.6	-5.7	-3.7	-5.8	-1.0	-4.1	-0.2	-5.2	-3.2	1.8	1.8	5.7	4.8	5.2	6.1	4.6	7.4	8.2	4.7	2.0	-1.9	-6.7	-11.4	-18.4	-25.8	-35.6	-46.3
Leq,d	15.5	-9.2	-28.0	-22.0	-7.0	-6.0	-4.0	-8.5	-1.4	-4.4	-0.7	-5.6	-3.7	1.4	1.4	5.4	4.5	4.4	5.3	3.8	6.6	7.3	3.7	0.9	-3.3	-8.1	-12.8	-19.7	-27.7	-37.8	-48.8
Leq,d	31.1					-1.4			8.3			13.6			21.0			25.2			26.4			24.9			16.5				
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Time slice	Sum	25Hz	31.5Hz	40Hz	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz	20kHz
	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
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Receiver R5 Fl G Lr,lim dB(A) Leq,d 49.9 dB(A) Sigma(Leq,d) 0.0 dB(A)																															
Leq,d	49.9					35.7			45.0			36.6			41.2			42.6			42.7			38.0			27.3			6.5	
Leq,d	26.6					14.3			21.7			12.3			17.8			19.5			19.6			13.7			-3.0			-43.8	
Leq,d	22.7	-31.0	-24.9	-20.9	-7.9	-0.5	-6.4	1.7	3.7	2.6	4.5	4.6	6.5	7.5	8.6	12.6	14.5	10.5	12.5	13.7	11.6	12.4	9.0	9.4	6.4	4.8	-2.5	-12.9	-22.5	-36.7	-55.4
Leq,d	16.0	-36.3	-30.3	-26.3	-10.8	-5.8	-11.9	-3.8	-1.9	-3.0	-1.0	-1.0	0.9	1.9	2.8	6.7	8.5	4.3	6.0	7.1	4.5	4.7	0.3	-0.7	-5.8	-10.6	-22.7	-38.0	-54.4	-77.5	
Leq,d	16.8	-35.4	-29.3	-25.4	-12.4	-7.4	-13.4	-5.4	-3.5	-4.6	-2.6	0.0	1.9	2.8	3.8	7.7	9.4	5.2	7.0	8.0	5.5	5.7	1.5	0.6	-4.3	-8.6	-20.1	-34.4	-49.4	-70.7	-98.1
Leq,d	6.4	-18.5	-35.5	-29.5	-14.5	-13.5	-11.5	-17.0	-13.1	-16.1	-9.7	-14.6	-12.7	-7.2	-7.2	-3.3	-4.4	-4.5	-3.6	-5.1	-2.5	-2.1	-6.0	-9.5	-14.8	-21.4	-28.8	-39.6	-52.6	-69.2	-88.1
Leq,d	6.2	-18.6	-35.6	-29.6	-14.6	-13.7	-11.7	-17.2	-13.3	-16.3	-9.9	-14.8	-12.9	-7.4	-7.4	-3.5	-4.6	-4.7	-3.8	-5.3	-2.7	-2.3	-6.2	-9.7	-15.1	-21.7	-29.2	-40.3	-53.5	-70.3	-89.8
Leq,d	6.0	-18.8	-35.7	-29.8	-14.8	-13.8	-11.8	-17.4	-13.4	-16.5	-10.1	-15.0	-13.1	-7.6	-7.6	-3.7	-4.8	-4.9	-4.0	-5.5	-2.9	-2.5	-6.5	-10.0	-15.4	-22.1	-29.8	-41.0	-54.4	-71.5	-91.5
Leq,d	7.0	-18.0	-35.0	-29.0	-14.0	-13.1	-11.1	-16.4	-12.5	-15.6	-9.0	-14.0	-12.1	-6.6	-6.6	-2.7	-3.8	-3.9	-3.1	-4.5	-1.9	-1.4	-5.3	-8.7	-13.8	-20.2	-27.2	-37.6	-49.9	-65.5	-83.3
Leq,d	6.8	-18.2	-35.2	-29.2	-14.2	-13.2	-11.2	-16.6	-12.7	-15.7	-9.2	-14.2	-12.3	-6.8	-6.8	-2.9	-4.0	-4.1	-3.2	-4.7	-2.1	-1.6	-5.5	-8.9	-14.1	-20.6	-27.7	-38.3	-50.8	-66.7	-84.8
Leq,d	6.6	-18.3	-35.3	-29.3	-14.3	-13.4	-11.4	-16.8	-12.9	-15.9	-9.5	-14.4	-12.5	-7.0	-7.0	-3.1	-4.2	-4.3	-3.4	-4.9	-2.3	-1.8	-5.8	-9.2	-14.4	-21.0	-28.2	-38.9	-51.7	-67.9	-86.4
Leq,d	5.3	-19.3	-36.3	-30.3	-15.3	-14.3	-12.3	-18.1	-14.1	-17.2	-13.3	-15.8	-13.8	-8.3	-8.3	-4.4	-5.4	-5.5	-4.6	-6.1	-3.6	-3.2	-7.3	-11.0	-16.5	-23.6	-31.7	-43.6	-57.9	-76.2	-98.1
Leq,d	5.1	-19.5	-36.4	-30.4	-15.4	-14.5	-12.5	-18.2	-14.3	-17.4	-13.5	-16.0	-14.0	-8.4	-8.5	-4.5	-5.6	-5.5	-4.7	-6.3	-3.7	-3.4	-7.5	-11.2	-16.9	-24.0	-32.2	-44.3	-58.9	-77.5	-99.8
Leq,d	5.0	-19.6	-36.5	-30.6	-15.6	-14.6	-12.6	-18.4	-14.5	-17.5	-13.7	-16.1	-14.2	-8.6	-8.6	-4.7	-5.7	-5.6	-4.8	-6.4	-3.9	-3.5	-7.7	-11.4	-17.1	-24.4	-32.7	-44.9	-59.7	-78.7	
Leq,d	5.8	-18.9	-35.9	-29.9	-14.9	-13.9	-11.9	-17.6	-13.6	-16.7	-12.8	-15.2	-13.3	-7.8	-7.8	-3.8	-4.9	-5.0	-4.2	-5.7	-3.1	-2.7	-6.7	-10.2	-15.7	-22.5	-30.3	-41.6	-55.3	-72.7	-93.2
Leq,d	5.6	-19.1	-36.0	-30.0	-15.0	-14.1	-12.1	-17.7	-13.8	-16.9	-13.0	-15.4	-13.5	-7.9	-7.9	-4.0	-5.1	-5.2	-4.3	-5.8	-3.2	-2.9	-6.9	-10.5	-16.0	-22.9	-30.7	-42.2	-56.1	-73.8	-94.8
Leq,d	5.4	-19.2	-36.2	-30.2	-15.2	-14.2	-12.2	-17.9	-14.0	-17.0	-13.2	-15.6	-13.7	-8.1	-8.1	-4.2	-5.3	-5.4	-4.5	-6.0	-3.4	-3.1	-7.1	-10.7	-16.3	-23.3	-31.2	-43.0	-57.1	-75.1	-96.6
Leq,d	12.6	-15.5	-32.5	-26.5	-11.5	-10.6	-8.6	-13.1	-9.2	-9.7	-5.2	-10.2	-6.9	-1.9	-1.9	3.3	1.8	1.7	2.6	1.2	3.9	4.6	0.9	-2.0	-6.5	-11.8	-17.3	-25.4	-34.5	-46.0	-58.7
Leq,d	12.3	-15.8	-32.7	-26.7	-11.7	-10.8	-8.8	-13.4	-9.5	-10.0	-5.5	-10.5	-8.5	-2.1	-2.1	3.0	1.5	1.4	2.3	0.9	3.7	4.3	0.6	-2.3	-6.8	-12.3	-17.9	-26.1	-35.4	-47.1	-60.2
Leq,d	12.0	-16.0	-32.9	-27.0	-12.0	-11.0	-9.0	-13.7	-9.8	-10.3	-5.9	-10.9	-8.9	-2.5	-2.5	2.7	1.2	1.2	2.1	0.6	3.4	4.0	0.3	-2.7	-7.2	-12.7	-18.5	-26.9	-36.4	-48.5	-61.9
Leq,d	13.0	-15.2	-32.2	-26.2	-11.2	-10.3	-8.3	-12.8	-8.9	-9.4	-4.8	-9.8	-6.6	-1.6	-0.3	3.6	2.1	2.0	2.9	1.5	4.2	4.9	1.3	-1.7	-6.1	-11.4	-16.8	-24.7	-33.6	-44.7	-57.1
Leq,d	11.6	-14.3	-31.3	-25.3	-10.3	-9.3	-7.3	-11.8	-7.9	-10.9	-6.0	-11.0	-9.0	-1.9	-1.9	2.0	0.6	0.5	1.4	-0.1	2.7	3.4	-0.2	-3.0	-7.3	-12.3	-17.4	-24.9	-33.0	-43.3	-54.6
Leq,d	11.3	-14.6	-31.6	-25.6	-10.6	-9.6	-7.6	-12.2	-8.2	-11.3	-6.5	-11.4	-9.5	-2.2	-2.2	1.7	0.3	0.2	1.1	-0.4	2.4	3.1	-0.5	-3.4	-7.7	-12.8	-18.0	-25.6	-34.0	-44.5	-56.1
Leq,d	12.1	-14.9	-31.9	-25.9	-10.9	-10.0	-8.0	-12.5	-8.5	-11.6	-6.9	-9.8	-7.9	-3.0	-1.3	2.7	1.2	1.1	2.0	0.6	3.3	4.0	0.4	-2.5	-6.9	-12.1	-17.4	-25.2	-33.8	-44.7	-56.7

Cathedral City Storage Noise
Contribution spectra - 002 - Cathedral City Storage: Outdoor SP

Time slice	Sum	25Hz	31.5Hz	40Hz	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz	20kHz
	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Leq,d	10.8	-16.1	-33.1	-27.1	-12.1	-11.2	-9.2	-13.9	-10.0	-10.5	-6.2	-11.2	-9.2	-2.7	-2.7	1.2	-0.2	-0.3	0.6	-0.8	2.0	2.6	-1.1	-4.1	-8.7	-14.2	-20.0	-28.5	-38.2	-50.4	-63.9
Leq,d	9.4	-17.1	-34.0	-28.0	-13.0	-12.1	-10.1	-15.2	-11.2	-14.3	-7.6	-12.6	-10.7	-5.3	-5.3	-0.1	-1.4	-1.5	-0.6	-2.0	0.7	1.2	-2.6	-5.7	-10.6	-16.5	-22.9	-32.3	-43.1	-56.9	-72.4
Leq,d	7.4	-17.7	-34.7	-28.7	-13.7	-12.8	-10.8	-16.0	-12.1	-15.2	-8.6	-13.6	-11.6	-6.2	-6.2	-2.3	-3.5	-3.6	-2.7	-4.2	-1.5	-1.0	-4.9	-8.2	-13.2	-19.4	-26.2	-36.3	-48.1	-63.2	-80.3
Leq,d	7.2	-17.9	-34.9	-28.9	-13.9	-12.9	-10.9	-16.2	-12.3	-15.4	-8.8	-13.8	-11.8	-6.4	-6.4	-2.5	-3.7	-3.8	-2.9	-4.4	-1.7	-1.2	-5.1	-8.4	-13.5	-19.8	-26.8	-37.0	-49.0	-64.4	-81.9
Leq,d	9.7	-16.9	-33.8	-27.8	-12.9	-11.9	-9.9	-14.9	-11.0	-11.5	-7.3	-12.3	-10.4	-5.0	-5.0	0.2	-1.1	-1.2	-0.3	-1.7	1.0	1.5	-2.2	-5.3	-10.1	-15.9	-22.2	-31.3	-41.9	-55.2	-70.2
Leq,d	10.5	-16.3	-33.3	-27.3	-12.3	-11.4	-9.4	-14.2	-10.2	-10.8	-6.5	-11.5	-9.5	-4.3	-3.0	1.0	-0.5	-0.5	0.4	-1.0	1.7	2.3	-1.4	-4.4	-9.0	-14.6	-20.5	-29.2	-39.0	-51.5	-65.3
Leq,d	10.2	-16.5	-33.5	-27.5	-12.5	-11.5	-9.5	-14.4	-10.5	-11.0	-6.8	-11.8	-9.8	-4.5	-3.2	0.7	-0.7	-0.8	0.1	-1.2	1.5	2.1	-1.6	-4.7	-9.4	-15.1	-21.0	-29.9	-40.0	-52.7	-66.8
Leq,d	9.9	-16.7	-33.7	-27.7	-12.7	-11.7	-9.7	-14.7	-10.7	-11.2	-7.1	-12.0	-10.1	-4.8	-4.8	0.5	-0.9	-1.0	-0.1	-1.5	1.2	1.8	-1.9	-5.0	-9.8	-15.5	-21.6	-30.6	-40.9	-53.9	-68.4
Leq,d	24.3					-6.5			0.3			7.8			15.2			18.8			19.9			17.4			5.8				
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Cathedral City Storage Noise
Contribution spectra - 002 - Cathedral City Storage: Outdoor SP

Time slice	Sum dB(A)	25Hz dB(A)	31.5Hz dB(A)	40Hz dB(A)	50Hz dB(A)	63Hz dB(A)	80Hz dB(A)	100Hz dB(A)	125Hz dB(A)	160Hz dB(A)	200Hz dB(A)	250Hz dB(A)	315Hz dB(A)	400Hz dB(A)	500Hz dB(A)	630Hz dB(A)	800Hz dB(A)	1kHz dB(A)	1.25kHz dB(A)	1.6kHz dB(A)	2kHz dB(A)	2.5kHz dB(A)	3.15kHz dB(A)	4kHz dB(A)	5kHz dB(A)	6.3kHz dB(A)	8kHz dB(A)	10kHz dB(A)	12.5kHz dB(A)	16kHz dB(A)	20kHz dB(A)
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Receiver R6 Fl G Lr,lim dB(A) Leq,d 45.3 dB(A) Sigma(Leq,d) 0.0 dB(A)																															
Leq,d	42.0					27.8			36.5			27.3			33.0			35.0			36.1			30.9			17.4			-11.8	
Leq,d	22.3					14.0			19.8			9.0			12.7			10.5			9.1			3.9			-8.8			-39.0	
Leq,d	25.7	-20.2	-14.4	-10.6	2.2	7.0	0.7	9.0	10.6	9.2	10.1	9.7	11.9	13.0	13.5	16.9	18.3	13.6	14.9	15.4	12.6	12.7	8.7	8.4	4.8	2.6	-4.9	-12.9	-18.5	-26.9	-37.9
Leq,d	14.0	-29.6	-23.7	-19.9	-7.1	-2.4	-8.7	-0.9	0.6	-0.9	0.6	0.1	1.5	1.8	2.1	5.2	6.3	1.4	2.4	2.7	-0.6	-0.9	-5.6	-6.7	-11.4	-14.8	-23.9	-34.8	-45.0	-59.9	-79.6
Leq,d	20.5	-27.8	-22.0	-15.8	-3.0	1.9	-4.3	3.6	5.4	4.1	5.8	5.5	7.1	7.7	8.3	11.7	13.0	8.3	9.6	10.0	7.0	6.9	2.6	2.0	-2.1	-4.9	-13.6	-23.6	-32.2	-44.7	-60.5
Leq,d	18.6	-10.6	-27.5	-21.6	-6.6	-3.1	1.4	-3.0	1.0	-2.1	3.2	-1.7	0.2	4.2	4.1	8.0	6.6	7.7	8.6	6.9	9.6	10.2	7.4	4.6	0.4	-4.4	-9.0	-15.5	-22.3	-30.5	-39.1
Leq,d	18.1	-11.1	-28.0	-22.0	-7.0	-6.1	-0.3	-3.5	0.5	-2.6	2.8	-2.2	-0.3	3.7	3.7	7.6	6.2	7.3	8.2	6.5	9.2	9.8	7.1	4.2	0.0	-4.9	-9.5	-16.1	-23.1	-31.6	-40.5
Leq,d	17.6	-11.5	-28.5	-22.5	-7.5	-6.6	-0.8	-4.0	0.0	-3.1	2.3	-2.7	-0.7	3.2	3.2	7.1	5.7	6.2	7.7	6.1	8.8	9.4	6.7	3.8	-0.4	-5.3	-10.0	-16.8	-24.0	-32.7	-42.0
Leq,d	20.4	-8.9	-25.8	-19.9	-4.9	-0.2	3.0	-1.3	2.7	-0.4	4.9	-0.1	1.8	5.7	5.7	9.6	9.4	9.3	10.1	8.7	11.4	12.5	9.0	6.2	2.0	-2.6	-6.9	-13.1	-19.2	-26.6	-34.1
Leq,d	19.9	-9.5	-26.4	-20.4	-5.5	-0.8	2.4	-1.9	2.1	-1.0	4.3	-0.7	1.3	5.2	5.2	9.0	8.2	8.7	9.6	8.3	10.9	12.1	8.6	5.8	1.6	-3.1	-7.5	-13.7	-20.1	-27.7	-35.6
Leq,d	19.4	-10.0	-27.0	-21.0	-6.0	-2.6	1.9	-2.4	1.5	-1.6	3.8	-1.2	0.7	4.7	4.6	8.5	7.7	8.2	9.1	7.8	10.5	11.7	8.2	5.4	1.2	-3.6	-8.0	-14.4	-21.0	-28.9	-37.1
Leq,d	16.3	-13.2	-30.2	-24.2	-9.2	-8.2	-6.2	-5.7	-1.7	-4.8	0.4	-4.5	-1.7	2.8	2.8	6.6	5.2	5.0	6.3	4.7	7.3	7.9	4.5	2.2	-2.2	-7.4	-12.5	-20.0	-28.0	-37.9	-48.7
Leq,d	15.9	-13.6	-30.5	-24.6	-9.6	-8.6	-6.6	-7.3	-2.1	-5.2	-0.1	-5.0	-2.5	2.5	2.4	6.3	4.8	4.7	6.0	4.3	7.0	7.5	3.8	1.8	-2.6	-7.9	-13.1	-20.6	-28.9	-39.1	-50.3
Leq,d	15.4	-13.9	-30.9	-24.9	-9.9	-8.9	-6.9	-7.6	-2.5	-5.5	-0.5	-5.5	-3.5	2.2	2.1	6.0	4.5	4.4	5.2	3.5	6.2	6.7	3.0	1.1	-3.4	-8.7	-14.1	-21.8	-30.3	-40.8	-52.3
Leq,d	17.2	-12.0	-29.0	-23.0	-8.0	-7.0	-2.5	-4.4	-0.5	-3.6	1.9	-3.1	-1.2	2.8	2.8	6.7	5.3	5.7	7.3	5.7	8.4	9.0	6.1	3.4	-0.8	-5.8	-10.6	-17.5	-24.9	-33.9	-43.6
Leq,d	17.0	-12.4	-29.4	-23.4	-8.4	-7.4	-2.9	-4.8	-0.9	-4.0	1.5	-3.5	-1.2	2.8	2.8	6.7	5.2	5.7	7.2	5.5	8.2	8.8	5.9	3.2	-1.1	-6.1	-11.0	-18.1	-25.6	-34.9	-44.9
Leq,d	16.5	-12.8	-29.8	-23.8	-8.8	-7.9	-3.4	-5.3	-1.4	-4.4	0.9	-4.0	-1.2	2.8	2.8	6.7	5.2	5.0	6.4	4.8	7.4	8.0	5.1	2.4	-2.0	-7.1	-12.1	-19.4	-27.2	-36.9	-47.3
Leq,d	28.4	3.3	-11.9	-5.9	9.1	10.0	12.0	8.0	11.9	8.7	13.8	8.8	11.4	15.3	15.1	19.1	17.8	17.4	18.1	16.1	18.7	19.1	15.4	12.6	8.6	4.4	0.9	-3.9	-8.0	-12.6	-16.6
Leq,d	28.7	4.8	-11.6	-5.6	9.4	10.3	12.3	8.3	12.2	9.1	14.1	9.1	11.7	15.6	15.4	19.4	18.0	17.7	18.3	16.4	18.9	19.3	15.6	12.8	8.8	4.6	1.2	-3.6	-7.7	-12.3	-16.2
Leq,d	28.6	4.7	-11.7	-5.7	9.3	10.2	12.2	8.2	12.1	8.9	14.0	9.0	11.6	15.5	15.3	19.3	17.9	17.6	18.2	16.3	18.8	19.3	15.5	12.7	8.8	4.6	1.1	-3.7	-7.8	-12.4	-16.3
Leq,d	28.0	2.6	-12.5	-6.6	8.4	9.4	11.3	7.3	11.2	8.1	13.2	8.2	10.1	14.8	14.6	18.6	17.3	17.0	17.6	15.7	18.3	18.7	15.0	12.2	8.2	4.0	0.5	-4.4	-8.6	-13.3	-17.5
Leq,d	25.8	-2.6	-17.3	-9.2	5.8	6.7	8.7	4.6	8.6	5.5	10.8	5.8	7.7	12.0	12.4	16.2	15.2	14.9	15.6	13.6	16.5	17.0	13.3	10.5	6.5	2.2	-1.5	-6.6	-11.3	-16.6	-21.4
Leq,d	26.6	0.7	-16.3	-8.3	6.7	7.6	9.6	5.6	9.5	6.4	11.6	6.6	8.5	13.3	13.2	16.9	15.9	15.6	16.3	14.2	17.1	17.6	13.9	11.1	7.1	2.9	-0.7	-5.8	-10.3	-15.4	-20.0
Leq,d	27.3	1.7	-13.3	-7.4	7.6	8.5	10.5	6.5	10.4	7.3	12.4	7.5	9.3	14.1	13.9	17.7	16.7	16.3	17.0	15.2	17.7	18.2	14.5	11.7	7.7	3.5	-0.1	-5.0	-9.4	-14.3	-18.6
Leq,d	28.3	3.0	-12.1	-6.1	8.8	9.8	11.7	7.7	11.6	8.5	13.6	8.6	10.4	15.1	14.9	19.0	17.6	17.3	17.9	16.0	18.6	19.0	15.3	12.5	8.5	4.3	0.8	-4.0	-8.2	-12.8	-16.9
Leq,d	24.6	-4.4	-18.9	-11.9	4.3	5.2	7.2	3.1	7.0	3.9	9.4	4.5	6.3	10.2	11.1	14.9	13.6	13.7	14.4	12.4	15.3	16.0	12.3	9.5	5.5	1.1	-2.7	-8.1	-13.0	-18.8	-24.2
Leq,d	21.6	-7.6	-24.6	-18.6	-1.1	2.2	4.2	0.0	3.9	0.8	6.1	1.1	3.0	6.9	6.8	11.3	10.6	10.4	11.6	9.7	12.3	13.5	9.9	7.0	2.9	-1.7	-5.8	-11.7	-17.4	-24.3	-31.1
Leq,d	20.9	-8.3	-25.3	-19.3	-1.8	1.6	3.6	-0.7	3.2	0.2	5.4	0.4	2.4	6.3	6.2	10.1	10.0	9.8	10.6	9.2	11.8	13.1	9.4	6.6	2.4	-2.2	-6.4	-12.4	-18.4	-25.5	-32.7
Leq,d	25.5	-3.2	-17.9	-9.7	5.3	6.2	8.2	4.1	8.1	5.0	10.3	5.4	7.3	11.1	12.0	15.8	14.5	14.6	15.3	13.3	16.3	16.8	13.1	10.3	6.3	2.0	-1.7	-6.9	-11.6	-17.1	-22.1

Cathedral City Storage Noise
Contribution spectra - 002 - Cathedral City Storage: Outdoor SP

Time slice	Sum dB(A)	25Hz dB(A)	31.5Hz dB(A)	40Hz dB(A)	50Hz dB(A)	63Hz dB(A)	80Hz dB(A)	100Hz dB(A)	125Hz dB(A)	160Hz dB(A)	200Hz dB(A)	250Hz dB(A)	315Hz dB(A)	400Hz dB(A)	500Hz dB(A)	630Hz dB(A)	800Hz dB(A)	1kHz dB(A)	1.25kHz dB(A)	1.6kHz dB(A)	2kHz dB(A)	2.5kHz dB(A)	3.15kHz dB(A)	4kHz dB(A)	5kHz dB(A)	6.3kHz dB(A)	8kHz dB(A)	10kHz dB(A)	12.5kHz dB(A)	16kHz dB(A)	20kHz dB(A)
Leq,d	27.6	2.1	-12.9	-6.9	8.0	9.0	11.0	6.9	10.8	7.7	12.9	7.9	9.7	14.4	14.3	18.0	17.0	16.6	17.3	15.5	18.1	18.5	14.8	12.0	8.1	3.8	0.3	-4.6	-8.9	-13.7	-17.9
Leq,d	27.0	1.2	-13.8	-7.8	7.2	8.1	10.1	6.1	10.0	6.9	12.1	7.1	8.9	13.7	13.6	17.3	16.3	16.0	16.7	14.7	17.5	18.0	14.3	11.5	7.5	3.3	-0.3	-5.3	-9.7	-14.7	-19.1
Leq,d	26.3	0.2	-16.8	-8.7	6.3	7.2	9.2	5.1	9.0	5.9	11.2	6.3	8.1	12.4	12.8	16.6	15.6	15.3	16.0	14.0	16.9	17.4	13.7	11.0	7.0	2.7	-0.9	-6.0	-10.6	-15.8	-20.5
Leq,d	39.7					9.8			17.5			23.6			29.3			34.1			34.9			33.1			26.5				
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Cathedral City Storage Noise
Contribution spectra - 002 - Cathedral City Storage: Outdoor SP

Time slice	Sum dB(A)	25Hz dB(A)	31.5Hz dB(A)	40Hz dB(A)	50Hz dB(A)	63Hz dB(A)	80Hz dB(A)	100Hz dB(A)	125Hz dB(A)	160Hz dB(A)	200Hz dB(A)	250Hz dB(A)	315Hz dB(A)	400Hz dB(A)	500Hz dB(A)	630Hz dB(A)	800Hz dB(A)	1kHz dB(A)	1.25kHz dB(A)	1.6kHz dB(A)	2kHz dB(A)	2.5kHz dB(A)	3.15kHz dB(A)	4kHz dB(A)	5kHz dB(A)	6.3kHz dB(A)	8kHz dB(A)	10kHz dB(A)	12.5kHz dB(A)	16kHz dB(A)	20kHz dB(A)
Leq,d																															
Receiver R7 Fl G Lr,lim dB(A) Leq,d 42.6 dB(A) Sigma(Leq,d) 0.0 dB(A)																															
Leq,d	34.7					22.5			29.9			19.8			25.4			27.7			27.8			21.2			3.8			-40.0	
Leq,d	21.0					12.8			18.7			7.7			10.8			8.5			6.9			1.6			-12.0			-44.5	
Leq,d	19.7	-28.4	-22.6	-18.8	-3.6	1.2	-4.9	3.2	4.9	3.6	5.1	4.8	6.4	7.0	7.5	11.0	12.3	7.6	8.8	9.2	6.2	6.1	1.7	1.0	-3.2	-6.1	-15.0	-25.3	-34.3	-47.1	-63.6
Leq,d	16.8	-27.9	-22.0	-18.3	-5.6	-0.9	-7.3	0.3	1.8	0.2	1.6	1.0	2.3	3.5	5.1	8.4	9.6	4.7	5.9	6.2	3.1	2.9	-1.7	-2.5	-6.6	-9.5	-18.3	-28.5	-37.3	-50.2	-67.0
Leq,d	25.4	-20.6	-14.7	-10.8	2.0	6.7	0.5	8.7	10.3	8.8	9.9	9.4	12.2	12.7	13.2	16.5	17.9	13.2	14.5	15.0	12.2	12.3	8.2	7.9	4.3	2.2	-5.2	-13.1	-18.6	-26.9	-37.8
Leq,d	27.1	-1.1	-13.9	-7.9	7.1	8.0	10.0	5.9	9.8	6.7	12.0	7.0	8.9	13.6	13.5	17.3	16.1	16.1	16.9	14.8	17.7	18.2	14.6	11.9	7.9	3.7	0.2	-4.7	-9.1	-14.2	-18.7
Leq,d	27.7	-0.2	-13.1	-7.1	7.9	8.8	10.8	6.7	10.6	7.5	12.8	7.7	9.6	14.3	14.2	18.0	17.0	16.7	17.5	15.5	18.2	18.7	15.1	12.3	8.4	4.2	0.8	-4.1	-8.4	-13.2	-17.6
Leq,d	28.2	4.6	-12.4	-6.4	8.5	9.5	11.5	7.4	11.3	8.2	13.4	8.4	10.2	14.9	14.7	18.5	17.6	17.3	18.0	15.9	18.6	19.1	15.5	12.7	8.8	4.7	1.2	-3.6	-7.8	-12.5	-16.6
Leq,d	24.9	-4.2	-21.1	-10.6	4.4	5.4	7.4	3.2	7.2	4.1	9.4	4.6	6.5	10.4	11.3	15.1	13.8	14.0	14.7	12.8	15.7	16.4	12.8	10.1	6.1	1.8	-1.9	-7.2	-12.0	-17.7	-23.1
Leq,d	25.6	-3.2	-20.2	-9.7	5.3	6.2	8.2	4.1	8.0	4.9	10.2	5.4	7.2	11.1	12.0	15.8	14.6	14.7	15.4	13.5	16.4	17.0	13.4	10.7	6.7	2.5	-1.2	-6.3	-11.0	-16.5	-21.5
Leq,d	26.3	-2.2	-14.8	-8.8	6.2	7.1	9.1	5.0	8.9	5.8	11.2	6.2	8.1	12.3	12.8	16.6	15.3	15.4	16.2	14.1	17.1	17.6	14.0	11.3	7.4	3.1	-0.5	-5.5	-10.0	-15.3	-20.0
Leq,d	27.9	4.1	-12.9	-6.9	8.1	9.0	11.0	7.0	10.9	7.8	13.0	7.9	9.8	14.5	14.4	18.2	17.2	16.9	17.6	15.5	18.3	18.9	15.2	12.5	8.6	4.4	0.9	-3.9	-8.2	-13.0	-17.3
Leq,d	27.2	-0.9	-13.7	-7.7	7.3	8.2	10.2	6.2	10.1	7.0	12.2	7.2	9.1	13.8	13.7	17.5	16.2	16.3	17.0	15.0	17.8	18.3	14.7	12.0	8.1	3.9	0.4	-4.6	-8.9	-13.9	-18.4
Leq,d	26.6	-1.8	-14.5	-8.5	6.5	7.4	9.4	5.4	9.3	6.2	11.5	6.5	8.4	12.6	13.1	16.9	15.6	15.7	16.4	14.4	17.3	17.8	14.2	11.5	7.6	3.3	-0.2	-5.2	-9.7	-14.8	-19.5
Leq,d	28.5	5.0	-12.0	-6.0	9.0	9.9	11.9	7.8	11.7	8.6	13.8	8.7	10.6	15.2	15.1	18.8	17.9	17.6	18.2	16.2	18.9	19.4	15.7	13.0	9.1	4.9	1.5	-3.3	-7.4	-12.1	-16.1
Leq,d	28.6	5.0	-11.9	-6.0	9.0	9.9	11.9	7.9	11.8	8.7	13.8	8.8	10.6	15.3	15.1	18.9	17.9	17.6	18.3	16.2	18.9	19.4	15.7	13.0	9.1	4.9	1.5	-3.3	-7.4	-12.0	-16.1
Leq,d	28.3	4.7	-12.3	-6.3	8.7	9.6	11.6	7.5	11.4	8.3	13.5	8.5	10.3	15.0	14.8	18.6	17.6	17.3	18.0	16.0	18.7	19.2	15.5	12.8	8.9	4.7	1.3	-3.5	-7.7	-12.4	-16.5
Leq,d	16.5	-12.8	-29.8	-23.8	-8.8	-7.8	-5.8	-6.5	-1.3	-4.4	0.9	-4.1	-1.8	2.3	2.3	6.2	4.7	5.1	6.5	5.0	7.7	8.3	5.3	2.6	-1.7	-6.8	-11.8	-19.1	-26.9	-36.5	-46.9
Leq,d	16.7	-12.4	-29.4	-23.4	-8.4	-7.4	-5.4	-4.8	-0.9	-4.0	1.4	-3.6	-1.6	2.4	2.4	6.3	4.8	5.3	6.8	5.3	8.0	8.6	5.7	3.0	-1.3	-6.3	-11.2	-18.3	-25.9	-35.2	-45.3
Leq,d	17.2	-11.9	-28.9	-22.9	-7.9	-6.9	-4.9	-4.3	-0.4	-3.5	1.9	-3.0	-1.1	2.9	2.9	6.8	5.3	5.8	7.3	5.7	8.4	9.1	6.1	3.5	-0.8	-5.7	-10.5	-17.4	-24.7	-33.7	-43.3
Leq,d	16.2	-13.2	-30.1	-24.2	-9.2	-8.2	-6.2	-6.9	-1.7	-4.8	0.4	-4.6	-2.6	2.3	2.2	6.1	4.5	4.4	6.3	4.8	7.4	8.0	5.0	2.3	-2.1	-7.3	-12.4	-19.8	-27.8	-37.8	-48.6
Leq,d	14.9	-14.2	-31.2	-25.2	-10.2	-9.3	-7.3	-11.8	-2.8	-5.9	-1.0	-6.0	-4.0	1.3	1.5	5.3	3.7	3.5	4.8	3.3	5.9	6.4	2.7	0.7	-3.8	-9.2	-14.6	-22.5	-31.2	-42.1	-54.1
Leq,d	15.2	-13.9	-30.9	-24.9	-9.9	-8.9	-6.9	-11.4	-2.5	-5.5	-0.6	-5.5	-3.6	1.9	1.8	5.6	4.1	3.9	5.2	3.6	6.2	6.8	3.0	1.1	-3.4	-8.7	-14.0	-21.8	-30.2	-40.8	-52.4
Leq,d	15.4	-13.5	-30.5	-24.5	-9.5	-8.6	-6.6	-11.1	-2.1	-5.2	-0.1	-5.1	-3.1	2.0	1.9	5.7	4.2	4.0	5.4	3.8	6.5	7.0	3.8	1.4	-3.0	-8.2	-13.4	-21.0	-29.3	-39.5	-50.7
Leq,d	17.7	-11.5	-28.5	-22.5	-7.5	-6.5	-2.5	-3.9	0.0	-3.1	2.3	-2.6	-0.7	3.3	3.3	7.2	5.7	6.8	7.7	6.1	8.8	9.5	6.7	3.9	-0.3	-5.2	-9.9	-16.6	-23.7	-32.5	-41.7
Leq,d	20.7	-8.7	-25.7	-19.7	-4.7	-0.1	3.1	-1.1	2.8	-0.3	5.0	0.0	2.0	5.9	5.9	9.8	9.7	9.5	10.4	9.1	11.8	12.9	9.5	6.7	2.6	-1.9	-6.1	-12.1	-18.1	-25.3	-32.7
Leq,d	23.4	-5.9	-22.8	-16.9	2.8	3.8	5.8	1.6	5.5	2.5	7.9	3.0	4.9	8.8	8.7	13.6	12.3	12.1	13.3	11.4	14.4	15.2	11.5	8.8	4.8	0.4	-3.4	-9.0	-14.2	-20.4	-26.3
Leq,d	24.2	-5.0	-22.0	-14.2	3.6	4.6	6.6	2.4	6.4	3.3	8.6	3.9	5.8	9.7	10.0	14.4	13.2	12.9	14.1	12.2	15.1	15.8	12.2	9.5	5.5	1.1	-2.6	-8.0	-13.1	-19.0	-24.6
Leq,d	20.2	-9.4	-26.4	-20.4	-5.4	-2.4	2.5	-1.8	2.1	-0.9	4.4	-0.6	1.3	5.3	5.3	9.2	9.1	8.9	9.8	8.5	11.2	12.4	9.0	6.2	2.1	-2.5	-6.7	-12.9	-19.1	-26.6	-34.4
Leq,d	18.2	-11.0	-28.0	-22.0	-7.0	-6.0	-0.3	-3.4	0.5	-2.5	2.8	-2.1	-0.2	3.8	3.7	7.7	6.2	7.3	8.2	6.6	9.3	10.0	7.2	4.4	0.2	-4.6	-9.2	-15.8	-22.6	-31.0	-39.9
Leq,d	19.0	-10.5	-27.5	-21.5	-6.5	-5.5	1.4	-2.9	1.0	-2.1	3.3	-1.7	0.3	4.2	4.2	8.1	7.3	7.8	8.7	7.1	10.2	11.4	8.0	5.2	1.0	-3.7	-8.2	-14.6	-21.3	-29.4	-37.9
Leq,d	19.5	-10.0	-26.9	-21.0	-6.0	-5.0	1.9	-2.4	1.5	-1.5	3.8	-1.2	0.8	4.7	4.7	8.6	7.8	8.4	9.2	7.5	10.7	11.9	8.5	5.7	1.6	-3.1	-7.5	-13.8	-20.3	-28.1	-36.2
Leq,d	38.3					8.0			15.7			21.9			27.7			32.3			33.4			32.2			25.6				
Leq,d																															

Cathedral City Storage Noise
Contribution spectra - 002 - Cathedral City Storage: Outdoor SP

Time slice	Sum	25Hz	31.5Hz	40Hz	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz	20kHz
	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
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Source group	Source type	Tr. lane	Leq,d dB(A)	A dB
Receiver R1 Fl G Lr,lim dB(A) Leq,d 46.7 dB(A) Sigma(Leq,d) 0.0 dB(A)				
Default industrial noise	Point		-8.4	0.0
Default industrial noise	Point		-8.7	0.0
Default industrial noise	Point		-8.8	0.0
Default industrial noise	Point		-9.0	0.0
Default industrial noise	Point		-8.6	0.0
Default industrial noise	Point		-8.0	0.0
Default industrial noise	Point		-4.9	0.0
Default industrial noise	Point		-8.3	0.0
Default industrial noise	Point		-6.3	0.0
Default industrial noise	Point		-8.6	0.0
Default industrial noise	Point		-8.6	0.0
Default industrial noise	Point		-8.7	0.0
Default industrial noise	Point		-8.8	0.0
Default industrial noise	Point		-9.4	0.0
Default industrial noise	Point		-9.5	0.0
Default industrial noise	Point		-9.6	0.0
Default industrial noise	Point		-9.7	0.0
Default industrial noise	Point		-10.0	0.0
Default industrial noise	Point		-10.2	0.0
Default industrial noise	Point		-10.3	0.0
Default industrial noise	Point		-10.4	0.0
Default industrial noise	Point		-10.5	0.0
Default industrial noise	Point		-10.6	0.0
Default industrial noise	Point		-10.7	0.0
Default industrial noise	Point		-11.0	0.0
Default industrial noise	Point		-10.6	0.0
Default industrial noise	Point		-10.7	0.0
Default industrial noise	Point		4.9	0.0
Default industrial noise	Point		14.2	0.0
Default industrial noise	Point		11.8	0.0
Default industrial noise	Point		0.3	0.0
Default parking lot noise	PLot		21.9	0.0
Default parking lot noise	PLot		46.7	0.0
Receiver R2 Fl G Lr,lim dB(A) Leq,d 47.7 dB(A) Sigma(Leq,d) 0.0 dB(A)				
Default industrial noise	Point		5.5	0.0
Default industrial noise	Point		5.3	0.0
Default industrial noise	Point		5.1	0.0
Default industrial noise	Point		5.0	0.0
Default industrial noise	Point		6.2	0.0
Default industrial noise	Point		6.7	0.0
Default industrial noise	Point		6.5	0.0
Default industrial noise	Point		6.4	0.0
Default industrial noise	Point		6.2	0.0

Source group	Source type	Tr. lane	Leq,d dB(A)	A dB
Default industrial noise	Point		6.0	0.0
Default industrial noise	Point		5.9	0.0
Default industrial noise	Point		5.5	0.0
Default industrial noise	Point		5.3	0.0
Default industrial noise	Point		4.8	0.0
Default industrial noise	Point		4.6	0.0
Default industrial noise	Point		4.5	0.0
Default industrial noise	Point		4.4	0.0
Default industrial noise	Point		4.2	0.0
Default industrial noise	Point		4.1	0.0
Default industrial noise	Point		3.8	0.0
Default industrial noise	Point		3.7	0.0
Default industrial noise	Point		3.6	0.0
Default industrial noise	Point		3.5	0.0
Default industrial noise	Point		3.3	0.0
Default industrial noise	Point		3.3	0.0
Default industrial noise	Point		3.2	0.0
Default industrial noise	Point		3.1	0.0
Default industrial noise	Point		21.5	0.0
Default industrial noise	Point		20.2	0.0
Default industrial noise	Point		14.5	0.0
Default industrial noise	Point		13.9	0.0
Default parking lot noise	PLot		23.4	0.0
Default parking lot noise	PLot		47.6	0.0
Receiver R3 Fl G Lr,lim dB(A) Leq,d 48.6 dB(A) Sigma(Leq,d) 0.0 dB(A)				
Default industrial noise	Point		6.5	0.0
Default industrial noise	Point		4.8	0.0
Default industrial noise	Point		4.6	0.0
Default industrial noise	Point		4.6	0.0
Default industrial noise	Point		6.4	0.0
Default industrial noise	Point		6.3	0.0
Default industrial noise	Point		6.2	0.0
Default industrial noise	Point		6.4	0.0
Default industrial noise	Point		6.6	0.0
Default industrial noise	Point		6.6	0.0
Default industrial noise	Point		6.1	0.0
Default industrial noise	Point		5.2	0.0
Default industrial noise	Point		4.7	0.0
Default industrial noise	Point		4.0	0.0
Default industrial noise	Point		3.8	0.0
Default industrial noise	Point		3.6	0.0
Default industrial noise	Point		3.5	0.0
Default industrial noise	Point		3.3	0.0
Default industrial noise	Point		3.2	0.0
Default industrial noise	Point		3.0	0.0

Source group	Source type	Tr. lane	Leq,d dB(A)	A dB
Default industrial noise	Point		2.9	0.0
Default industrial noise	Point		2.7	0.0
Default industrial noise	Point		2.7	0.0
Default industrial noise	Point		2.5	0.0
Default industrial noise	Point		2.4	0.0
Default industrial noise	Point		2.3	0.0
Default industrial noise	Point		2.1	0.0
Default industrial noise	Point		20.7	0.0
Default industrial noise	Point		19.6	0.0
Default industrial noise	Point		15.1	0.0
Default industrial noise	Point		15.3	0.0
Default parking lot noise	PLot		24.4	0.0
Default parking lot noise	PLot		48.6	0.0
Receiver R4 Fl G Lr,lim dB(A) Leq,d 49.7 dB(A) Sigma(Leq,d) 0.0 dB(A)				
Default industrial noise	Point		8.2	0.0
Default industrial noise	Point		6.8	0.0
Default industrial noise	Point		6.5	0.0
Default industrial noise	Point		9.4	0.0
Default industrial noise	Point		9.6	0.0
Default industrial noise	Point		8.7	0.0
Default industrial noise	Point		9.5	0.0
Default industrial noise	Point		9.3	0.0
Default industrial noise	Point		9.2	0.0
Default industrial noise	Point		8.8	0.0
Default industrial noise	Point		8.5	0.0
Default industrial noise	Point		6.5	0.0
Default industrial noise	Point		6.2	0.0
Default industrial noise	Point		5.5	0.0
Default industrial noise	Point		5.3	0.0
Default industrial noise	Point		5.1	0.0
Default industrial noise	Point		4.9	0.0
Default industrial noise	Point		4.8	0.0
Default industrial noise	Point		4.6	0.0
Default industrial noise	Point		4.4	0.0
Default industrial noise	Point		4.3	0.0
Default industrial noise	Point		4.1	0.0
Default industrial noise	Point		4.0	0.0
Default industrial noise	Point		3.8	0.0
Default industrial noise	Point		3.7	0.0
Default industrial noise	Point		3.5	0.0
Default industrial noise	Point		3.4	0.0
Default industrial noise	Point		22.2	0.0
Default industrial noise	Point		20.7	0.0
Default industrial noise	Point		16.2	0.0
Default industrial noise	Point		15.4	0.0

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Source group	Source type	Tr. lane	Leq,d dB(A)	A dB
Default parking lot noise	PLot		25.4	0.0
Default parking lot noise	PLot		49.6	0.0
Receiver R5 Fl G Lr,lim dB(A) Leq,d 49.9 dB(A) Sigma(Leq,d) 0.0 dB(A)				
Default industrial noise	Point		18.0	0.0
Default industrial noise	Point		18.6	0.0
Default industrial noise	Point		18.9	0.0
Default industrial noise	Point		18.4	0.0
Default industrial noise	Point		18.0	0.0
Default industrial noise	Point		17.9	0.0
Default industrial noise	Point		17.0	0.0
Default industrial noise	Point		16.8	0.0
Default industrial noise	Point		16.5	0.0
Default industrial noise	Point		16.2	0.0
Default industrial noise	Point		15.5	0.0
Default industrial noise	Point		15.2	0.0
Default industrial noise	Point		14.9	0.0
Default industrial noise	Point		13.8	0.0
Default industrial noise	Point		13.5	0.0
Default industrial noise	Point		13.3	0.0
Default industrial noise	Point		13.1	0.0
Default industrial noise	Point		12.8	0.0
Default industrial noise	Point		13.2	0.0
Default industrial noise	Point		12.9	0.0
Default industrial noise	Point		12.7	0.0
Default industrial noise	Point		12.5	0.0
Default industrial noise	Point		12.2	0.0
Default industrial noise	Point		12.0	0.0
Default industrial noise	Point		11.8	0.0
Default industrial noise	Point		10.4	0.0
Default industrial noise	Point		10.2	0.0
Default industrial noise	Point		31.1	0.0
Default industrial noise	Point		26.7	0.0
Default industrial noise	Point		16.6	0.0
Default industrial noise	Point		17.6	0.0
Default parking lot noise	PLot		26.9	0.0
Default parking lot noise	PLot		49.8	0.0
Receiver R5 Fl G Lr,lim dB(A) Leq,d 49.9 dB(A) Sigma(Leq,d) 0.0 dB(A)				
Default industrial noise	Point		11.6	0.0
Default industrial noise	Point		11.3	0.0
Default industrial noise	Point		12.1	0.0
Default industrial noise	Point		13.0	0.0
Default industrial noise	Point		12.6	0.0
Default industrial noise	Point		12.3	0.0
Default industrial noise	Point		12.0	0.0

Source group	Source type	Tr. lane	Leq,d dB(A)	A dB	
Default industrial noise	Point		10.8	0.0	
Default industrial noise	Point		10.5	0.0	
Default industrial noise	Point		10.2	0.0	
Default industrial noise	Point		9.9	0.0	
Default industrial noise	Point		9.7	0.0	
Default industrial noise	Point		9.4	0.0	
Default industrial noise	Point		7.4	0.0	
Default industrial noise	Point		7.2	0.0	
Default industrial noise	Point		7.0	0.0	
Default industrial noise	Point		6.8	0.0	
Default industrial noise	Point		6.6	0.0	
Default industrial noise	Point		6.4	0.0	
Default industrial noise	Point		6.2	0.0	
Default industrial noise	Point		6.0	0.0	
Default industrial noise	Point		5.8	0.0	
Default industrial noise	Point		5.6	0.0	
Default industrial noise	Point		5.4	0.0	
Default industrial noise	Point		5.3	0.0	
Default industrial noise	Point		5.1	0.0	
Default industrial noise	Point		5.0	0.0	
Default industrial noise	Point		24.3	0.0	
Default industrial noise	Point		22.7	0.0	
Default industrial noise	Point		16.0	0.0	
Default industrial noise	Point		16.8	0.0	
Default parking lot noise	PLot		26.6	0.0	
Default parking lot noise	PLot		49.9	0.0	
Receiver R6 Fl G Lr,lim dB(A) Leq,d 45.3 dB(A) Sigma(Leq,d) 0.0 dB(A)					
Default industrial noise	Point		25.8	0.0	
Default industrial noise	Point		26.6	0.0	
Default industrial noise	Point		27.3	0.0	
Default industrial noise	Point		28.0	0.0	
Default industrial noise	Point		28.4	0.0	
Default industrial noise	Point		28.7	0.0	
Default industrial noise	Point		28.6	0.0	
Default industrial noise	Point		28.3	0.0	
Default industrial noise	Point		27.6	0.0	
Default industrial noise	Point		27.0	0.0	
Default industrial noise	Point		26.3	0.0	
Default industrial noise	Point		25.5	0.0	
Default industrial noise	Point		24.6	0.0	
Default industrial noise	Point		21.6	0.0	
Default industrial noise	Point		20.9	0.0	
Default industrial noise	Point		20.4	0.0	
Default industrial noise	Point		19.9	0.0	
Default industrial noise	Point		19.4	0.0	

Source group	Source type	Tr. lane	Leq,d dB(A)	A dB
Default industrial noise	Point		18.6	0.0
Default industrial noise	Point		18.1	0.0
Default industrial noise	Point		17.6	0.0
Default industrial noise	Point		17.2	0.0
Default industrial noise	Point		17.0	0.0
Default industrial noise	Point		16.5	0.0
Default industrial noise	Point		16.3	0.0
Default industrial noise	Point		15.9	0.0
Default industrial noise	Point		15.4	0.0
Default industrial noise	Point		39.7	0.0
Default industrial noise	Point		25.7	0.0
Default industrial noise	Point		14.0	0.0
Default industrial noise	Point		20.5	0.0
Default parking lot noise	PLot		22.3	0.0
Default parking lot noise	PLot		42.0	0.0
Receiver R7 Fl G Lr,lim dB(A) Leq,d 42.6 dB(A) Sigma(Leq,d) 0.0 dB(A)				
Default industrial noise	Point		14.9	0.0
Default industrial noise	Point		15.2	0.0
Default industrial noise	Point		15.4	0.0
Default industrial noise	Point		16.2	0.0
Default industrial noise	Point		16.5	0.0
Default industrial noise	Point		16.7	0.0
Default industrial noise	Point		17.2	0.0
Default industrial noise	Point		17.7	0.0
Default industrial noise	Point		18.2	0.0
Default industrial noise	Point		19.0	0.0
Default industrial noise	Point		19.5	0.0
Default industrial noise	Point		20.2	0.0
Default industrial noise	Point		20.7	0.0
Default industrial noise	Point		23.4	0.0
Default industrial noise	Point		24.2	0.0
Default industrial noise	Point		24.9	0.0
Default industrial noise	Point		25.6	0.0
Default industrial noise	Point		26.3	0.0
Default industrial noise	Point		27.1	0.0
Default industrial noise	Point		27.7	0.0
Default industrial noise	Point		28.2	0.0
Default industrial noise	Point		28.5	0.0
Default industrial noise	Point		28.6	0.0
Default industrial noise	Point		28.3	0.0
Default industrial noise	Point		27.9	0.0
Default industrial noise	Point		27.2	0.0
Default industrial noise	Point		26.6	0.0
Default industrial noise	Point		38.3	0.0
Default industrial noise	Point		19.7	0.0

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Source group	Source type	Tr. lane	Leq,d dB(A)	A dB
Default industrial noise	Point		16.8	0.0
Default industrial noise	Point		25.4	0.0
Default parking lot noise	PLot		21.0	0.0
Default parking lot noise	PLot		34.7	0.0

Cathedral City Storage Noise
Octave spectra of the sources in dB(A) - 002 - Cathedral City Storage: Outdoor SP

Name	Source type	I or A	Li	R'w	L'w	Lw	KI	KT	LwMax	DO-Wall	Time histogram	Emission spectrum	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	16kHz
		m,m²	dB(A)	dB	dB(A)	dB(A)	dB	dB	dB(A)	dB			dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
	PLot	12641.06			54.8	95.8	0.0	0.0		0	100%/24h	Typical spectrum	79.2	90.8	83.3	87.8	87.9	88.3	85.6	79.4	66.6
Auto Parking	PLot	1682.55			51.7	84.0	0.0	0.0		0	100%/24h	Typical spectrum	67.3	78.9	71.4	75.9	76.0	76.4	73.7	67.5	54.7
HVAC	Point				74.9	74.9	0.0	0.0		0	100%/24h	HVAC: 67.7dB @ 3ft - Carrier 50TFQ0006 -	52.0	60.5	62.9	67.2	69.5	69.1	66.1	61.2	48.9
HVAC	Point				74.9	74.9	0.0	0.0		0	100%/24h	HVAC: 67.7dB @ 3ft - Carrier 50TFQ0006 -	52.0	60.5	62.9	67.2	69.5	69.1	66.1	61.2	48.9
HVAC	Point				74.9	74.9	0.0	0.0		0	100%/24h	HVAC: 67.7dB @ 3ft - Carrier 50TFQ0006 -	52.0	60.5	62.9	67.2	69.5	69.1	66.1	61.2	48.9
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5

Cathedral City Storage Noise
Octave spectra of the sources in dB(A) - 002 - Cathedral City Storage: Outdoor SP

Name	Source type	I or A	Li	R'w	L'w	Lw	KI	KT	LwMax	DO-Wall	Time histogram	Emission spectrum	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	16kHz
		m,m²	dB(A)	dB	dB(A)	dB(A)	dB	dB	dB(A)	dB			dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Idiling Cars	Point				62.8	62.8	0.0	0.0		0	100%/24h	Drive-Thru - Idiling Car @ 6ft	46.8	48.3	51.8	55.5	56.4	57.6	54.0	45.9	39.5
Truck: loading general cargo	Point				80.0	80.0	0.0	0.0		0	100%/24h	Truck: loading general cargo	47.0	57.0	64.1	70.1	73.0	74.0	74.1	72.0	

Appendix C:

FHWA Roadway Noise Modeling Worksheets

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

PROJECT:	Date Palm Rosemount	JOB #:	0741-22-31
ROADWAY:	Date Palm Dr	DATE:	28-Dec-23
LOCATION:	Date Palm Existing	ENGINEER:	R. Pearson

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT =	21,246	
SPEED =	55	
PK HR % =	10	
NEAR LANE/FAR LANE DIST	0	
ROAD ELEVATION =	0.0	
GRADE =	1.0	%
PK HR VOL =	2,125	

RECEIVER INPUT DATA

RECEIVER DISTANCE =		50
DIST C/L TO WALL =		80
RECEIVER HEIGHT =		5.0
WALL DISTANCE FROM RECEIVER =		(30)
PAD ELEVATION =		0.5
ROADWAY VIEW:	LF ANGLE=	-90
	RT ANGLE=	90
	DF ANGLE=	180

SITE CONDITIONS

AUTOMOBILES =	15
MEDIUM TRUCKS =	15
HEAVY TRUCKS =	15

(10 = HARD SITE, 15 = SOFT SITE)

WALL INFORMATION

HTH WALL=	0.0	
AMBIENT=	0.0	
BARRIER =	0	(0 = WALL, 1 = BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES	2.0	50.12	- -
MEDIUM TRUCKS	4.0	50.02	- -
HEAVY TRUCKS	8.0	50.06	0.00

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	71.9	70.0	68.2	62.1	70.8	71.4
MEDIUM TRUCKS	61.8	60.3	53.9	52.3	60.8	61.0
HEAVY TRUCKS	61.8	60.3	51.3	52.6	60.9	61.0
NOISE LEVELS (dBA)	72.6	70.8	68.4	63.0	71.6	72.1

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	71.9	70.0	68.2	62.1	70.8	71.4
MEDIUM TRUCKS	61.8	60.3	53.9	52.3	60.8	61.0
HEAVY TRUCKS	61.8	60.3	51.3	52.6	60.9	61.0
NOISE LEVELS (dBA)	72.6	70.8	68.4	63.0	71.6	72.1

NOISE CONTOUR (FT)				
NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	69	149	321	691
LDN	64	137	295	636

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

PROJECT: Date Palm Rosemount
ROADWAY: Date Palm Dr
LOCATION: Date Palm Alternative 1

JOB #: 0741-22-31
DATE: 28-Dec-23
ENGINEER: R. Pearson

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 24,903
SPEED = 55
PK HR % = 10
NEAR LANE/FAR LANE DIST 0
ROAD ELEVATION = 0.0
GRADE = 1.0 %
PK HR VOL = 2,490

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 80
RECEIVER HEIGHT = 5.0
WALL DISTANCE FROM RECEIVER = (30)
PAD ELEVATION = 0.5
ROADWAY VIEW: LF ANGLE= -90
RT ANGLE= 90
DF ANGLE= 180

SITE CONDITIONS

AUTOMOBILES = 15
MEDIUM TRUCKS = 15
HEAVY TRUCKS = 15
(10 = HARD SITE, 15 = SOFT SITE)

WALL INFORMATION

HTH WALL= 0.0
AMBIENT= 0.0
BARRIER = 0 (0 = WALL, 1 = BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES	2.0	50.12	- -
MEDIUM TRUCKS	4.0	50.02	- -
HEAVY TRUCKS	8.0	50.06	0.00

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	72.5	70.6	68.9	62.8	71.4	72.1
MEDIUM TRUCKS	62.4	60.9	54.6	53.0	61.5	61.7
HEAVY TRUCKS	62.4	61.0	52.0	53.2	61.6	61.7
NOISE LEVELS (dBA)	73.3	71.5	69.1	63.7	72.3	72.8

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	72.5	70.6	68.9	62.8	71.4	72.1
MEDIUM TRUCKS	62.4	60.9	54.6	53.0	61.5	61.7
HEAVY TRUCKS	62.4	61.0	52.0	53.2	61.6	61.7
NOISE LEVELS (dBA)	73.3	71.5	69.1	63.7	72.3	72.8

NOISE CONTOUR (FT)				
NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	77	165	356	768
LDN	71	152	328	707

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

PROJECT:	Date Palm Rosemount	JOB #:	0741-22-31
ROADWAY:	Date Palm Dr	DATE:	28-Dec-23
LOCATION:	Date Palm Alternative 2	ENGINEER:	R. Pearson

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT =	24,522
SPEED =	55
PK HR % =	10
NEAR LANE/FAR LANE DIST	0
ROAD ELEVATION =	0.0
GRADE =	1.0 %
PK HR VOL =	2,452

RECEIVER INPUT DATA

RECEIVER DISTANCE =		50
DIST C/L TO WALL =		80
RECEIVER HEIGHT =		5.0
WALL DISTANCE FROM RECEIVER =		(30)
PAD ELEVATION =		0.5
ROADWAY VIEW:	LF ANGLE=	-90
	RT ANGLE=	90
	DF ANGLE=	180

SITE CONDITIONS

AUTOMOBILES =	15
MEDIUM TRUCKS =	15
HEAVY TRUCKS =	15

(10 = HARD SITE, 15 = SOFT SITE)

WALL INFORMATION

HTH WALL=	0.0
AMBIENT=	0.0
BARRIER =	0 (0 = WALL, 1 = BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES	2.0	50.12	- -
MEDIUM TRUCKS	4.0	50.02	- -
HEAVY TRUCKS	8.0	50.06	0.00

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	72.5	70.6	68.8	62.8	71.4	72.0
MEDIUM TRUCKS	62.4	60.9	54.5	53.0	61.4	61.7
HEAVY TRUCKS	62.4	61.0	51.9	53.2	61.5	61.7
NOISE LEVELS (dBA)	73.3	71.4	69.1	63.6	72.2	72.7

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	72.5	70.6	68.8	62.8	71.4	72.0
MEDIUM TRUCKS	62.4	60.9	54.5	53.0	61.4	61.7
HEAVY TRUCKS	62.4	61.0	51.9	53.2	61.5	61.7
NOISE LEVELS (dBA)	73.3	71.4	69.1	63.6	72.2	72.7

NOISE CONTOUR (FT)				
NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	76	164	353	760
LDN	70	151	325	700

Appendix D:

Construction Noise Modeling Output

Receptor - Residences to the East

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Edge of Site to Receptor, feet	Center of Site to Receptor, feet	Item Usage Percent[1]	Ground Factor[2]	Usage Factor	Receptor Item Lmax, dBA	Recptor. Item Leq, dBA
SITE PREP									
Tractor	4	84	80	178	40	0.66	0.40	78.6	65.4
Dozer	3	82	80	178	40	0.66	0.40	76.6	63.4
							Log Sum	78.6	73.1
GRADE									
Excavator	1	81	80	178	40	0.66	0.40	75.6	62.4
Grader	1	85	80	178	40	0.66	0.40	79.6	66.4
Dozer	1	82	80	178	40	0.66	0.40	76.6	63.4
Tractor	3	84	150	400	40	0.66	0.40	71.3	56.0
								79.6	69.7
BUILD									
Crane	1	81	80	178	16	0.66	0.16	75.6	58.4
Man lift	3	75	80	178	20	0.66	0.20	69.6	53.3
Generator	1	81	80	178	50	0.66	0.50	75.6	63.3
Tractor	3	84	80	178	40	0.66	0.40	78.6	65.4
Welder/Torch	1	74	80	178	40	0.66	0.40	68.6	55.4
								78.6	71.5
PAVE									
Paver	2	77	80	178	50	0.66	0.50	71.6	59.3
Compactor (ground)	2	83	80	178	20	0.66	0.20	77.6	61.3
Roller	2	80	80	178	20	0.66	0.20	74.6	58.3
								77.6	67.6
ARCH COAT									
Compressor (air)	1	78	80	178	40	0.66	0.40	72.6	59.4
								72.6	59.4

[1]FHWA Construction Noise Handbook: Table 9.1 RCNM Default Noise Emission Reference Levels and Usage Factors

Appendix E:

Construction Vibration Modeling Output

VIBRATION LEVEL IMPACT			
Project:	Date Palm Rosemount		Date: 4/14/23
Source:	Large Bulldozer		
Scenario:	Unmitigated		
Location:	Adjacent residences		
Address:	Date Palm and Rosemount		
PPV = PPVref(25/D)^n (in/sec)			

DATA INPUT

Equipment = Type	2	Large Bulldozer	INPUT SECTION IN BLUE
PPVref =	0.089	Reference PPV (in/sec) at 25 ft.	
D =	50.00	Distance from Equipment to Receiver (ft)	
n =	1.10	Vibration attenuation rate through the ground	

Note: Based on reference equations from Vibration Guidance Manual, California Department of Transportation, 2006, pgs 38-43.

DATA OUT RESULTS

PPV =	**0.042**	IN/SEC	OUTPUT IN RED

Appendix E

Soils Report

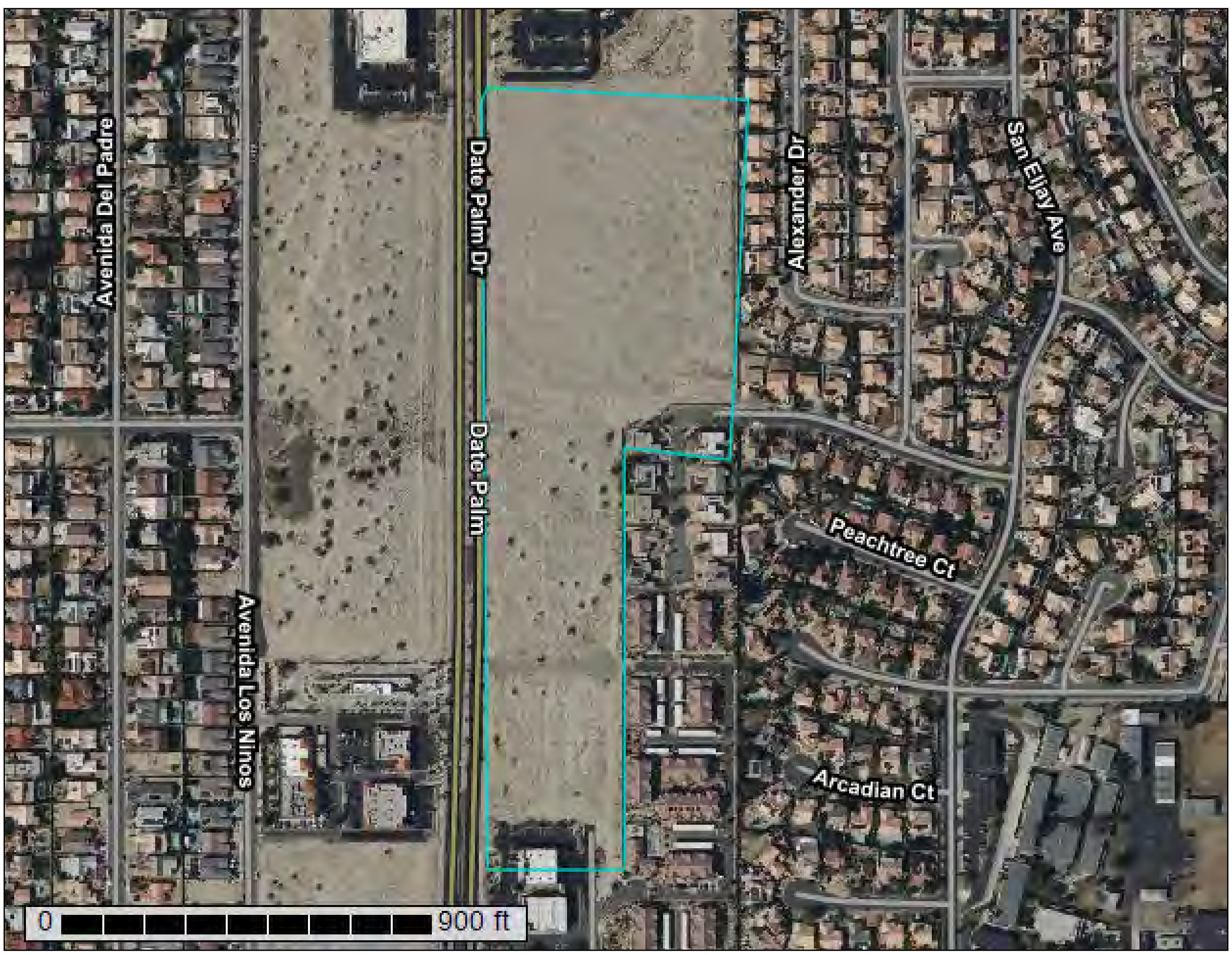
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for
Riverside County, Coachella Valley Area, California



July 10, 2023

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Soil Map


116° 27' 35" W
116° 27' 14" W
33° 49' 46" N
33° 49' 24" N
550010
550090
550170
550250
550330
550410
550490
3743370
3743290
3743210
3743130
3743050
3742970
3742890
3742810
3742730
Date Palm
Date Palm Dr
Alexander Dr
Winter Dr
Rosemount Rd
Kemper Ct
MaB
Soil Map may not be valid at this scale.
Map Scale: 1:3,380 if printed on A portrait (8.5" x 11") sheet.
Meters
0 50 100 200 300
Feet
0 150 300 600 900
N
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Riverside County, Coachella Valley Area, California
Survey Area Data: Version 14, Sep 1, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 15, 2022—May 28, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND	MAP INFORMATION
	imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
MaB	Myoma fine sand, 0 to 5 percent slopes	20.2	100.0%
Totals for Area of Interest		**20.2**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Riverside County, Coachella Valley Area, California

MaB—Myoma fine sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: hkw3
Elevation: -200 to 1,800 feet
Mean annual precipitation: 2 to 4 inches
Mean annual air temperature: 72 to 75 degrees F
Frost-free period: 270 to 320 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Myoma and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Myoma

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Wind blown sandy alluvium

Typical profile

H1 - 0 to 18 inches: fine sand
H2 - 18 to 60 inches: sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: R040XD007CA - Lacustrine Basin and Large RIver Floodplain
Hydric soil rating: No

Minor Components

Coachella

Percent of map unit: 4 percent

Hydric soil rating: No

Carsitas

Percent of map unit: 4 percent
Hydric soil rating: No

Unnamed, noncalcareous soils

Percent of map unit: 4 percent
Hydric soil rating: No

Riverwash

Percent of map unit: 3 percent
Landform: Channels
Hydric soil rating: Yes

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Appendix F

Traffic Analysis

Date Palm Drive Mixed Use Transportation Analysis

Prepared for:

The Altum Group
Strive Higher

44-600 Village Court, Suite 100
Palm Desert CA, 92260

Prepared by:

INTEGRATED ENGINEERING GROUP

23905 Clinton Keith Road 114-280
Wildomar, CA 92595

December 2023

Date Palm Drive Mixed Use Transportation Analysis

Prepared for:

The Altum Group
Strive Higher

44-600 Village Court, Suite 100
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June 2024

EXECUTIVE SUMMARY

Purpose of the Report

The purpose of this transportation analysis (TA) report is to identify and document potential traffic deficiencies related to the proposed Date Palm Drive Mixed Use project (Project) in Cathedral City. The technical report will be prepared in accordance with the County of Riverside Transportation Analysis Guidelines for Level of Service (LOS) and Vehicle Miles Traveled (VMT), December 2020 (Guidelines). This technical report will also recommend transportation improvements to address potential Project deficiencies at local and regional transportation facilities.

Project Overview

The Project will be developed on a vacant site located on the southeast corner of Date Palm Drive and Rosemount Road. The project is proposing the construction of the following two land use scenarios, each in two phases:

Scenario 1

- Phase 1:
  - 115,054 sf of mini warehouse (self-storage facility including office space)
- Phase 2:
  - 11,159 sf of strip retail plaza
  - 7,030 sf of fast-food restaurant with drive-through window

Scenario 2

- Phase 1:
  - 115,054 sf of mini warehouse (self-storage facility including office space)
- Phase 2:
  - 54,725 sf of shopping plaza (including 50,000 sf of supermarket and 4,725 sf of retail)

Under existing conditions, Rosemount Road does not extend to Date Palm Drive. The Project will be conditioned to construct half-width roadway improvement along the property frontage on Rosemount Road including curb, gutter, sidewalk and paving. Therefore, this report will take into consideration the following in addressing the proposed Project phases:

- Phase 1 – Rosemount Road extension not constructed prior to opening year 2025. Access would be limited to one proposed driveway along Date Palm Drive and one existing driveway along McCallum Way.
- Phase 2 - Rosemount Road extension is in place prior to opening year 2027. Access to the project site will be provided via one proposed driveway along Date Palm Drive, one proposed driveway along Rosemount Road that is aligned with the main access point to the Wren Residential development located at the northeast corner of Date Palm Drive and Rosemount Road, and one existing driveway along McCallum Way. Additionally, the Project will construct a traffic signal at the new intersection of Rosemount Road and Date Palm Drive.

The Project trip generation was calculated using the ITE Trip Generation Manual (11th Edition). It is estimated that Scenario 1 will generate 1,696 total daily trips, 192 AM peak hour trips and 137 PM peak hour trips and Scenario 2 will generate 3,542 total daily trips, 203 AM peak hour trips and 340

PM peak hour trips which represents the worst-case scenario. However, since Scenario 1 would result in 13 additional outbound AM peak hour trips, Scenario 2 will still be the governing scenario for analysis and only the intersection AM peak hour will be analyzed for Scenario 1 as supplemental analysis. Please refer to the trip generation tables in Chapter 1 of this report.

Project trip distribution and assignment were developed, in coordination with the Cathedral City staff, based on the land use characteristics of the proposed project and surrounding area, existing travel patterns within the study area, anticipated travel patterns to and from the project site, and approved projects located in the vicinity of the project site. Analysis scenarios and study area were then established in coordination with City staff to determine the potential project deficiencies on the transportation network. Refer to **Appendix A** for approved scoping agreement.

Analysis Scenarios:
- Existing Conditions Year 2023
- Project Completion Year 2025 (Existing Plus Ambient Plus Project Phase 1)
- Project Completion Year 2027 (Existing Plus Ambient Plus Project Phases 1 & 2)
- Cumulative Year 2027 (Existing Plus Ambient Plus Cumulative Plus Project)

Study Area Intersections:
1. Date Palm Drive and McCallum Way
2. Date Palm Drive and Rosemount Road (Phase 2 only)
3. Date Palm Drive and 30th Avenue
4. Date Palm Drive and Tachevah Drive
5. Date Palm Drive and Project Driveway
6. Project Driveway and McCallum Way

Study Roadway Segments:
1. Date Palm Drive, McCallum Way to Project Driveway
2. Date Palm Drive, Project Driveway to Rosemount Road
3. Date Palm Drive, Rosemount Road to 30th Avenue
4. Date Palm Drive, 30th Avenue to Tachevah Drive

Analysis Results and Recommendations

Scenario 2

Existing Year 2023

All study area intersections operate at an acceptable level of service (LOS) under Existing Year 2023 Conditions. All roadway segments have capacity at an acceptable LOS under Existing Year 2023 Conditions. Therefore, no improvements are required by this project.

Project Completion Year 2025

All study area intersections operate at an acceptable LOS under Project Completion Year 2025 Conditions. All roadway segments have capacity at an acceptable LOS under Project Completion Year 2025 Conditions. Therefore, no improvements are required by this project.

Date Palm Drive Mixed Use Vehicle Miles Traveled Screening Assessment

Prepared for:
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Prepared by:

INTEGRATED ENGINEERING GROUP
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23905 Clinton Keith 114-280
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June 2024

1.0 PROJECT INTRODUCTION

The purpose of this report is to evaluate the project's Vehicle Miles Traveled (VMT) analysis requirements and compliance with Senate Bill 743 (SB 743) and the California Environmental Quality Act (CEQA).

1.1 PROJECT DESCRIPTION

The project will be developed on a vacant site located on the southeast corner of Date Palm Drive and Rosemount Road in Cathedral City. The project is proposing the construction of the following two land use scenarios, each in two phases:

Scenario 1

- Phase 1:
  - 115,054 sf of mini warehouse (self-storage facility including office space)
- Phase 2:
  - 11,159 sf of strip retail plaza
  - 7,030 sf of fast-food restaurant with drive-through window

Scenario 2

- Phase 1:
  - 115,054 sf of mini warehouse (self-storage facility including office space)
- Phase 2:
  - 54,725 sf of shopping plaza (including 50,000 sf of supermarket and 4,725 sf of retail)

Additionally, Rosemount Road does not currently extend to Date Palm Drive. It is anticipated that the appropriate dedications and easements will be in place prior to project opening. Therefore, this report will address the following access scenarios:

- Alternative 1: Rosemount Road extension in place prior to opening year. Access to the project site will be provided via two driveways along Date Palm Drive and one driveway along Rosemount Road.
- Alternative 2: Rosemount Road extension not constructed prior to opening year. Access would be limited to two driveways along Date Palm Drive.

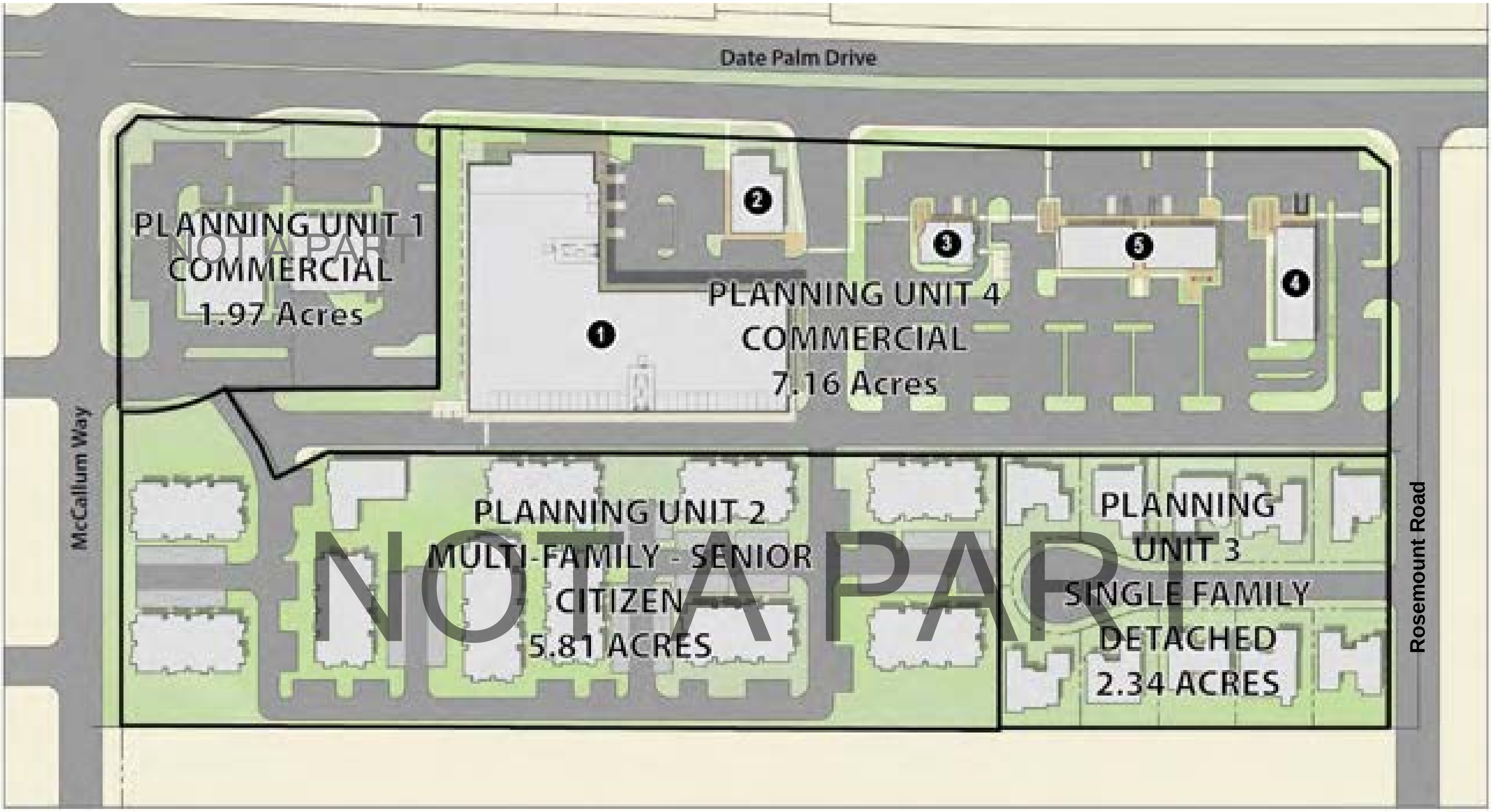
Figures 1-1 and **1-2** show Scenario 1 and 2 site plans, respectively.

1.2 SENATE BILL 743

On September 27, 2013, SB 743 was signed into State law and started a process intended to fundamentally change transportation impact analysis as part of the CEQA compliance. The California Natural Resource Agency updated the CEQA transportation analysis guidelines in 2018. In this update automobile delay and LOS metrics are no longer to be used in determining transportation impacts. Instead VMT metrics will serve as the basis in determining impacts. Furthermore, the guidelines stated that after July 1, 2020, transportation analysis under CEQA must use VMT to determine impacts for land use projects.

1.3 GUIDANCE DOCUMENTS

The project is within Cathedral City and the County of Riverside. The City has not adopted guidance on evaluating VMT for transportation impacts under CEQA. Therefore, the County of Riverside Transportation Analysis Guidelines for Level of Service (LOS) and Vehicle Miles Traveled (VMT), December 2020, hereafter referred to as Guidelines, will be used for this analysis.



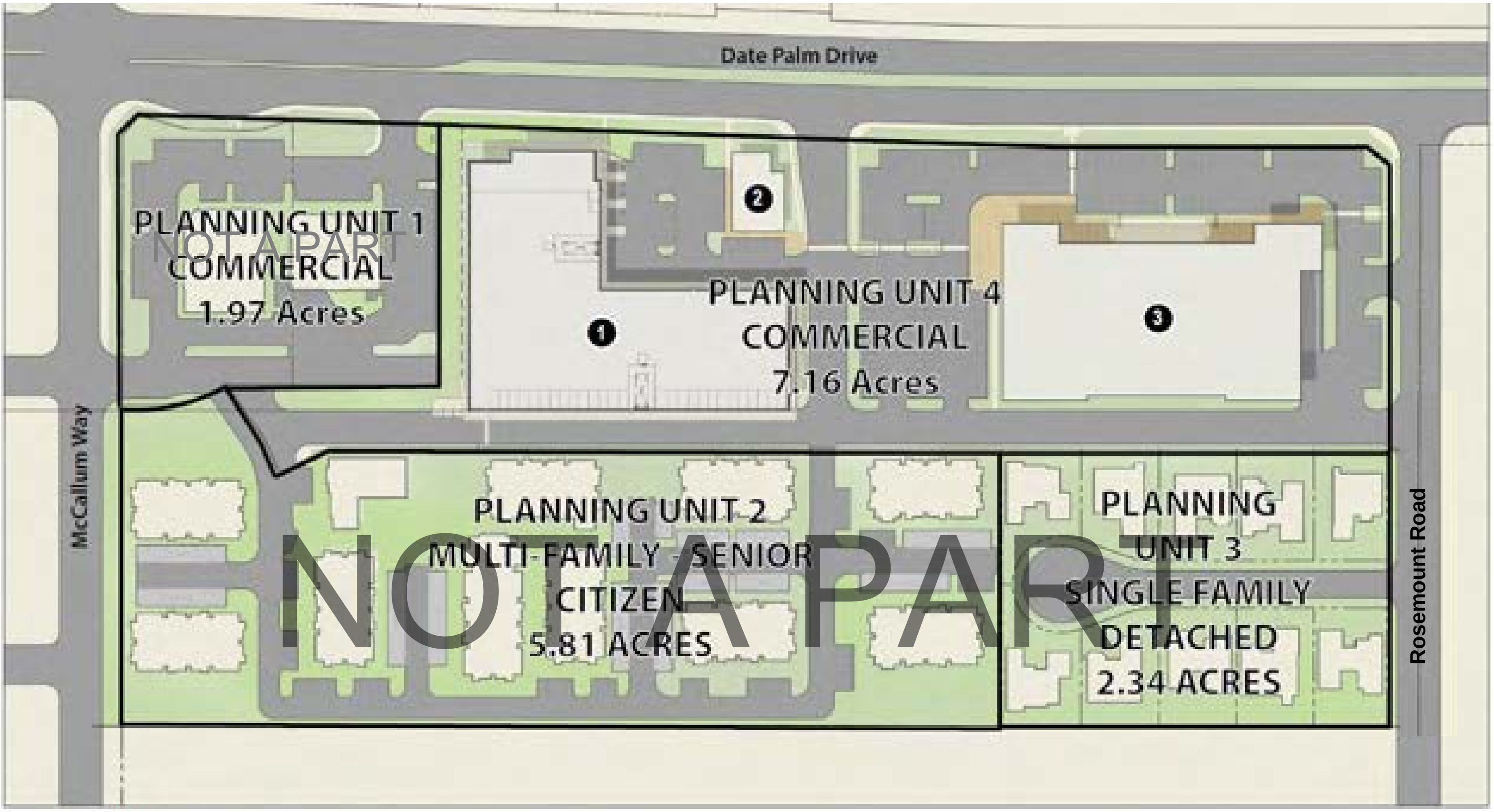
LEGEND

- ❶ Indoor Climate-Controlled Mini-Storage Facility - 115,054 SF
- ❷ Retail - 4,725 SF
- ❸ Fast Food Drive-Through Restaurant - 2,413 SF
- ❹ Fast Food Drive-Through Restaurant - 4,617 SF
- ❺ (2) Retail - 3,217 SF Each

NORTH
Not to Scale

INTEGRATED ENGINEERING GROUP
TRANSPORTATION PLANNING AND ENGINEERING

Date Palm Drive Mixed Use
Project Site Plan (Scenario 1)
Figure 1-1



LEGEND

1 Indoor Climate-Controlled Mini-Storage Facility - 115,054 SF

2 Retail - 4,725 SF

3 Grocery Store or other Big Box Use - 50,000 SF

NORTH
Not to Scale

INTEGRATED ENGINEERING GROUP
TRANSPORTATION PLANNING AND ENGINEERING

Date Palm Drive Mixed Use
Project Site Plan (Scenario 2)
Figure 1-2

2.0 ANALYSIS METHODOLGY

The Guidelines outline 5 major-steps[1] for CEQA assessment and VMT analysis:

- Evaluation of land use type
- Screening criteria under which projects are not required to submit a detailed VMT analysis
- Significance thresholds
- VMT analysis methodologies
- Mitigation measures for significant and unavoidable impacts

2.1 SCREENING CRITERIA

The Guidelines recognize that certain projects based on type, location, size and other contexts could lead to a *presumption of less than significance* (i.e. the project's VMT would not cause a transportation impact under CEQA) and would not need additional VMT analysis. The Guidelines provide the following screening criteria[2]:

1. Small Projects –
   a. Single Family Housing projects less than or equal to 110 Dwelling Units; or
   b. Multi Family (low rise) Housing projects less than or equal to 147 Dwelling Units; or
   c. Multi Family (mid-rise) Housing projects less than or equal to 194 Dwelling Units; or
   d. General Office Building with area less than or equal to 165,000 SF; or
   e. Retail buildings with area less than or equal to 60,000 SF; or
   f. Warehouse (unrefrigerated) buildings with area less than or equal to 208,000 SF; or
   g. General Light Industrial buildings with area less than or equal to 179,000 SF Project GHG emissions less than 3,000 Metric Tons of Carbon Dioxide Equivalent (MTCO2e) as determined by a methodology acceptable to the Transportation Department; or
   h. Unless specified above, project trip generation is less than 110 trips per day per the ITE Manual or other acceptable source determined by Riverside County.
2. Projects near high quality transit – The project is located within half mile of an existing major transit stop and maintains a service interval frequency of 15 minutes or less during the morning and afternoon peak commute periods.
3. Local-serving retail – No single store on-site exceeds 50,000 SF and project is local-serving as determined by the Transportation Department
4. Affordable Housing – A high percentage of affordable housing is provided as determined by the Riverside County Planning and Transportation Departments.
5. Local Essential Services –
   a. Project is local-serving as determined by the Transportation Department; and
   b. Local-serving and Day care center; or
   c. Police or Fire facility; or
   d. Medical/Dental office building under 50,000 square feet; or
   e. Government offices (in-person services such as post office, library, and utilities); or
   f. Local or Community Parks
6. Map-based Screening – Area of development is under threshold as shown on screening map as allowed by the Transportation Department
7. Redevelopment projects – Project replaces an existing VMT-generating land use and does not result in a net overall increase in VMT.

[1] Guidelines, Pages 18-24

[2] Guidelines, Figure 3, pages 19-21

2.2 VMT THRESHOLDS

A land use project should determine the appropriate VMT measure and threshold of significance to apply. The thresholds[3] as defined by the Guidelines are as follows:

- Residential Projects: Existing county-wide average 15.2 VMT per capita
- Office: Existing county-wide average 14.2 VMT per employee
- Retail: No net increase in total regional VMT
- Other Employment: Existing county-wide average 14.2 VMT per employee
- Other Customer: No net increase in total regional VMT
- Mixed-Use Projects: Respective VMT threshold for its multiple distinct land uses

2.3 VMT ASSESSMENT

Projects that do not meet any of the screening criteria identified would need to assess its project VMT using one of the following methods per the Guidelines:

- Riverside County Sketch Planning Tool; or
- RIVTAM/RIVCOM or other approved travel demand forecasting model.

3.0 PROJECT ANALYSIS

The Project proposes the construction of the following two land use scenarios, each in two phases:

<u>Scenario 1</u>

- Phase 1:
  - 115,054 sf of mini warehouse (self-storage facility including office space)
- Phase 2:
  - 11,159 sf of strip retail plaza
  - 7,030 sf of fast-food restaurant with drive-through window

<u>Scenario 2</u>

- Phase 1:
  - 115,054 sf of mini warehouse (self-storage facility including office space)
  - Phase 2:54,725 sf of shopping plaza (including 50,000 sf of supermarket and 4,725 sf of retail)

3.1 SCREENING CRITERIA ASSESSMENT

1. *Small Project*

   Project Phase 1 proposes 115,054 SF of mini warehouse. This land use component is a warehouse building with area less than or equal to 208,000 SF. Therefore, the **mini warehouse component of the Project would be presumed to cause a less than significant impact based on this criterion**.

2. *Projects Near High Quality Transit*

[3] Guidelines, Figure 6, page 22

The Project is not located within half mile of an existing major transit stop and it's the nearest transit stop does not maintain a service interval frequency of 15 minutes or less during the morning and afternoon peak commute periods. Therefore, the Project **does not qualify for this criterion.**

3. *Local-serving Retail*
   Scenario 1 Phase 2 proposes 11,159 SF of strip retail plaza and 7,030 SF of fast-food restaurant with drive-through. Additionally, Scenario 2 Phase 2 proposes 50,000 SF of supermarket and 4,725 SF of retail. Each of these single retail uses in Scenarios 1 and 2 do not exceed 50,000 SF and are local-serving. Therefore, **the retail plaza, fast-food restaurant, and supermarket components of the Project would be presumed to cause a less than significant impact based on this criterion.**
4. *Affordable Housing*
   Scenarios 1 & 2 are not affordable housing projects and therefore **do not qualify for this criterion**.

5. *Local Essential Service*
   The Project proposes mini warehouse, strip retail, shopping plaza, and fast-food restaurant land uses. Scenarios 1 and 2 do not include local essential service land use components and therefore, **do not qualify for this criterion.**

6. *Map-Based Screening*
   The Project proposes mini warehouse, strip retail, shopping plaza, and fast-food restaurant land uses. Scenarios 1 and 2 do not include residential and office land use components and therefore, **do not qualify for this criterion.**

7. *Redevelopment Project*
   The Project is proposed on a vacant lot and does not replace an existing VMT-generating land use. Therefore, the Project **does not qualify for this criterion**.

3.2 CONCLUSION

As concluded in Section 3.1 of this report, the proposed project screens out from VMT analysis since the mini warehouse component satisfies the Small Project screening criterion, and the strip retail plaza, shopping plaza, and fast-food restaurant components meet the Local-serving retail screening criterion. Therefore, Scenario 1 and 2 land use components are presumed to cause less than significant VMT impacts. It is our recommendation that the project be approved with no additional project-level VMT analysis.

Project Completion Year 2027

All study area intersections operate at an acceptable LOS under Project Completion Year 2027 Conditions except for the following:

- Date Palm Drive and Tachevah Drive - Install a traffic signal

All roadway segments have capacity at an acceptable LOS under Project Completion Year 2027 Conditions.

Cumulative Year 2027 Scenario

All study area intersections operate at an acceptable LOS under Cumulative Year 2027 Conditions except for the following:

- Date Palm Drive and Tachevah Drive - Install a traffic signal

All roadway segments have capacity at an acceptable LOS under Cumulative Year 2027 Conditions.

Scenario 1 - AM Peak Hour

All study area intersections would operate at an acceptable LOS under Project (Scenario 1) Completion Year 2027 and Cumulative Year 2027 (Scenario 1) AM Peak Hour Conditions except for the following:

- Date Palm Drive and Tachevah Drive – the addition of the project trips at this location would result in a delay lower than Scenario 2. Therefore, no additional improvements are recommended at this location when compared to Scenario 2.

Recommended Improvements

The proposed traffic signal at the new intersection of Date Palm Drive and Rosemount Road will be constructed by whichever project completes their final phase first between Date Palm Drive Mixed Use, the Wren Project, and the Vallarta Shopping Center. However, all three projects will contribute to the funding of this project based on their portion of total ADT generated. It should be noted that through the course of the subject project entitlement process, it has been determined that the potential supermarket discussed under scenario 2 will no longer be constructed on the subject property phase 2 parcel but instead the supermarket will be built on the Vallarta Shopping Center site at the southwest corner of Date Plam and Rosemount Road intersection; therefore, the Project fair share contribution of 16.29% toward the signalization of Date Plam Drive and Rosemount Road intersection is calculated based on the project scenario 1 land use intensity, as shown in **Table ES-1**.

Table ES-1
Project Feature Contributions

Project	Project ADT (Scenario 1)	Project ADT (Scenario 2)	Project Share % (Scenario 1)	Project Share % (Scenario2)
Date Palm Drive Mixed Use	1,668	3,542	**16.29%**	29.23%
Wren Project	1,375	1,375	13.43%	11.35%
Vallarta Shopping Center	7,199	7,199	70.29%	59.42%
Total	10,242	12,116	100%	100%

Project fair share costs of improvements necessary to mitigate deficient conditions have been calculated and are shown in **Table ES-2** below. Fair share cost is determined based on the following equation, which is the ratio of Project traffic to new traffic. New traffic is total future traffic less existing baseline traffic:

Project Fair Share % = Project Traffic / (Cumulative Year 2027 Traffic – Existing Baseline Traffic)

Table ES-2
Project Fair Share Contributions

#	Intersection	Existing Baseline Traffic	Project Traffic	Cumulative Year 2027 Traffic	Project Fair Share %	Funding Mechanism
5	Date Palm Drive and Tachevah Drive					
	AM	1,927	41	2,527	6.8%	Project fair share towards intersection signalization
	PM	1,999	68	2,784	**8.7%**	

As shown in the above table, Project fair share contribution toward the future signalization of the Date Palm Drive and Tachevah Drive intersection is 8.7%.

VMT Screening Assessment

The proposed project screens out from VMT analysis since the mini warehouse component satisfies the Small Project screening criterion, and the strip retail plaza, shopping plaza and fast-food restaurant components meet the Local-serving retail screening criterion. Therefore, all Scenario 1 and 2 land use components are presumed to cause less than significant VMT impacts. It is our recommendation that the project be approved with no additional project-level VMT analysis.

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Appendices

1.0 PROJECT INTRODUCTION

This transportation analysis (TA) report has been prepared for Date Palm Drive Mixed Use project (Project) in Cathedral City. The technical report will be prepared in accordance with the County of Riverside Transportation Analysis Guidelines for Level of Service (LOS) and Vehicle Miles Traveled (VMT), December 2020 (Guidelines).

PROJECT DESCRIPTION

The project will be developed on a vacant site located on the southeast corner of Date Palm Drive and Rosemount Road. The project is proposing the construction of the following two land use scenarios, each in two phases:

Scenario 1

- Phase 1:
  - 115,054 sf of mini warehouse (self-storage facility including office space)
- Phase 2:
  - 11,159 sf of strip retail plaza
  - 7,030 sf of fast-food restaurant with drive-through window

Scenario 2

- Phase 1:
  - 115,054 sf of mini warehouse (self-storage facility including office space)
- Phase 2:
  - 54,725 sf of shopping plaza (including 50,000 sf of supermarket and 4,725 sf of retail)

Figures 1-1a and **1-1b** show the project site plans for each scenario.

STUDY AREA

The study area for this project was developed consistent with the Guidelines, including all intersections of “Collector” or higher classification streets with “Collector” or higher classification streets, at which the proposed project will add 50 or more peak hour trips. IEG prepared a project traffic study scoping agreement defining the study area, which was reviewed and approved by Cathedral City staff prior to the preparation of this technical report. Refer to **Appendix A** for approved scoping agreement.

Figure 1-2 presents the study area that includes the following key locations:

Study Area Intersections:

1. Date Palm Drive and McCallum Way
2. Date Palm Drive and Rosemount Road (Phase 2 only)
3. Date Palm Drive and 30th Avenue
4. Date Palm Drive and Tachevah Drive
5. Date Palm Drive and Project Driveway
6. Project Driveway and McCallum Way

Study Roadway Segments:

1. Date Palm Drive, McCallum Way to Project Driveway
2. Date Palm Drive, Project Driveway to Rosemount Road
3. Date Palm Drive, Rosemount Road to 30th Avenue
4. Date Palm Drive, 30th Avenue to Tachevah Drive

Turning movement counts for one weekday during the morning and evening peak hours and average daily traffic (ADT) counts were conducted on Tuesday May 9, 2023. The turning movement and ADT counts are included in **Appendix B.** These counts will be utilized in Synchro 11 software to determine LOS at all study intersections and for roadway segment capacity analysis. Year 2025 and Year 2027 without Project traffic volumes will be developed by adding a 3% annual growth for two and four years, respectively, to the existing counts.

PROJECT TRIP GENERATION

The trip generation is a measure or forecast of the number of trips that begin or end at the Project site. These trips will result in some traffic increases on the streets where they occur. The rates used in this analysis were determined using *Trip Generation, 11th Edition*, published by the Institute of Transportation Engineers (ITE) is the method preferred by the Guidelines. Project ITE average trip generation rates are presented in **Table 1-1**.

Table 1-1
Project Trip Generation Rate

Land Use[1]	Units[2]	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Strip Retail Plaza (<40k)[3]	TSF	822	1.66	1.11	2.77	3.77	3.77	7.54	62.78
Shopping Plaza (40-150k)[4]	TSF	821	2.19	1.34	3.53	4.72	5.12	9.84	102.78
Fast Food Restaurant w/ Drive-through Window	TSF	934	22.75	21.86	44.61	17.18	15.85	33.03	467.48
Mini-Warehouse	TSF	151	0.05	0.04	0.09	0.07	0.08	0.15	1.45

[1]Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Eleventh Edition (2021).
[2]TSF = Thousand Square Feet
[3]Peak hour and daily trip rates for LU 822 Strip Retail Plaza are based on fitted curve equations for total 11,159 sf of retail proposed for Scenario 1.
[4]PM peak hour and daily trip rates for LU 821 Shopping Plaza are based on fitted curve equations for total 54,725 sf of shopping plaza (supermarket plus retail) proposed for Scenario 2.

Table 1-2 summarizes the calculated trip generation associated with Scenario 1. As shown in Table 1-2, Scenario 1 is anticipated to generate approximately 1,696 total daily trips, 192 AM peak hour trips and 137 PM peak hour trips.

Table 1-2
Scenario 1 Project Trip Generation

Land Use[1]	Intensity	Units[2]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Phase 1									
Mini-Warehouse	115.054	TSF	6	4	10	8	9	17	167
Phase 2									
Strip Retail Plaza (<40k)	11.159	TSF	19	12	31	42	42	84	701
Internal Capture (11% - AM In, 17% - AM Out, 50% - PM In, 29% - PM Out, & 39% - Daily)[3]			2	2	4	21	12	33	273
Pass-by Reduction (40% - PM Peak Hour & Daily)[5]			0	0	0	8	12	20	171
Subtotal			*17*	*10*	*27*	*13*	*18*	*31*	*257*
Fast Food Restaurant w/ Drive-through Window	7.030	TSF	160	154	314	121	111	232	3,286
Internal Capture (1% - AM In, 1% - AM Out, 10% - PM In, 19% - PM Out, 14% - Daily)[3]			2	2	4	12	21	33	460
Pass-by Reduction (50% - AM Peak Hour, 55% - PM Peak Hour & Daily)[4]			79	76	155	49	40	89	1,272
Subtotal			*79*	*76*	*155*	*49*	*40*	*89*	*1,272*
Scenario 1 Total			***102***	***90***	***192***	***70***	***67***	***137***	***1,696***

[1]Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Eleventh Edition (2021).
[2] TSF = Thousand Square Feet
[3] Internal Capture percentage is based on NCHRP Report 684, as recommended in the ITE Trip Generation Handbook, 3rd Edition, and included in **Appendix A**.
[4] Pass-by reduction percentage is based on the ITE methodology per 2021 Pass-By Tables for ITE Trip Generation Appendices.
[5] Used the same Pass-by reduction percentage as LU 821 Shopping Plaza.

Table 1-3 summarizes the calculated trip generation associated with Scenario 2. As shown in Table 1-3, Scenario 2 would be anticipated to generate approximately 3,542 total daily trips, 243 AM peak hour trips and 340 PM peak hour trips. This results in an increase of 1,846 daily trips, an increase of 11 AM peak hour trips, and an increase of 203 PM peak hour trips when compared to Scenario 1. However, since Scenario 1 would result in 13 additional outbound AM peak hour trips, Scenario 2 will still be the governing scenario for analysis and only the intersection AM peak hour will be analyzed for Scenario 1 as supplemental analysis. Please refer to the trip generation tables in Chapter 1 of this report.

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Table 1-3
Scenario 2 Project Trip Generation

Land Use[1]	Intensity	Units[2]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Phase 1									
Mini-Warehouse	115.054	TSF	6	4	10	8	9	17	167
Phase 2									
Shopping Plaza (40-150k)	54.725	TSF	120	73	193	258	280	538	5,625
Pass-by Reduction (40% - PM Peak Hour & Daily)[3]			0	0	0	103	112	215	2,250
Subtotal			*120*	*73*	*193*	*155*	*168*	*323*	*3,375*
Scenario 2 Total			***126***	***77***	***203***	***163***	***177***	***340***	***3,542***
Scenario 1 Total			***102***	***90***	***192***	***70***	***67***	***137***	***1,696***
Net Difference (Scenario 2-Scenario 1)			***+24***	***-13***	***+11***	***+93***	***+110***	***+203***	***+1,846***

[1]Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Eleventh Edition (2021).
[2] TSF = Thousand Square Feet
[3] Pass-by reduction percentage is based on the ITE methodology per 2021 Pass-By Tables for ITE Trip Generation Appendices.

PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

Trip distribution and assignment is the process of identifying the probable destinations, directions, and traffic routes that Project related traffic will affect. Once the proposed development's trips have been estimated, they are assigned to the study area network. For this development, the Project trip distribution and assignment were developed, in coordination with City staff, based on the land use characteristics of the proposed project and surrounding area, existing travel patterns within the study area, anticipated travel patterns to and from the project site, and approved projects located in the vicinity of the project site.

Figures 1-1 through **1-3** show Project site plan, study area, trip distribution, and assignment.

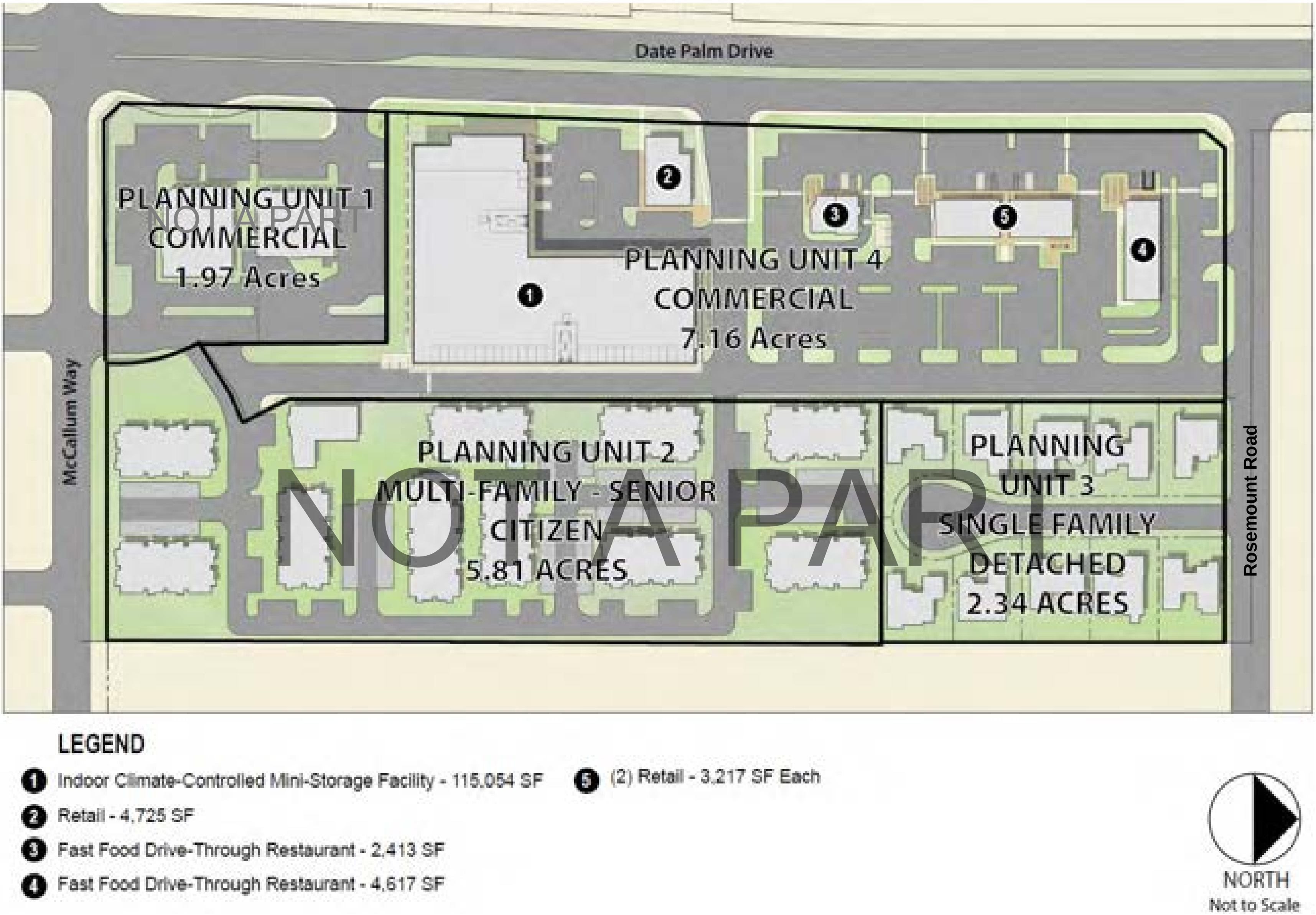
PROJECT ACCESS

Rosemount Road does not currently extend to Date Palm Drive. The Project will be conditioned to construct half-width roadway improvement along the property frontage on Rosemount Road including curb, gutter, sidewalk and paving. Therefore, this report will take into consideration the following in addressing the proposed Project phases:

- Phase 1 – Rosemount Road extension not constructed prior to opening year 2025. Access would be limited to one proposed driveway along Date Palm Drive and one existing driveway along McCallum Way.
- Phase 2 - Rosemount Road extension in place prior to opening year 2027. Access to the project site will be provided via one proposed driveway along Date Palm Drive, one proposed driveway along Rosemount Road, and one existing driveway along McCallum Way. Additionally, the Project will construct a traffic signal at the new intersection of Rosemount Road and Date Palm Drive.

PARKING

The proposed development will provide on-site parking spaces consistent with City of Cathedral City parking requirements.



LEGEND

1. Indoor Climate-Controlled Mini-Storage Facility - 115,054 SF
2. Retail - 4,725 SF
3. Fast Food Drive-Through Restaurant - 2,413 SF
4. Fast Food Drive-Through Restaurant - 4,617 SF
5. (2) Retail - 3,217 SF Each

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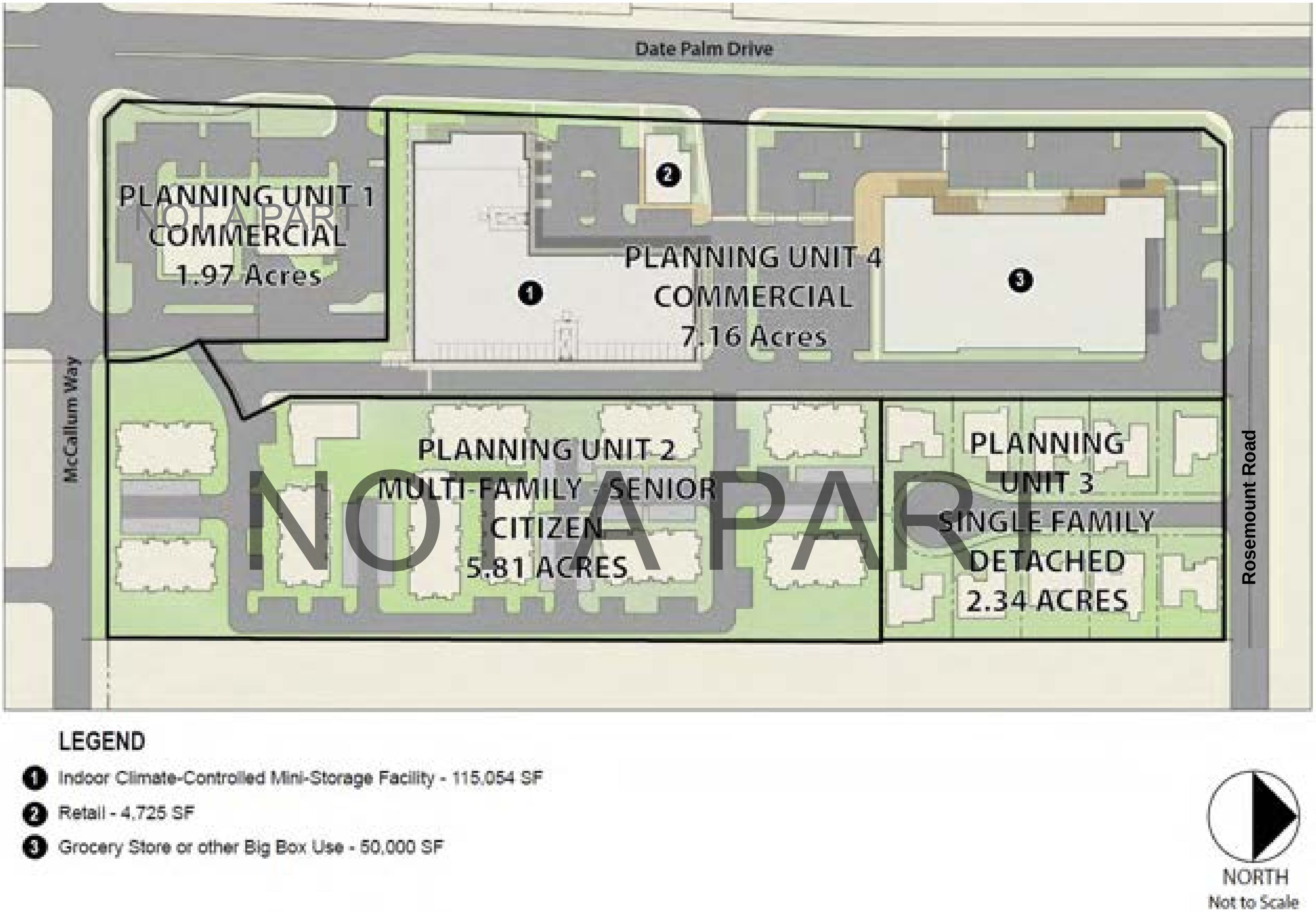
Date Palm Drive Mixed Use
Project Site Plan (Scenario 1)
Figure 1-1a



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Date Palm Drive Mixed Use
Project Site Plan (Scenario 2)
Figure 1-1b

LEGEND # Instersection # Driveway

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Date Palm Drive Mixed Use - Study Area and Trip Distribution (Phase 1 Only)
Figure 1-2a

LEGEND # Instersection # Driveway

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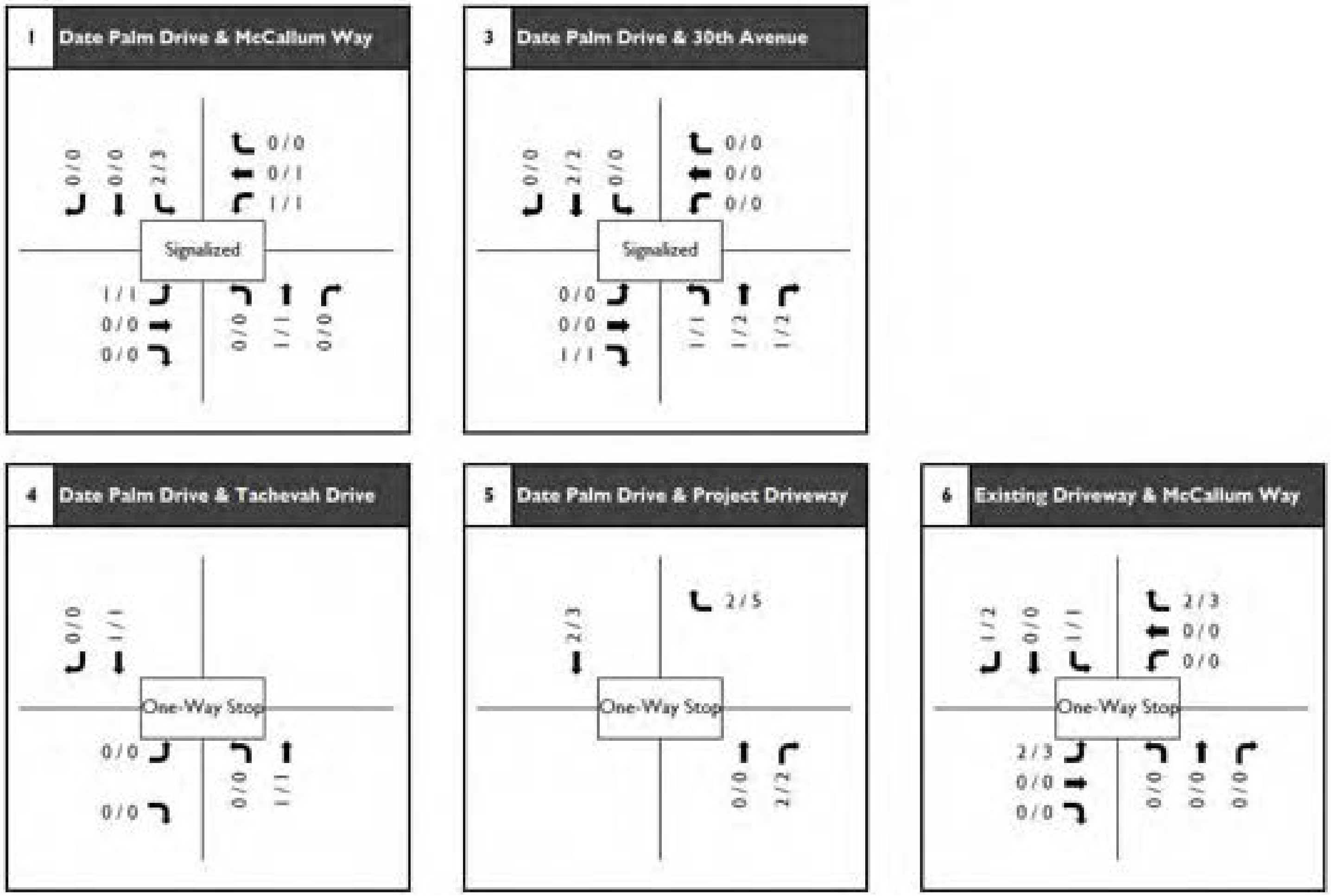
Date Palm Drive Mixed Use - Study Area and Trip Distribution (Phase 1 and 2 Total)
Attachment 2b



Roadway Segment	Phase 1 ADT
Total ADT	**167**
Date Palm Drive	
McCallum Way to Project Driveway	71
Project Driveway to 30th Avenue	84
30th Avenue to Tachevah Drive	33

XX / XX AM / PM Peak Hour Volumes

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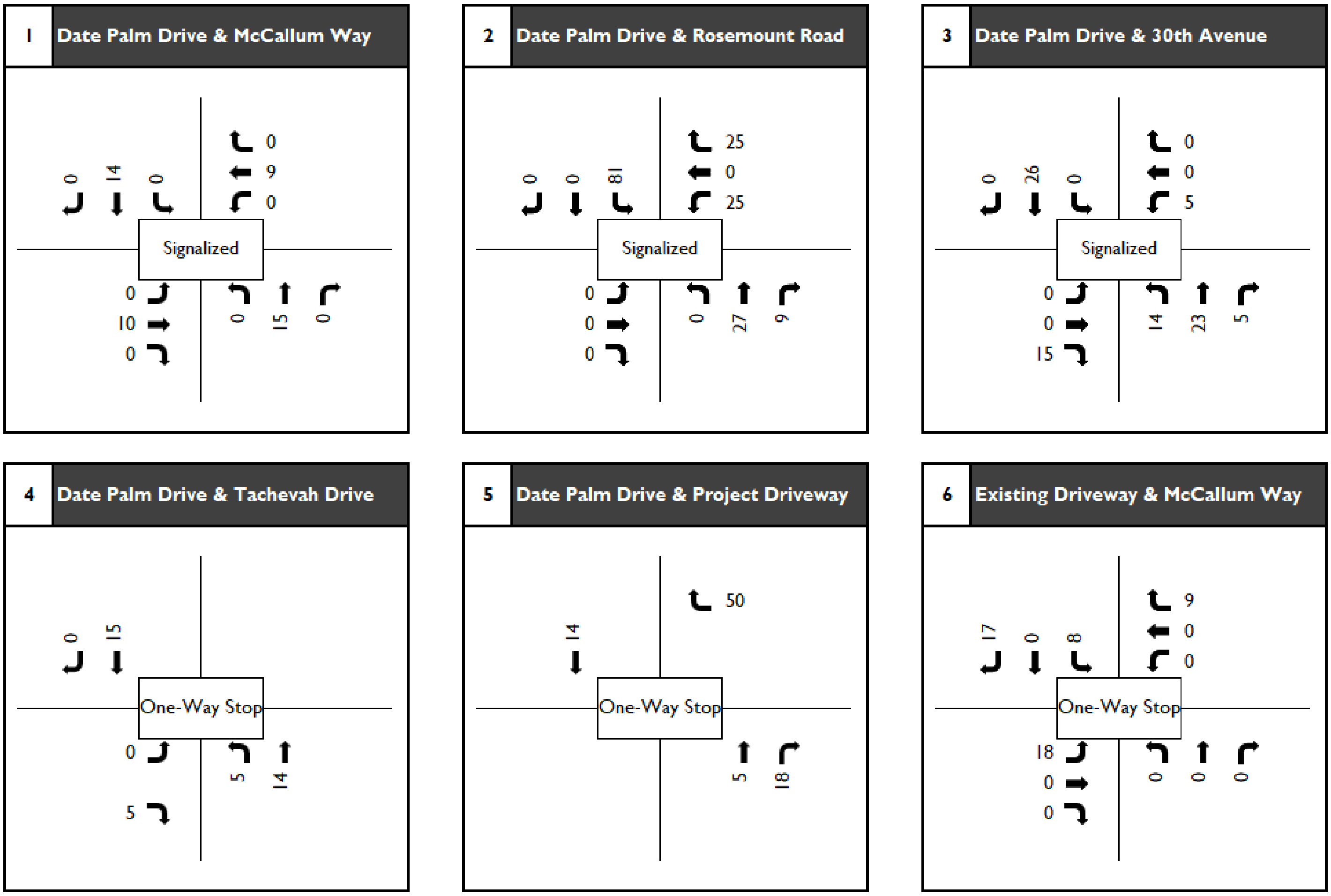
Date Palm Drive Mixed Use
Scenarios 1 & 2 Phase 1 Volumes
Figure 1-3a



XX / XX AM / PM Peak Hour Volumes

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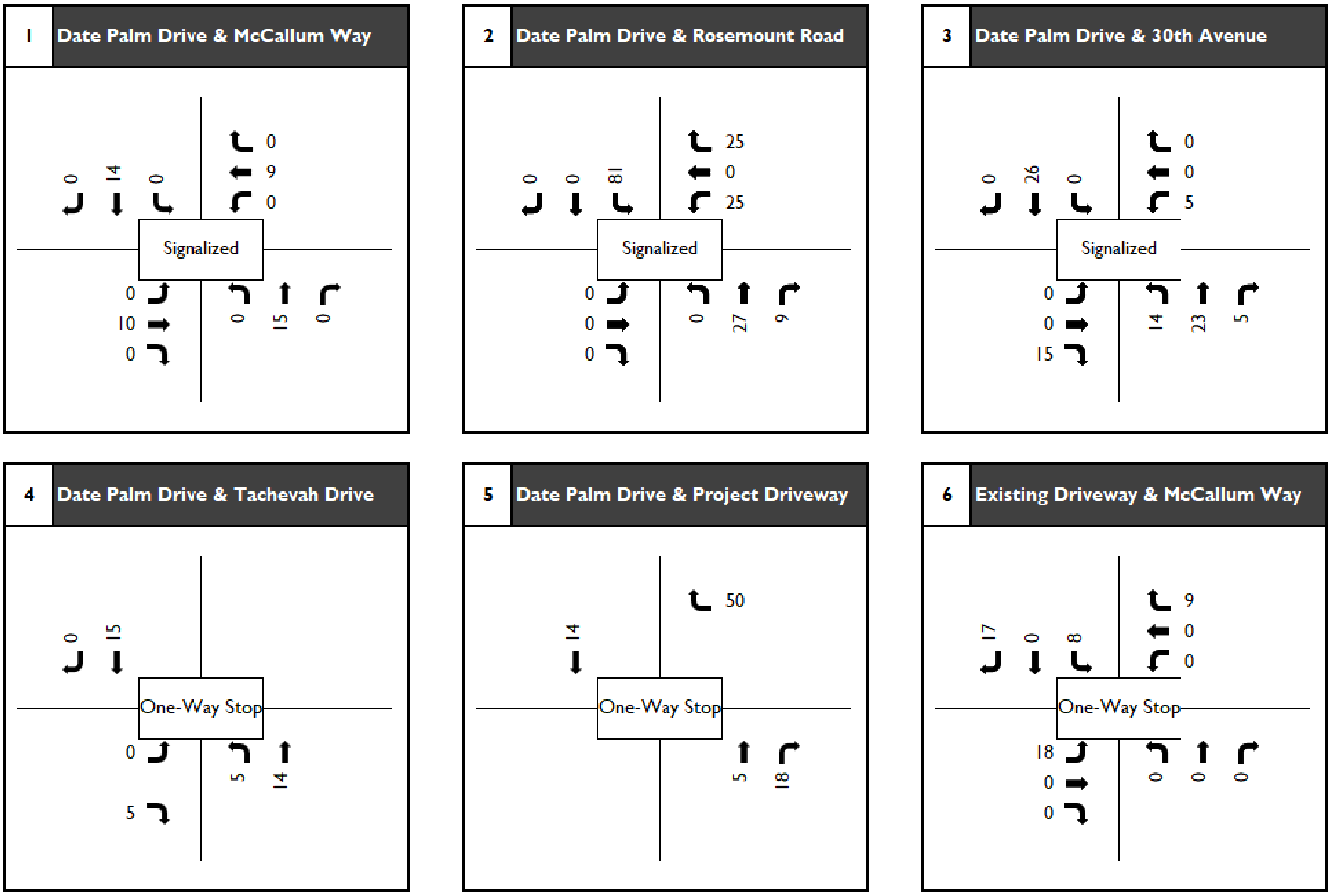
Date Palm Drive Mixed Use
Scenario 1 Phases 1 & 2
AM Peak Hour Intersection Volumes
Figure 1-3b



XX / XX AM / PM Peak Hour Volumes

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Date Palm Drive Mixed Use
Scenario 1 Phases 1 & 2
AM Peak Hour Intersection Volumes
Figure 1-3b

2.0 METHODOLOGIES

This section documents the methodologies and assumptions used to conduct the circulation impact analysis for the proposed project. This section contains the following background information:

- Analysis scenarios
- Study time periods
- Analysis methodologies

Refer to **Appendix A** for approved scoping agreement.

ANALYSIS SCENARIOS

This report presents an analysis of the study area intersections and roadway segments for the following anticipated timeframe scenarios:

- Existing Conditions Year 2023
- Project Completion Year 2025 (Existing Plus Ambient Plus Project Phase 1)
- Project Completion Year 2027 (Existing Plus Ambient Plus Project Phases 1 & 2)
- Cumulative Year 2027 (Existing Plus Ambient Plus Cumulative Plus Project)

STUDY TIME PERIODS

The Guidelines recommend the following peak hours for analysis:

- Weekday AM (peak hour between 7:00 AM and 9:00 AM)
- Weekday PM (peak hour between 4:00 PM and 6:00 PM)

ANALYSIS METHODOLOGIES

Street system operating conditions are typically described in terms of "level of service." Level of service is a report-card scale used to indicate the quality of traffic flow on roadway segments and at intersections. Level of service (LOS) ranges from LOS A (free flow, little congestion) to LOS F (forced flow, extreme congestion). **Table 2-1** describes generalized definitions of auto LOS A through F.

Table 2-1
Vehicular Level of Service Definitions

LOS	Characteristics
A	Primarily free-flow operation. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Controlled delay at the boundary intersections is minimal. The travel speed exceeds 85% of the base free-flow speed.
B	Reasonably unimpeded operation. The ability to maneuver within the traffic stream is only slightly restricted and control delay at the boundary intersections is not significant. The travel speed is between 67% and 85% of the base free-flow speed.
C	Stable operation. The ability to maneuver and change lanes at mid-segment locations may be more restricted than at LOS B. Longer queues at the boundary intersections may contribute to lower travel speeds. The travel speed is between 50% and 67% of the base free-flow speed.
D	Less stable condition in which small increases in flow may cause substantial increases in delay and decreases in travel speed. This operation may be due to adverse signal progression, high volume, or inappropriate signal timing at the boundary intersections. The travel speed is between 40% and 50% of the base free-flow speed.
E	Unstable operation and significant delay. Such operations may be due to some combination of adverse signal progression, high volume, and inappropriate signal timing at the boundary intersections. The travel speed is between 30% and 40% of the base free-flow speed.
F	Flow at extremely low speed. Congestion is likely occurring at the boundary intersections, as indicated by high delay and extensive queuing. The travel speed is 30% or less of the base free-flow speed. Also, LOS F is assigned to the subject direction of travel if the through movement at one or more boundary intersections have a volume-to-capacity ratio greater than 1.0.

Source: Highway Capacity Manual, Transportation Research Board (2016)

Intersection Capacity Analysis

The analysis of peak hour intersection performance was conducted using the Synchro 11 software program, which uses methodologies defined in the Highway Capacity Manual (HCM) 6th Edition to calculate LOS. Level of service (LOS) for intersections is determined by control delay. Control delay is defined as the total elapsed time from when a vehicle stops at the end of a queue to the time the vehicle departs from the stop line. The total elapsed time includes the time required for the vehicle to travel from the last-in-queue position to the first-in-queue position, including deceleration of vehicles from free-flow speed to the speed of vehicles in the queue.

Signalized Intersections

The HCM analysis methodology for evaluating signalized intersections is based on the "operational analysis" procedure. This technique uses 1,900 passenger cars per hour of green per lane (pcphpl) as the maximum saturation flow of a single lane at an intersection. **Table 2-2** summarizes the level of service criteria for signalized intersections.

Table 2-2
Signalized Intersection Level of Service HCM Operational Analysis Method

Average Control Delay Per Vehicle (seconds)	Level of Service (LOS) Characteristics
≤10.0	*LOS A* occurs when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.
10.1 – 20.0	*LOS B* occurs when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.
20.1 – 35.0	*LOS C* occurs when progression is favorable or the cycle length is moderate. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.
35.1 – 55.0	*LOS D* occurs when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.
55.1 – 80.0	*LOS E* occurs when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.
>80.0	*LOS F* occurs when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

Source: Highway Capacity Manual, Transportation Research Board (2016)

Side-Street Stop-controlled (SSSC) Intersections

The HCM analysis methodology for evaluating Side-Street Stop-controlled (SSSC) intersections is based on gap acceptance and conflicting traffic for vehicles stopped on the minor-street approaches. The critical gap (minimum gap that would be acceptable) is defined as the minimum time interval in the major-street traffic stream that allows intersection entry for one minor-street vehicle. Average control delay and LOS for the "worst approach" are reported. Level of service is not defined for the entire intersection.

Table 2-3 summarizes the level of service criteria for unsignalized intersections.

Table 2-3
Level of Service Criteria for Stop Controlled Unsignalized Intersections

Average Control Delay (sec/veh)	Level of Service (LOS)
0-10	A
> 10 – 15	B
> 15 – 25	C
> 25 – 35	D
> 35 – 50	E
> 50	F

Source: Highway Capacity Manual 6th Edition, Transportation Research Board (2016)

Roadway Capacity Analysis

Roadway capacities are theoretical for planning purposes and are affected by factors such as intersection spacing, configuration, traffic control, access control, roadway grade, design geometrics, sight distance and vehicle mix. Roadway segment level of service is estimated by comparing the ADT on a roadway segment to the roadway ADT capacity. The Draft City of Cathedral City Comprehensive General Plan (July 2019) provides roadway segment volume capacities based on street classifications. **Table 2-4** shows these ADT thresholds.

Table 2-4
Cathedral City General Plan Roadway Segment ADT Thresholds

Classification	Typical Lane Configuration	ADT Capacity (Vehicles per day)				
		LOS A	LOS B	LOS C	LOS D	LOS E
Arterial Highway	6-Lane Divided	17,000	27,500	38,000	48,500	59,000

Source: Draft City of Cathedral City Comprehensive General Plan Table CM-3, July 2019

Traffic Signal Warrant Analysis

The Federal Highway Administration's (FHWA) Manual on Uniform Traffic Control Devices (MUTCD), amended with California MUTCD 2014 Edition, presents warrant criteria for justifying the installation of a traffic signal at an unsignalized intersection. The criteria include studying traffic conditions, pedestrian characteristics, and physical characteristics of the intersection location. The MUTCD indicates that satisfaction of one or more of the traffic signal warrants does not in itself require the installation of a traffic control signal.

This study uses MUTCD Section 4C.04 Warrant 3, Peak Hour to assess the need of a traffic signal at the unsignalized intersections of Date Palm Drive and Tachevah Drive, and Date Palm Drive and Rosemount Road. Signal warrant worksheets are included in **Appendices H** and **I**.

City of Cathedral City 2040 General Plan Compliance

In coordination with City staff, the transportation analysis will identify LOS deficiencies for compliance with City of Cathedral City Comprehensive General Plan goals. Cathedral City has established LOS "D" as the minimum allowable level of service at intersections and roadway segments. Therefore, any intersection or roadway segment resulting in an LOS worse than this minimum will be considered deficient for the purposes of this analysis.

Project Fair Share Calculation Methodology

New development projects within the City of Cathedral City are required to provide needed infrastructure improvements to meet the demand created by the development and provide off-site improvements designed to ensure construction of the local and regional transportation networks to their ultimate classifications. In cases where this study identifies that the Project would contribute additional traffic volumes to cumulative traffic deficiencies, the Project's fair share contribution towards needed transportation related improvements will be determined based on the following equation, which is the ratio of Project traffic to new traffic. New traffic is total future traffic less existing baseline traffic:

Project Fair Share % = Project Traffic / (Cumulative Year 2027 Traffic – Existing Year 2023 Traffic)

The identified funding mechanisms and Project fair share contribution calculations are presented in Section 8.0 of this study.

3.0 EXISTING YEAR 2023

This section documents the circulation system conditions within the study area of the project under Existing Year 2023 conditions. This section also documents potential operational deficiencies on the existing local and regional circulation networks.

ROADWAY NETWORK

Locally significant roadway located within the study area of the proposed project is discussed below.

Date Palm Drive functions as a divided 6-lane roadway within the study area from McCallum Way to Tachevah Drive. The posted speed limit is 55 miles per hour (mph) north of 30th Avenue and 45 mph south of 30th Avenue. Per the City of Cathedral City Comprehensive General Plan Circulation & Mobility Element, Date Palm Drive is at its buildout roadway classification of an arterial highway.

Figure 3-1 shows the City of Cathedral City Comprehensive General Plan Circulation Network.

TRANSIT SYSTEM

The SunLine Transit Agency (STA) is the main transit agency servicing Cathedral City. Currently, STA operates Route 4 within the vicinity of the project. Route 4 operates seven days a week and connects to Palm Springs west of the site and Palm Desert to the south. Weekday and weekend service frequency is 60 minutes. Bus stops for Route 4 is currently located within 350 ft of the site at the northeast corner of the Date Palm Drive and McCallum Way intersection for northbound service and at the southwest corner for southbound service. Pedestrian accessibility and connectivity from the project site to these bus stops is provided along the frontage (east side of Date Palm Drive) with signalized crossings at the intersection where the bus stops are located. Bus route information is included in **Appendix L**.

ACTIVE TRANSPORTATION SYSTEM

Pedestrian facilities are provided within the study area of the project. Pedestrian crosswalks are generally provided at signalized intersections along Date Palm Drive with sidewalks on the west side from McCallum Way to Tachevah Drive and on the east side from the Project limits to McCallum Way. There are no existing bicycle facilities along Date Palm Drive. However, the City of Cathedral City Comprehensive General Plan Circulation & Mobility Element proposes a Class I off-road shared bike and pedestrian trail along Date Palm Drive.

Figure 3-2 shows the City of Cathedral City Comprehensive General Plan Bikeways and LSEV Routes.

TRAFFIC VOLUMES

The Existing Year 2023 peak hour intersection turning movement and ADT counts were counted on Tuesday May 9, 2023. The counts are provided in **Appendix B**.

ANALYSIS RESULTS

Tables 3-1 and **3-2** show Existing Conditions intersection operation and roadway segment capacity analysis results.

Figure 3-3 shows the peak hour intersection turning movement volumes under Existing Year 2023 Conditions.

Table 3-1
Existing Conditions 2023 Intersection Operation Analysis

Intersection	Intersection Control	Existing Conditions	
		Delay (a)	LOS (b)
AM/PM Peak			
1. Date Palm Drive and McCallum Way	Signalized	11.9/11.3	B/B
3. Date Palm Drive and 30th Avenue	Signalized	23.2/21.6	C/C
4. Date Palm Drive and Tachevah Drive	SSSC	24.8/20.9	C/C

Notes:
(a) Delay refers to the average control delay for the entire intersection and control delay for the worst movement for SSSC intersections, measured in seconds per vehicle.
(b) LOS calculations are based on the methodology outlined in the Highway Capacity Manual 6th Edition and performed using Synchro 11.

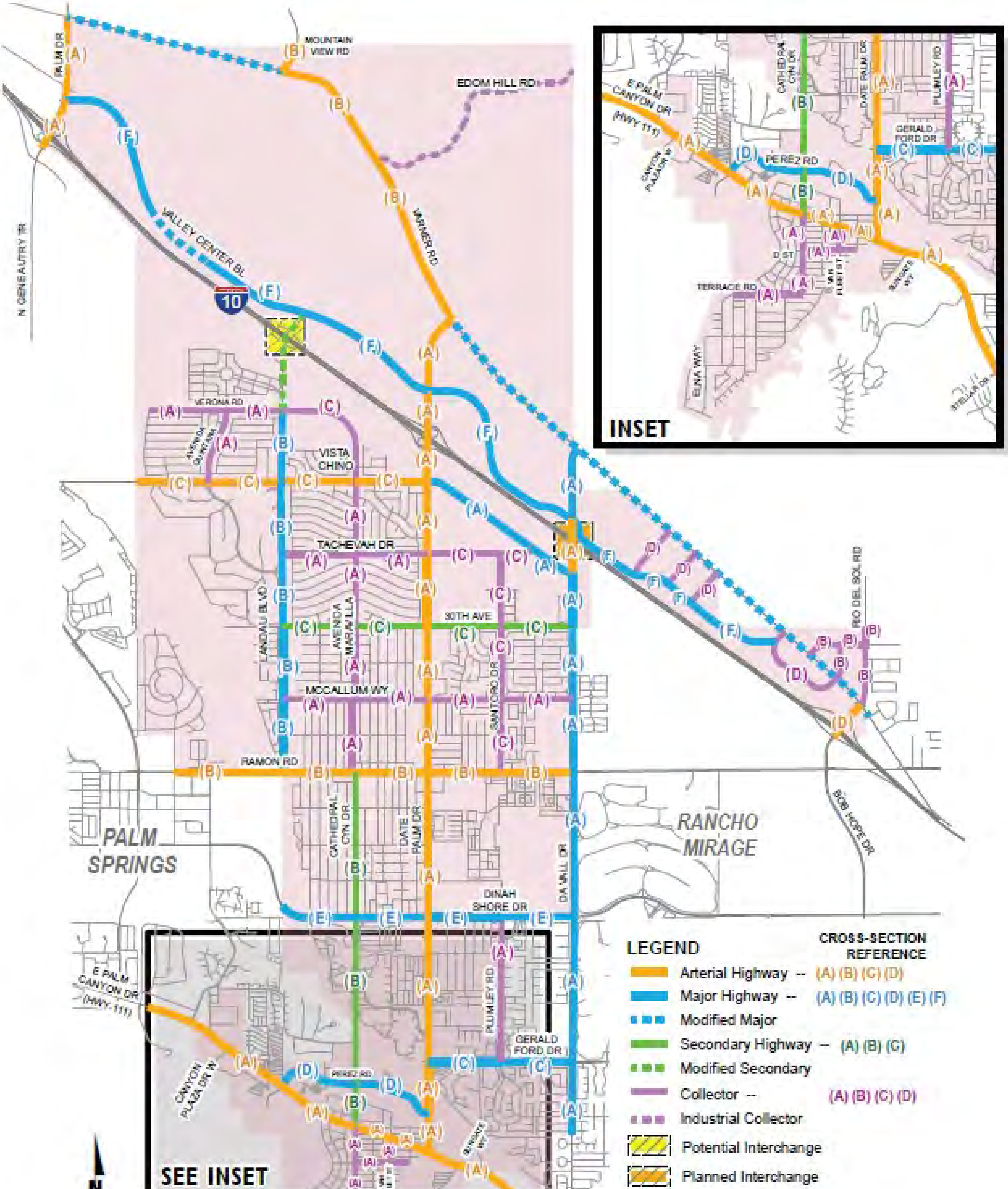
Per the analysis results shown in **Table 3-1**, all analyzed intersections are operating at an acceptable LOS under Existing Year 2023 Conditions.

Existing Year 2023 Conditions peak hour analysis worksheets are provided in **Appendix C**.

Table 3-2
Existing Year 2023 Roadway Segment Capacity Analysis

Roadway Segment	Classification	LOS E Capacity	Existing Year 2023		
			ADT	V/C	LOS
Date Palm Drive					
McCallum Way to Project Driveway	6-lane Arterial Highway	59,000	21,195	0.359	B
Project Driveway to 30th Avenue	6-lane Arterial Highway	59,000	21,246	0.360	B
30th Avenue to Tachevah Drive	6-lane Arterial Highway	59,000	24,031	0.407	B

Per the analysis results shown in **Table 3-2**, all analyzed roadway segments are operating at an acceptable LOS under Existing Year 2023 Conditions.



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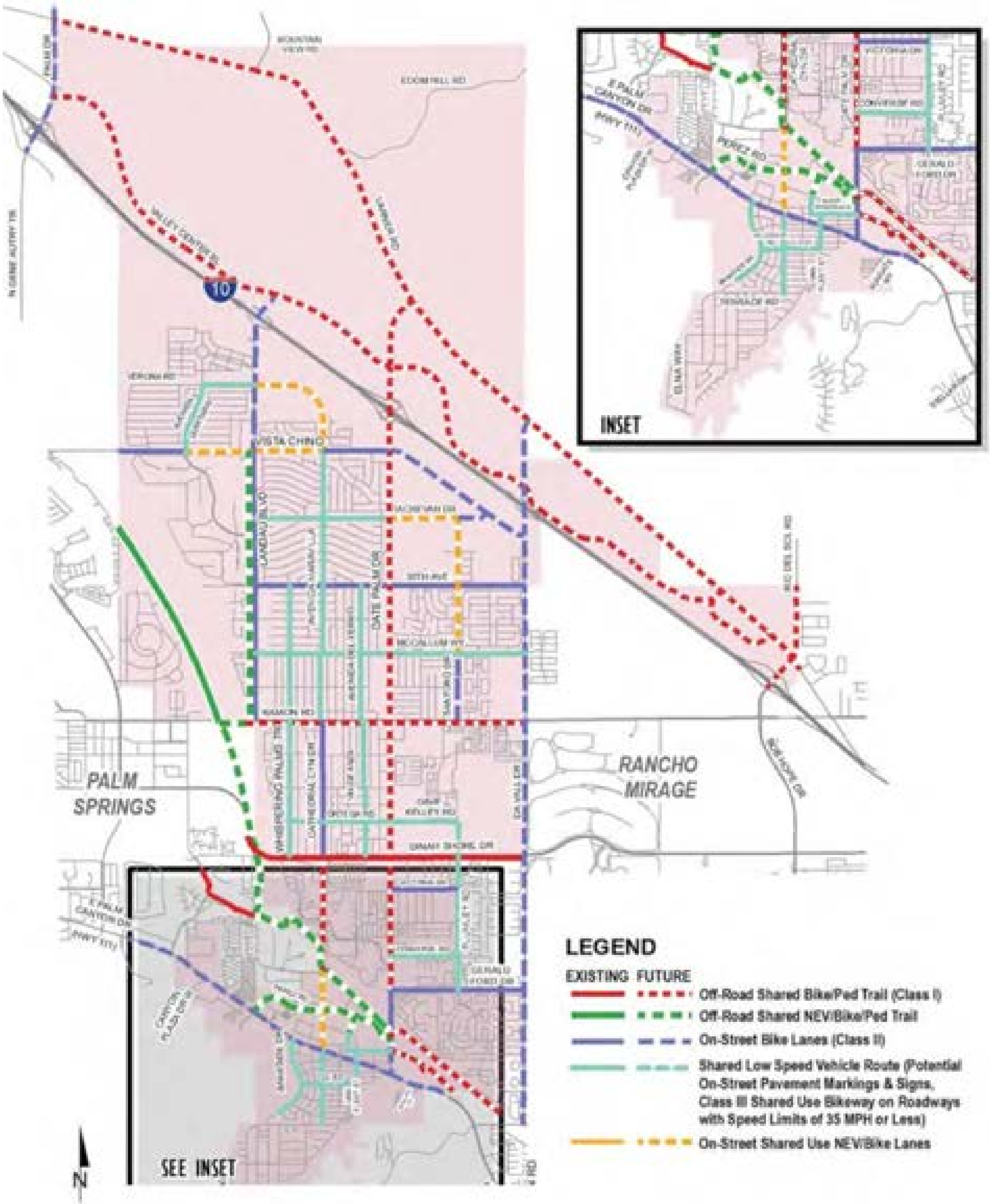
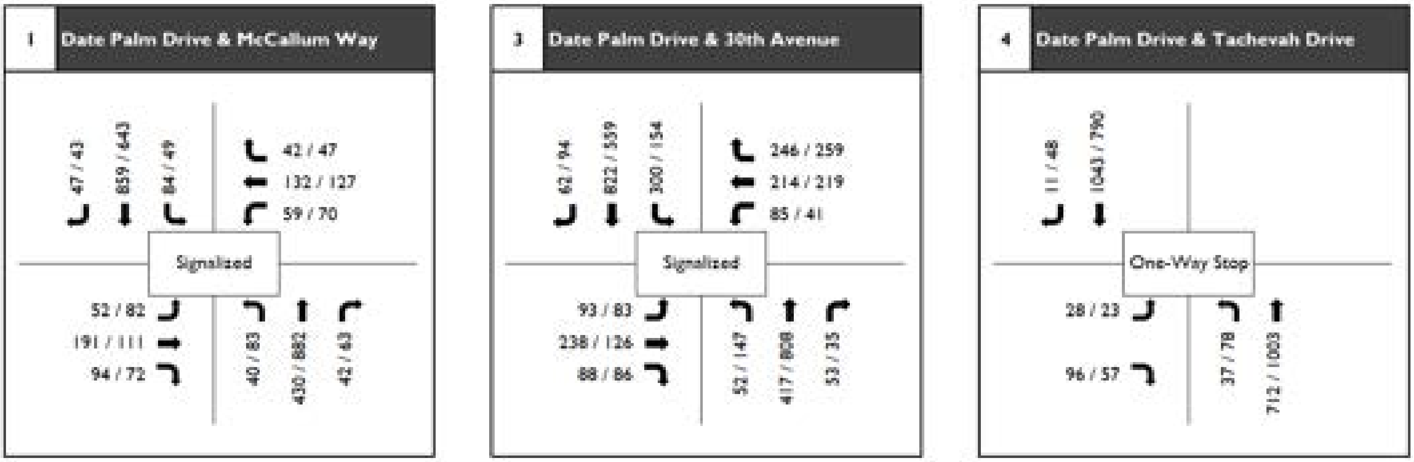
Date Palm Drive Mixed Use
Cathedral City General Plan Circulation Network
Figure 3-1



INTEGRATED ENGINEERING GROUP
TRANSPORTATION PLANNING AND ENGINEERING

Date Palm Drive Mixed Use
Cathedral City General Plan Bikeways and NSEV Routes
Figure 3-2



XX / XX AM / PM Peak Hour Volumes

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Date Palm Drive Mixed Use
Existing Year 2023 AM/PM Peak Hour Intersection Volumes
Figure 3-3

4.0 PROJECT COMPLETION YEAR 2025 CONDITIONS

This section documents the circulation system conditions within the study area of the project under Scenario 2 Project Completion Year 2025 (Existing Plus Ambient Plus Project Phase 1) Conditions. Since Phase 1 of the project is expected to be built and operational in 2025, a 3% annual growth factor for two years was applied to the existing counts. Project Phase 1 traffic volumes are then added to these volumes to develop Project Completion Year 2025 Conditions traffic volumes. This section also documents potential operational deficiencies on the existing local and regional circulation network.

ANALYSIS RESULTS

Tables 4-1 and **4-2** show Project Completion Year 2025 Conditions intersection operation and roadway segment capacity analysis results, respectively.

Figure 4-1 shows intersection turning movement volumes under Project Completion Year 2025 Conditions.

Table 4-1
Project Completion Year 2025 Conditions Intersection Operation Analysis

Intersection	Intersection Control	Project Completion Year 2025	
		Delay (a)	LOS (b)
AM/PM Peak			
1. Date Palm Drive and McCallum Way	Signalized	12.6/11.9	B/B
3. Date Palm Drive and 30th Avenue	Signalized	23.7/23.7	C/C
4. Date Palm Drive and Tachevah Drive	SSSC	29.0/23.5	D/C
5. Date Palm Drive and Project Driveway	SSSC	11.1/14.6	B/B
6. Existing Driveway and McCallum Way	SSSC	12.0/10.9	B/B

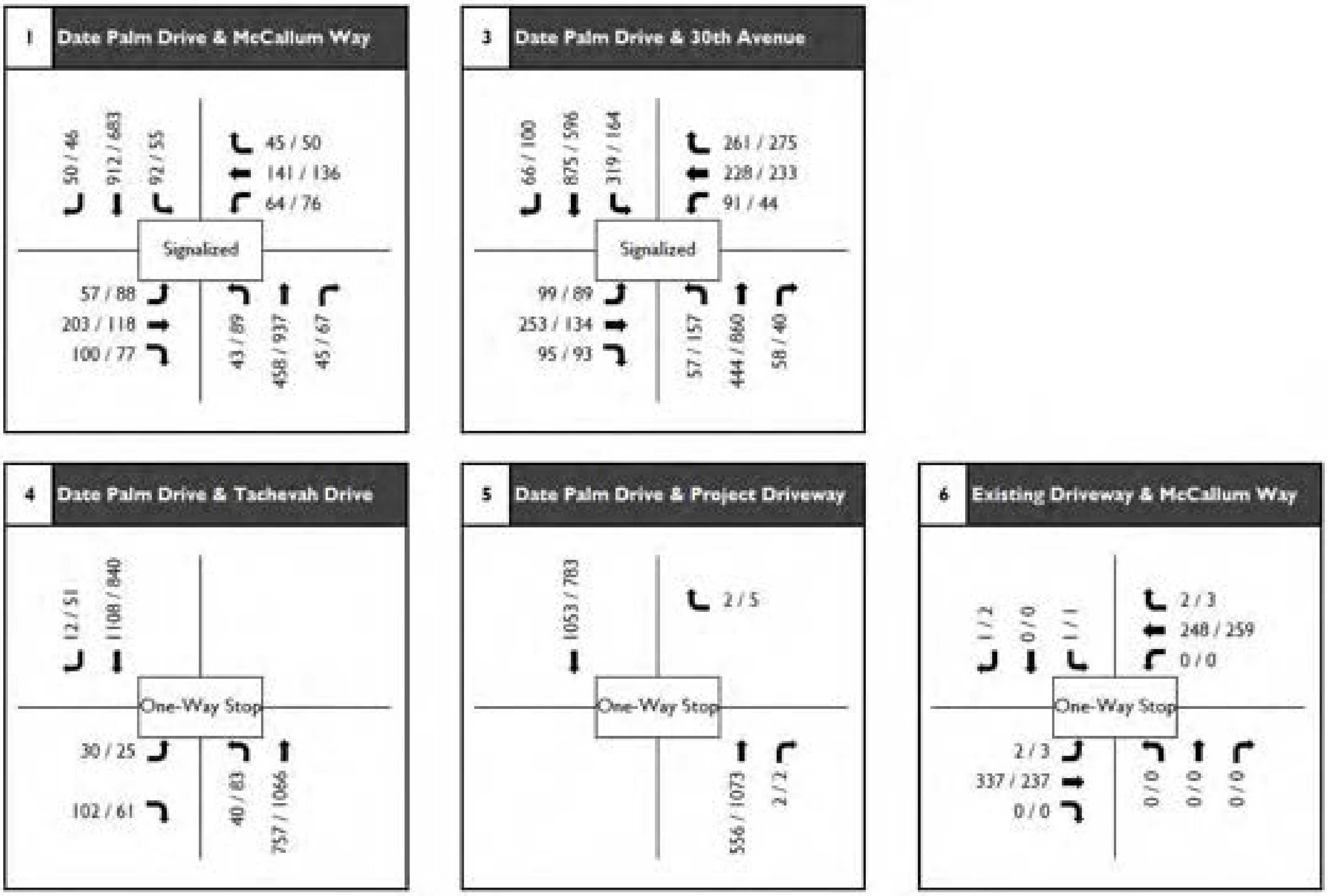
Notes:
(a) Delay refers to the average control delay for the entire intersection, measured in seconds/vehicle. At unsignalized intersections, delay refers to the worst movement.
(b) LOS calculations are based on the methodology outlined in the Highway Capacity Manual 6th Edition and performed using Synchro 11.

Per the analysis results shown in **Table 4-1**, all analyzed intersections are operating at an acceptable LOS under Project Completion Year 2025 Conditions. Project Completion Year 2025 Conditions peak hour analysis worksheets are provided in **Appendix D**.

Table 4-2
Project Completion Year 2025 Conditions Roadway Segment Capacity Analysis

Roadway Segment	Classification	LOS E Capacity	Project Completion Year 2025		
			ADT	V/C	LOS
Date Palm Drive					
McCallum Way to Project Driveway	Arterial Highway	59,000	22,561	0.382	B
Project Driveway to 30th Avenue	Arterial Highway	59,000	22,624	0.383	B
30th Avenue to Tachevah Drive	Arterial Highway	59,000	25,533	0.433	B

Per the analysis results shown in **Table 4-2**, all analyzed roadway segments are operating at an acceptable LOS under Project Completion Year 2025 Conditions.



XX / XX AM / PM Peak Hour Volumes

INTEGRATED ENGINEERING GROUP
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Date Palm Drive Mixed Use
Project Completion Year 2025
AM/PM Peak Hour Intersection Volumes
Figure 4-1

5.0 PROJECT COMPLETION YEAR 2027 CONDITIONS

This section documents the circulation system conditions within the study area of the project under Scenario 2 Project Completion Year 2027 (Existing Plus Ambient Plus Scenario 2 Phases 1 & 2) Conditions. The Rosemount Road extension is anticipated to be in place prior to opening year 2027. Therefore, this analysis assumes the construction of a traffic signal at the new intersection of Rosemount Road and Date Palm Drive by the Project. Signal warrant worksheets are provided in **Appendix I**. IEG understands that existing traffic patterns would change due to these improvements. Existing Year 2023 intersection peak hour traffic volumes for Intersection 2 were developed by redistributing forecast traffic from RIVCOM 3 Traffic Analysis Zone (TAZ) to the intersection of Date Palm Drive and Rosemount Road.

The TAZ adjacent to the west side of Date Palm Drive loads approximately one-third of its base year 2018 daily traffic onto Date Palm Drive. The TAZ that the project is located within also loads approximately one-third of its 2018 daily traffic volume onto the intersection of Santoro Drive and 30th Avenue. Since both TAZs include similar residential and commercial retail components, the unadjusted zone connector volumes applied to the intersection of Santoro Drive and 30th Avenue were also applied at the intersection of Date Palm Drive and Rosemount Road.

An annual growth factor based on the growth from Base Year 2018 to Forecast Year 2045 was applied to 2018 TAZ AM and PM peak hour volumes to calculate the redistributed volumes that would be applied to Existing Year 2023 counts. The turning movement distribution percentages for the westbound approach at the intersection of Date Palm Drive and 30th Avenue was applied to the intersection of Date Palm Drive and Rosemount Road to calculate adjusted Year 2023 turning movement volumes. RIVCOM 3 model plots, annual growth calculation, Date Palm Drive and 30th Avenue distribution, and adjusted Year 2023 volumes are included in **Appendix B**.

Since Phase 2 of the project is expected to be built and operational in 2027, a 3% annual growth factor for four years was applied to the existing counts. Scenario 2 Phases 1 & 2 traffic volumes were then added to these adjusted Year 2023 volumes to develop Project Completion Year 2027 Conditions traffic volumes, shown in **Figure 5-1**. This section also documents potential operational deficiencies on the proposed circulation network.

ANALYSIS RESULTS AND RECOMMENDED IMPROVEMENTS

Tables 5-1 and **5-2** show Project Completion Year 2027 Conditions intersection operation and roadway segment capacity analysis results, respectively.

Figure 5-1 shows intersection turning movement volumes under Project Completion Year 2027 Conditions.

Table 5-1
Project Completion Year 2027 Conditions Intersection Operation Analysis

Intersection	Intersection Control	Project Completion Year 2027	
		Delay (a)	LOS (b)
AM/PM Peak			
1. Date Palm Drive and McCallum Way	Signalized	13.6/13.0	B/B
2. Date Palm Drive and Rosemount Road	Signalized	8.4/17.7	A/B
3. Date Palm Drive and 30th Avenue	Signalized	25.2/20.0	C/B
4. Date Palm Drive and Tachevah Drive	SSSC	38.4/29.3	**E**/D
5. Date Palm Drive and Project Driveway	SSSC	11.6/19.3	B/C
6. Existing Driveway and McCallum Way	SSSC	11.8/11.9	B/B

Notes:
***Bold** indicates deficient LOS E or F*
(a) Delay refers to the average control delay for the entire intersection, measured in seconds/vehicle. At unsignalized intersections, delay refers to the worst movement.
(b) LOS calculations are based on the methodology outlined in the Highway Capacity Manual 6th Edition and performed using Synchro 11.

Per the analysis results shown in **Table 5-1**, all analyzed intersections are operating at an acceptable LOS under Project Completion Year 2027 Conditions except for the following:

- Date Palm Drive and Tachevah Drive - Installation of a traffic signal.

It should be noted that Date Palm Drive and Tachevah Drive intersection will experience poor LOS under AM peak hour due to the EBL movement which the project will not contribute to. The Project will only contribute trips to the NBL and EBR vehicular movements at the subject intersection. The delays and degradation in the EBL LOS are due to the increase in background vehicular volumes along Date Palm Drive related to the increase in developments throughout the City that are consistent with the buildout land use intensities anticipated in the Cathedral City General Plan. The increase of northbound and southbound through volumes on Date Palm Drive will reduce the number of gaps available for left turn vehicular movements out of Tachevah Drive.

Table 5-2 demonstrates the effectiveness of signalizing the two locations should the City secure the funds to address the existing operational deficiencies at these intersections.

Table 5-2
Project Completion Year 2027 With Improvements Intersection Operation Analysis

Intersection	Project Completion Year 2027		Project Completion Year 2027 With Improvements	
	Delay (a)	LOS (b)	Delay (a)	LOS (b)
AM/PM Peak				
4. Date Palm Drive and Tachevah Drive	38.4/29.3	**E**/D	6.4/5.7	A/A

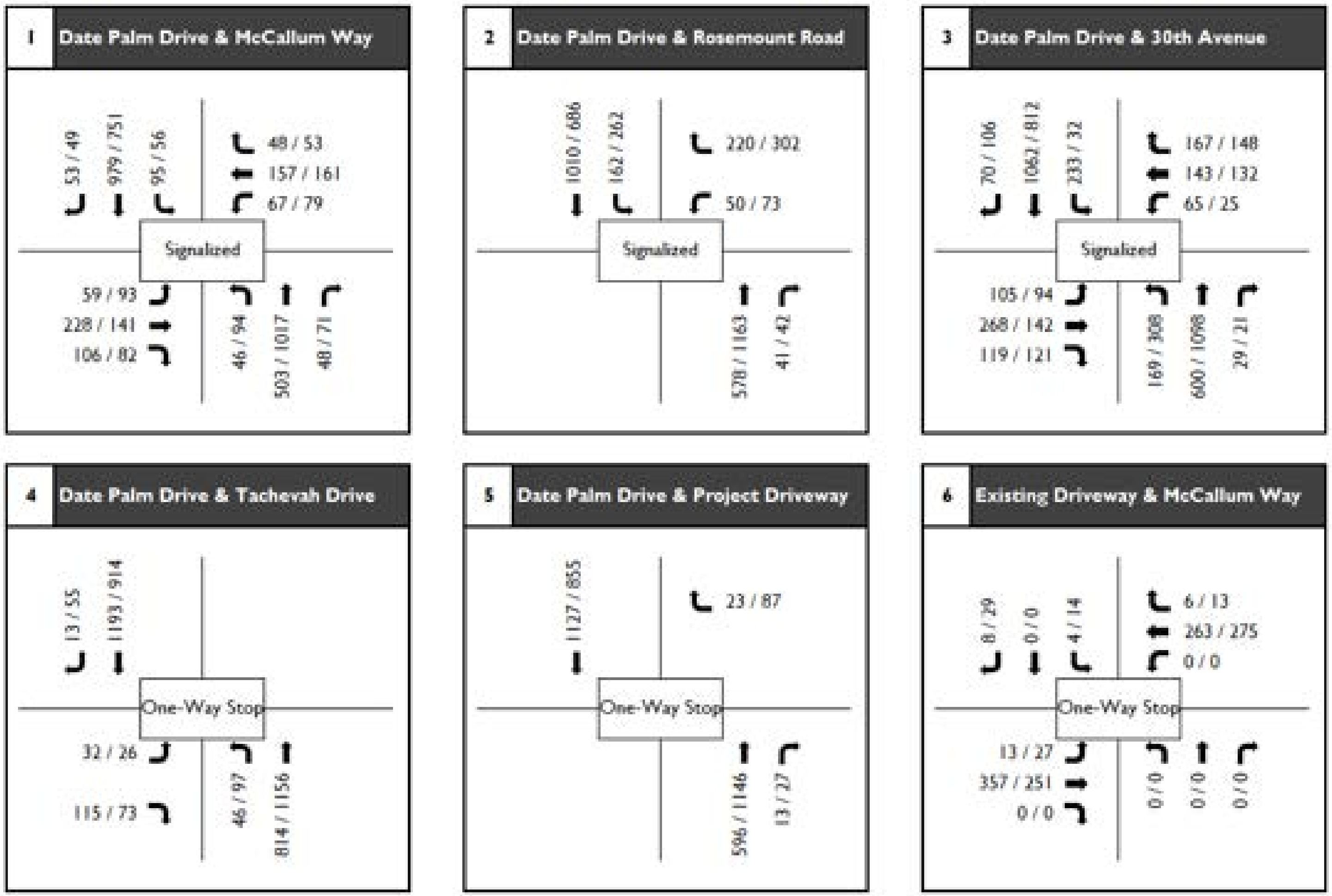
Notes:
***Bold** indicates deficient LOS E or F*
(a) Delay refers to the average control delay for the entire intersection, measured in seconds/vehicle. At unsignalized intersections, delay refers to the worst movement.
(b) LOS calculations are based on the methodology outlined in the Highway Capacity Manual 6th Edition and performed using Synchro 11.

Project Completion Year 2027 Conditions peak hour analysis worksheets are provided in **Appendix E**. Project Completion Year 2027 With Improvement peak hour analysis worksheets and signal warrant analysis are provided in **Appendix H**.

Table 5-3
Project Completion Year 2027 Conditions Roadway Segment Capacity Analysis

Roadway Segment	Classification	LOS E Capacity	Project Completion Year 2027		
			ADT	V/C	LOS
Date Palm Drive					
McCallum Way to Project Driveway	Arterial Highway	59,000	24,391	0.413	B
Project Driveway to Rosemount Drive	Arterial Highway	59,000	24,540	0.416	B
Rosemount Drive to 30th Avenue	Arterial Highway	59,000	25,514	0.432	B
30th Avenue to Tachevah Drive	Arterial Highway	59,000	27,758	0.470	C

Per the analysis results shown in **Table 5-3**, all analyzed roadway segments are operating at an acceptable LOS under Project Completion Year 2027 Conditions.



XX / XX AM / PM Peak Hour Volumes

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TRANSPORTATION PLANNING AND ENGINEERING

Date Palm Drive Mixed Use
Project Completion Year 2027
AM/PM Peak Hour Intersection Volumes
Figure 5-1

6.0 CUMULATIVE YEAR 2027 CONDITIONS

This section documents the circulation system conditions within the study area of the Project under Scenario 2 Cumulative Year 2027 (Existing Plus Ambient Plus Cumulative Plus Scenario 2 Phases 1 & 2) Conditions. The Cumulative Conditions traffic volumes were developed by adding cumulative project trips to the Project Completion 2027 Conditions traffic volumes. These cumulative projects are listed in **Table 6-1** and the cumulative project trip volumes assigned to the study intersections are shown in **Figure 6-1**. The locations and trip distribution for these cumulative projects are included in **Appendix F**.

Table 6-1
Cumulative Projects

ID[1]	Project	Land Use	Quantity	Units[2]
1	Kroger Gas Station	Service Station	10	VFP
2	Wren Project	Residential	204	DU
3	Vallarta Shopping Center	Shopping Plaza	134	TSF
4	Canyon Springs Villas	Residential	58	DU
5	Mountain View Estates	Residential	110	DU
6	Tower Market	Service Station with Convenience Market	12	VFP
7	Cathedral Cove Center	Residential	200	DU
		Retail	6.65	TSF
		Fast-Food Restaurant	14.025	TSF
		Service Station with Convenience Market	12	VFP
C1	Ecoplex Park Phases 1 & 2	Cannabis Cultiviation	93.44	TSF
C2	Horizon Gardens	Senior Living	80	OB
C3	CCBC Restaurant	Restaurant	2.5	TSF
C4	Quick Quack Carwash	Carwash	3.5	TSF
C5	7-Eleven	Gas Station	8	VFP
C6	Ramon 19	Cannabis (Cultivation) Facility	486	TSF
		Dispensary	3	TSF
C7	District East	Residential	43	DU
C8	Greenscape Engineering (67587 Canyon Plaza)	Cannabis Cultivation	40	TSF
C9	Agua Caliente Casino	Casino	40	TSF
		Shopping Center	24	TSF
		High-Turnover Sit-Down Restaurant	14	TSF
		Quality Restaurant	14	TSF
		Fast Casual Restaurant	6	TSF
		Coffee Shop w/o Drive-Thru	2	TSF
C10	Nirvana Estates	Residential	103	DU
C11	Silver Torch Motel	Motel	6	Rooms
C12	Cree Gas Station	Convenience Store w/ Gas Station	8	VFP
C13	Cathedral City Events Center (35900 Date Palm Dr)	Event Center	80.0	TSF
C14	Amazon Hub Center (35780 Date Palm Dr)	Warehouse	94.0	TSF
C15	Medicinal Healing (36555 Bankside Dr)	Cannabis Cultivation Facility	11.0	TSF
C16	Horizon Hotel (67670 Carey Rd)	Hotel	68	Rooms
C17	MoGenCo (67555/67575 East Palm Canyon Drive)	Cannabis Cultivation Facility	111.0	TSF
C18	Desert Lexus (67855 East Palm Canyon Drive)	Automobile Dealership	41.0	TSF
C19	Cathedral City Community Amphitheater	Amphitheater	2,909	Seats
P1	Canyon View / Summit Project by EHOF Canyon View, LLC	Residential	80	DU

P2	Palm Springs Surf Club	Water Park	7.746	TSF
P3	Parker Hotel Expansion	Hotel	32	Rooms
P4	Vibrante	Condominium	41	DU
RM1	RM 38 JV LLC	Residential	82	DU
RM2	Carefield Senior Living	Residential	84	DU
RM3	ECHO at Rancho Mirage	Residential	9	DU
RM4	Santa Barbara Cove Estates	Residential	20	DU
RM5	Pulte Homes/ Del Webb	Residential	1,200	DU
RM6	Veneto	Residential	34	DU
RM7	Revelle	Residential	32	DU
RM8	Bella Clancy	Residential	20	DU
RM9	Mirada Villas	Residential	46	DU
RM10	Estilo	Residential	39	DU
RM11	RM Five-1 LLC/Kilani	Residential	4	DU
RM12	Heinrich/Steinberg	Residential	4	DU
RM13	Rancho Mirage LLC	Residential	4	DU
RM14	La Paloma Homes, Inc.	Residential	13	DU
RM15	Monterey Medical Center	Medical Office	75.164	TSF
RM16	38 JV, LLC c/o Meriwether Companies	Residential	10	DU
RM17	38 JV, LLC c/o Meriwether Companies	Residential	97	DU
RM18	38 JV, LLC c/o Meriwether Companies	Residential	10	DU
RM19	GRV Mirage, LLC (ECHO)	Residential	9	DU
RM20	Ken Catanzarite	Residential	20	DU
RM21	Miragedunes Properties	Residential	9	DU
RM22	AMS Development Group (Bellavia)	Residential	18	DU
RM23	IN-N-OUT Burgers	Commercial	3.995	TSF
RM24	DHO Medical Office Building	Medical Office	13.80	TSF
RM25	Chase Bank	Bank	3.47	TSF
RM26	Section 31 Specific Plan Project	Hotel	400	Rooms
		Commercial	175.00	TSF
		Residential	1,932	DU
RM27	Tower Energy Group	Commercial	5.565	TSF
RM28	Oasis Ranch LLC	Hotel	60	Rooms
		Residential	108	DU
RM29	Horizon Pacific Rancho Cove MSA Consulting	Commercial	20.00	TSF
		Hotel	100	Rooms
		Residential	35	DU
RM30	Ritz-Carlton Residences	Residential	106	DU
		Commercial	6.966	TSF
RM31	Hazelden Betty Ford Center	Office	6.399	TSF
		Drug/Alcohol Treatment Ctr.	56	Beds
RM32	Rancho Mirage Highway 111 Dealerships	Auto Sales (New)	58	TSF
		Auto Care Center	56	TSF

Notes:

[1] Projects with C, P, or RM designation are based on *Cathedral Cove Center Traffic Analysis* dated April 8, 2022, and prepared by Urban Crossroads. Volumes distributed north of Intersection 17 Date Palm Drive and Ramon Road were applied to study intersections as northbound and southbound through volumes.

[2] DU = Dwelling Units, TSF = Thousand Square Feet, VFP = Vehicle Fueling Positions, and OB = Occupied Beds

This section also documents potential Cumulative Conditions operational deficiencies on the circulation network. Rosemount Road does not currently extend to Date Palm Drive. The Rosemount Road extension is anticipated to be in place prior to opening year 2027. Therefore, the following analysis assumes a traffic signal at the new intersection of Date Palm Drive and Rosemount Road. Signal warrant worksheets are provided in **Appendix I**.

ANALYSIS RESULTS AND RECOMMENDED IMPROVEMENTS

Tables 6-2 through **6-4** show Cumulative Conditions intersection operation and roadway segment analysis results, respectively.

Figure 6-2 shows intersection turning movement under Cumulative Conditions.

Table 6-2
Cumulative Year 2027 Conditions Intersection Operation Analysis

Intersection	Intersection Control	Cumulative Conditions	
		Delay (a)	LOS (b)
AM/PM Peak			
1. Date Palm Drive and McCallum Way	Signalized	15.3/17.7	B/B
2. Date Palm Drive and Rosemount Road	Signalized	22.7/41.0	C/D
3. Date Palm Drive and 30th Avenue	Signalized	29.0/25.5	C/C
4. Date Palm Drive and Tachevah Drive	SSSC	61.0/59.0	**F/F**
5. Date Palm Drive and Project Driveway	SSSC	13.0/23.5	B/C
6. Existing Driveway and McCallum Way	SSSC	12.3/12.5	B/B

Notes:
***Bold** indicates deficient LOS E or F*
(a) Delay refers to the average control delay for the entire intersection, measured in seconds/vehicle. At unsignalized intersections, delay refers to the worst movement.
(b) LOS calculations are based on the methodology outlined in the Highway Capacity Manual 6th Edition and performed using Synchro 11.

Per the analysis results shown in **Table 6-2**, all analyzed intersections are operating at an acceptable LOS under Cumulative Conditions except for the following:

- Date Palm Drive and Tachevah Drive - Installation of a traffic signal.

It should be noted that Date Palm Drive and Tachevah Drive intersection will experience poor LOS under AM and PM peak hours due to the EBL movement which the project will not contribute to. The Project will only contribute trips to the NBL and EBR vehicular movements at the subject intersection. The delays and degradation in the EBL LOS are due to the increase in background vehicular volumes along Date Palm Drive related to the increase in developments throughout the City that are consistent with the buildout land use intensities anticipated in the Cathedral City General Plan. The increase of northbound and southbound through volumes on Date Palm Drive will reduce the number of gaps available for left turn vehicular movements out of Tachevah Drive.

Table 6-3 demonstrates the effectiveness of signalizing the two locations should the City secure the funds to address the existing operational deficiencies at these intersections.

Table 6-3
Cumulative Year 2027 With Improvements Intersection Operation Analysis

Intersection	Cumulative Year 2027		Cumulative Year 2027 With Improvements	
	Delay (a)	LOS (b)	Delay (a)	LOS (b)
AM/PM Peak				
4. Date Palm Drive and Tachevah Drive	61.0/59.0	**F/F**	6.4/5.7	A/A

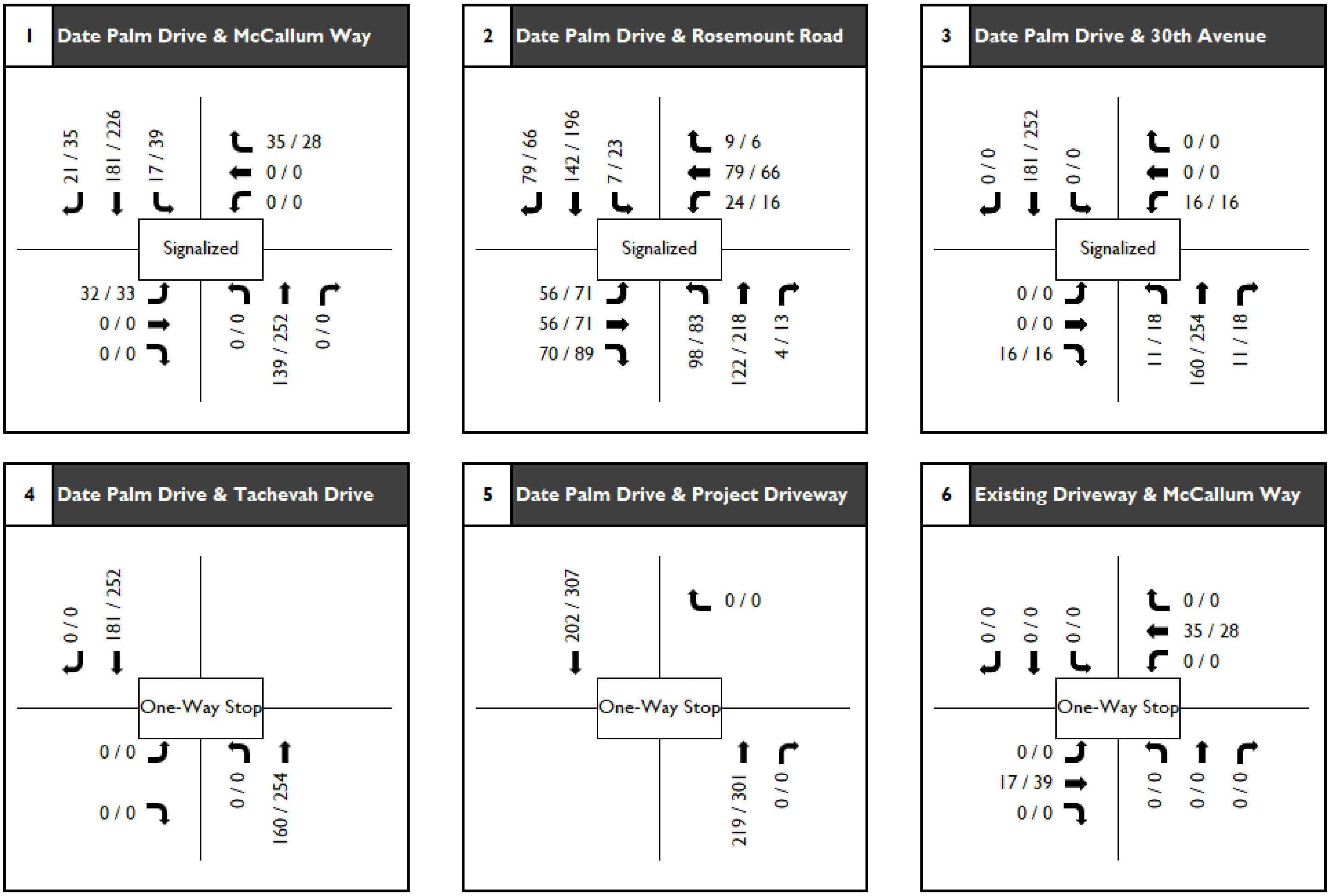
Notes:
***Bold** indicates deficient LOS E or F*
(a) Delay refers to the average control delay for the entire intersection, measured in seconds/vehicle. At unsignalized intersections, delay refers to the worst movement.
(b) LOS calculations are based on the methodology outlined in the Highway Capacity Manual 6th Edition and performed using Synchro 11.

Cumulative Year 2027 Conditions peak hour analysis worksheets are provided in **Appendix G**. Cumulative Year 2027 With Improvement peak hour analysis worksheets and signal warrant analysis are provided in **Appendix H**.

Table 6-4
Cumulative Year 2027 Conditions Roadway Segment Capacity Analysis

Roadway Segment	Classification	LOS E Capacity	Cumulative Year 2027		
			ADT	V/C	LOS
Date Palm Drive					
McCallum Way to Project Driveway	Arterial Highway	59,000	28,431	0.482	C
Project Driveway to Rosemount Drive	Arterial Highway	59,000	28,580	0.484	C
Rosemount Drive to 30th Avenue	Arterial Highway	59,000	29,054	0.492	C
Tortuga Road to Tachevah Drive	Arterial Highway	59,000	30,648	0.519	C

Per the analysis results shown in **Table 6-3**, all analyzed roadway segments are operating at an acceptable LOS under Cumulative Year 2027 Conditions.



Roadway Segment	Cumulative ADT
Date Palm Drive	
McCallum Way to Project Driveway	4,039
Project Driveway to Rosemount Road	4,039
Rosemount Road to 30th Avenue	3,541
30th Avenue to Tachevah Drive	2,890

XX / XX AM / PM Peak Hour Volumes

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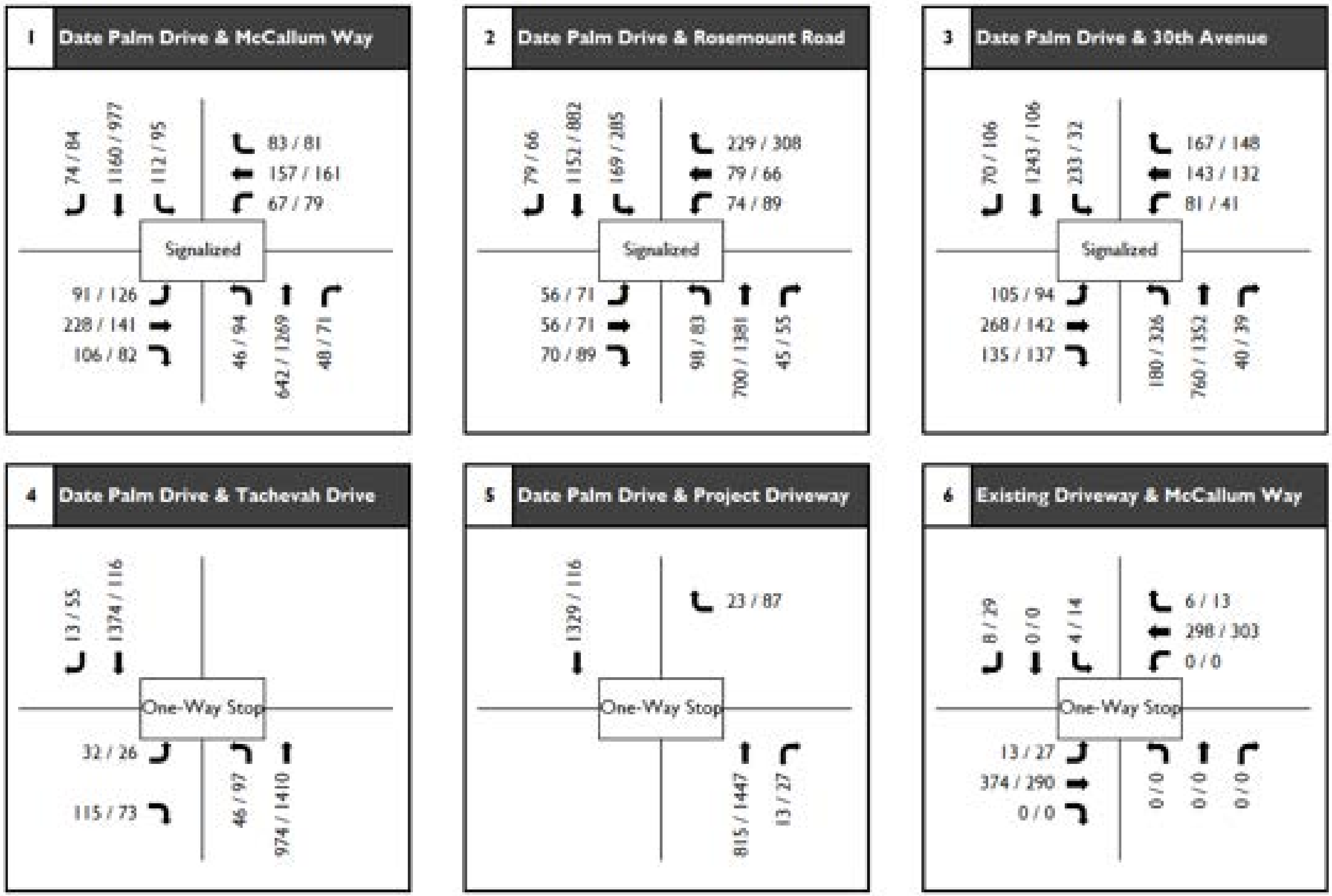
Date Palm Drive Mixed Use
Cumulative Projects Volumes
Figure 6-1



XX / XX AM / PM Peak Hour Volumes

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Date Palm Drive Mixed Use
Cumulative Year 2027
AM/PM Peak Hour Intersection Volumes
Figure 6-2

7.0 SCENARIO 1

This section documents the circulation system conditions within the study area of the project during the AM peak hour under Project (Scenario 1) Completion Year 2027 and Cumulative Year 2027 (Scenario 1) Conditions. Rosemount Road does not currently extend to Date Palm Drive. The Rosemount Road extension is anticipated to be in place prior to opening year 2027. Therefore, the following analysis assumes a traffic signal at the new intersection of Date Palm Drive and Rosemount Road. Signal warrant worksheets are provided in **Appendix I**.

ANALYSIS RESULTS AND RECOMMENDED IMPROVEMENTS

Tables 7-1 through **7-2** show Project (Scenario 1) Completion Year 2027 and Cumulative Year 2027 (Scenario 1) Conditions PM peak hour intersection operation analysis results, respectively.

Figures 7-1 through **7-2** show intersection turning movement volumes under Project (Scenario 1) Completion Year 2027 and Cumulative Year 2027 (Scenario 1) Conditions, respectively.

Table 7-1
Project Completion Year 2027 (Scenario 1) Conditions AM Peak Hour Intersection Operation Analysis

Intersection	Intersection Control	Project Completion Year 2027 (Scenario 1)	
		Delay (a)	LOS (b)
1. Date Palm Drive and McCallum Way	Signalized	15.2	B
2. Date Palm Drive and Rosemount Road	Signalized	24.1	A
3. Date Palm Drive and 30th Avenue	Signalized	29.0	C
4. Date Palm Drive and Tachevah Drive	SSSC	61.0	**F**
5. Date Palm Drive and Project Driveway	SSSC	13.5	B
6. Existing Driveway and McCallum Way	SSSC	12.6	B

Notes:
(a) Delay refers to the average control delay for the entire intersection, measured in seconds/vehicle. At unsignalized intersections, delay refers to the worst movement.
(b) LOS calculations are based on the methodology outlined in the Highway Capacity Manual 6th Edition and performed using Synchro 11.

Per the analysis results shown in **Table 7-1**, all analyzed intersections are operating at an acceptable LOS under Project (Scenario 1) Completion Year 2027 Conditions except for the following:

- Date Palm Drive and Tachevah Drive - as shown in Table 7-1, the addition of the project trips at this location would result in the same delay as Scenario 2. Therefore, no additional improvements are recommended at this location when compared to Scenario 2.

Project (Scenario 1) Completion Year 2027 Conditions AM peak hour analysis worksheets are provided in **Appendix J**.

Table 7-2
Cumulative Year 2027 (Scenario 1) Conditions AM Peak Hour Intersection Operation Analysis

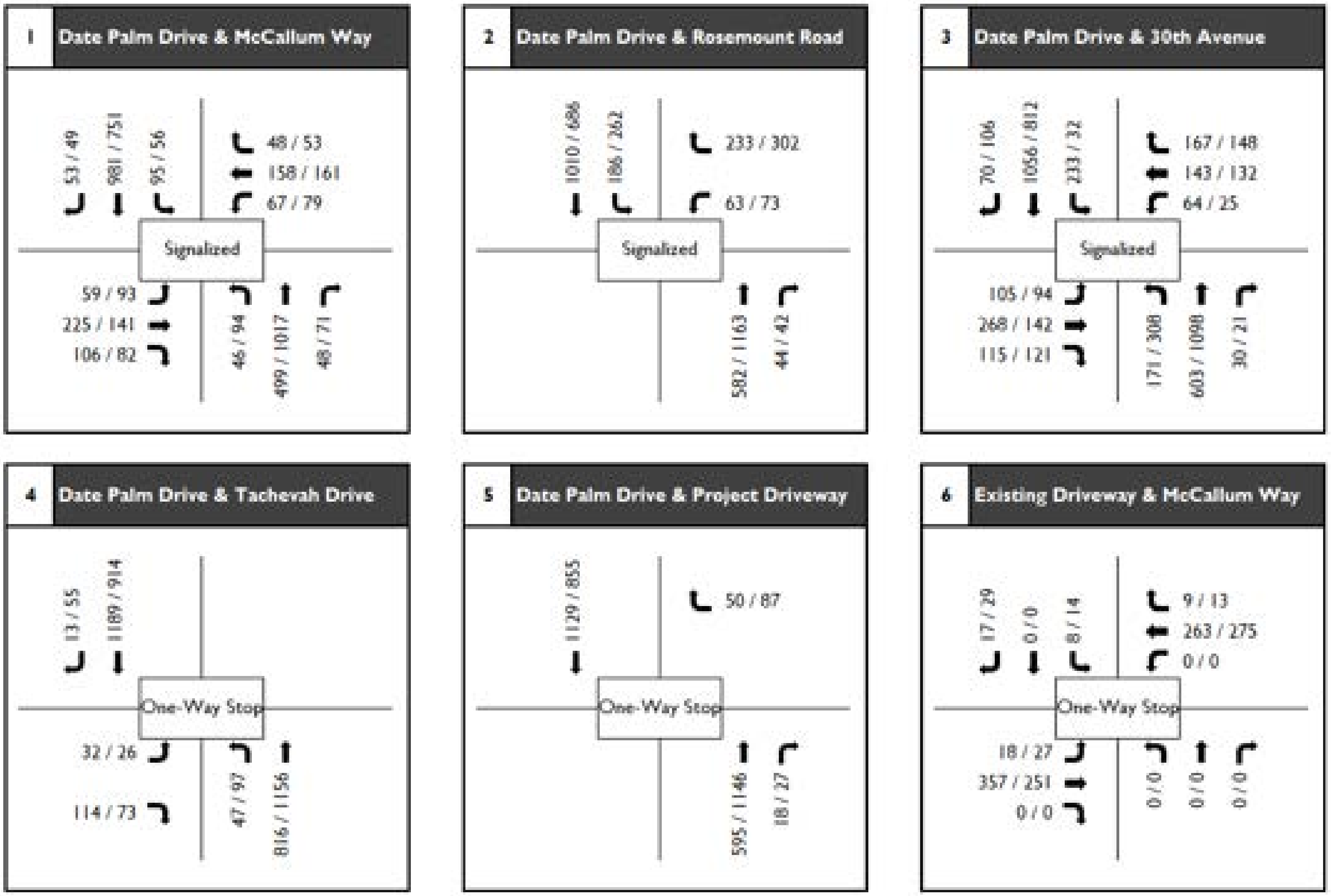
Intersection	Intersection Control	Cumulative Year 2027 (Scenario 1)	
		Delay (a)	LOS (b)
1. Date Palm Drive and McCallum Way	Signalized	15.2	B
2. Date Palm Drive and Rosemount Road	Signalized	24.1	C
3. Date Palm Drive and 30th Avenue	Signalized	29.0	C
4. Date Palm Drive and Tachevah Drive	SSSC	61.0	**F**
5. Date Palm Drive and Project Driveway	SSSC	13.5	B
6. Existing Driveway and McCallum Way	SSSC	12.6	B

Notes:
(a) Delay refers to the average control delay for the entire intersection, measured in seconds/vehicle. At unsignalized intersections, delay refers to the worst movement.
(b) LOS calculations are based on the methodology outlined in the Highway Capacity Manual 6th Edition and performed using Synchro 11.

Per the analysis results shown in **Table 7-2**, all analyzed intersections are operating at an acceptable LOS under Cumulative Year 2027 (Scenario 1) Conditions except for the following:

- Date Palm Drive and Tachevah Drive - as shown in Table 7-2, the addition of the project trips at this location would result in a delay lower than Scenario 2. Therefore, no additional improvements are recommended at this location when compared to Scenario 2.

Cumulative Year 2027 (Scenario 1) Conditions AM peak hour analysis worksheets are provided in **Appendix J**.



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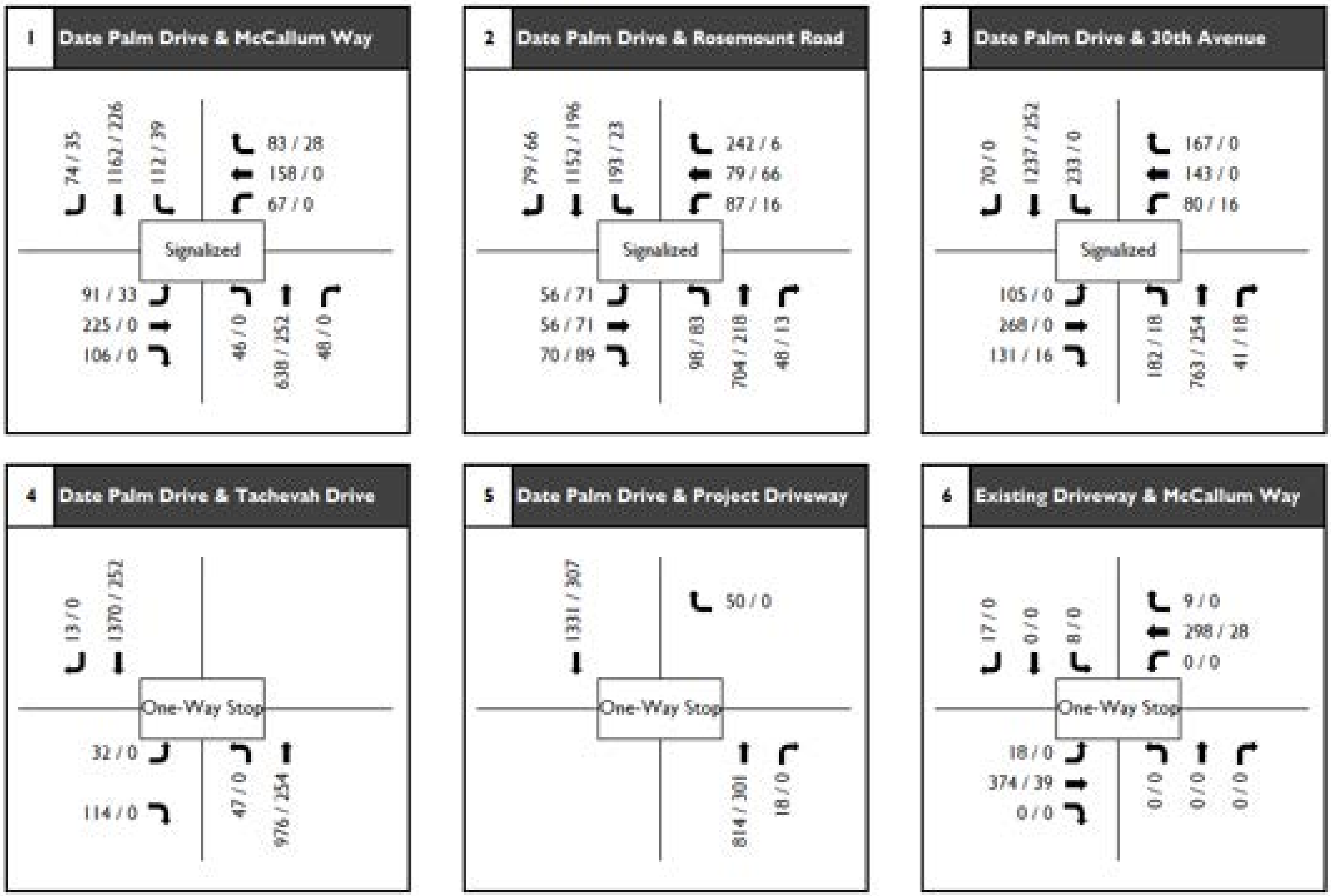
Date Palm Drive Mixed Use
Project (Scenario 1) Completion Year 2027
AM Peak Hour Intersection Volumes
Figure 7-1



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Date Palm Drive Mixed Use
Cumulative Year 2027 (Scenario 1)
AM Peak Hour Intersection Volumes
Figure 7-2

8.0 RECOMMENDED IMPROVEMENTS

New development projects within the City of Cathedral City are required to provide needed infrastructure improvements to meet the demand created by the development and provide off-site improvements designed to ensure construction of the local and regional transportation networks to their ultimate classifications. This section summarizes the project feature improvements and recommended improvements at deficient locations under all analyzed scenarios discussed in this report.

The proposed traffic signal at the new intersection of Date Palm Drive and Rosemount Road will be constructed by whichever project is constructed first between Date Palm Drive Mixed Use, the Wren Project, and the Vallarta Shopping Center. All three projects will contribute to the funding of the transportation improvement based on their portion of total ADT generated. It should be noted that through the course of the subject project entitlement process, it has been determined that Vallarta will no longer be interested in acquiring phase 2 parcel to construct a supermarket but instead the supermarket will be built on the vacant site at the southwest corner of Date Plam and Rosemount Road intersection; therefore, the Project fair share contribution of 16.29% toward the signalization of Date Plam and Rosemount Road intersection is calculated based on the project scenario 1 land use intensity, as shown in **Table 8-1**. Wren Project and Vallarta Shopping Center project Trip generation is shown in **Appendix K**.

Table 8-1
Project Feature Contributions

Project	Project ADT (Scenario 1)	Project ADT (Scenario 2)	Project Share % (Scenario 1)	Project Share % (Scenario2)
Date Palm Drive Mixed Use	1,668	3,542	**16.29%**	29.23%
Wren Project	1,375	1,375	13.43%	11.35%
Vallarta Shopping Center	7,199	7,199	70.29%	59.42%
Total	10,242	12,116	100%	100%

Additionally, the ultimate turn lane lengths were determined by analyzing queues under Horizon Year 2045 Plus Projects Conditions. An annual growth factor based on the growth from RIVCOM 4.01 Base Year 2018 with 3 Projects to Forecast Year 2045 with 3 Projects was applied to Adjusted Existing Year 2023 counts (from Section 5.0) Plus 3 Projects volumes. The calculated growth factors, developed Horizon Year Plus Projects volumes, and queue analysis worksheets are included in **Appendix K**.

Table 8-2 shows the recommended turn lane lengths to accommodate the anticipated queue demand.

Table 8-2
Horizon Year 2045 Plus Projects Intersection Queue Analysis

Intersection	Movement	Analyzed Turn Lane Length (ft)	Recommended Minimum Taper Length (ft)	Queue (ft)		Excess Demand		Recommended Turn Lane Length (ft)
				AM	PM	AM	PM	
Date Palm Drive and Rosemount Road	NBL	180	90	101	185	--	--	200
	NBR	100	90	53	103	--	--	120
	SBL	280	90	171	281	--	--	300
	SBR	140	90	136	75	--	--	140
	WBL	140	60	74	147	--	--	160

In cases where this study identified that the Project would contribute additional traffic volumes to cumulative traffic deficiencies, Project fair share costs of improvements necessary to mitigate deficient conditions have been calculated. The Project's 8.7% fair share cost of improvements shown in **Table 8-3** is determined based on the following equation, which is the ratio of Project traffic to new traffic. New traffic is total future traffic less existing baseline traffic:

Project Fair Share % = Project Traffic / (Cumulative Year 2027 Traffic – Existing Baseline Traffic)

Table 8-3
Project Fair Share Contributions

#	Intersection	Existing Baseline Traffic	Project Traffic	Cumulative Year 2027 Traffic	Project Fair Share %	Funding Mechanism
4	Date Palm Drive and Tachevah Drive					
	AM	1,927	41	2,527	6.8%	Project fair share towards intersection signalization
	PM	1,999	68	2,784	**8.7%**	

9.0 VEHICLE MILES TRAVELED

This section documents the results of the Project VMT Screening assessment per the Guidelines.

The Guidelines provide project screening criteria to determine if a detailed VMT analysis is necessary. A presumption can be made that a project land use would not cause a significant transportation related CEQA impact if a project meets any one of project-level assessment screening criteria identified in the Guidelines.

Per the Guidelines screening criteria for development projects, Scenarios 1 and 2 are screened out from VMT analysis since the mini warehouse component satisfies the Small Project screening criterion, and the strip retail plaza, fast-food restaurant, and shopping plaza components meet the Local-serving retail screening criterion. Therefore, all Scenarios 1 and 2 land use components are presumed to cause less than significant VMT impacts. It is our recommendation that the project be approved with no additional project-level VMT analysis.

The VMT Screening Assessment is included in a separate document.

APPENDIX A -

SCOPING AGREEMENT

SCOPING AGREEMENT FOR TRANSPORTATION LOS ANALYSIS

This letter acknowledges the Riverside County Transportation Department requirements for transportation level of service analysis of the following project. The analysis must follow the Riverside County Transportation Department Transportation Analysis Guidelines, December 2020.

Case No.	
Related Cases	
Project Name:	Date Palm Drive Mixed Use
Project Address:	SEC of Date Palm Drive and Rosemount Road extension
Project Description:	Phase 1 - 115,916 sf self storage. Phase 2 - 2 scenarios; see attached memo

	Traffic Consultant	Applicant/Developer
Name:	George Ghossain, Integrated Engineering Grp	Stephen Nieto, The Altum Group
Address:	23905 Clinton Keith Road 114-280	44-600 Village Court, Ste 100
	Wildomar, CA 92595	Palm Desert, CA 92260
Telephone:	951-239-1546	760-346-4750
E-mail:	george@intenggroup.com	Stephen.Nieto@thealtumgroup.com

Current GP Land Use	General Commercial	Proposed Land Use	General Commercial
Current Zoning	Planned Community Comm	Proposed Zoning	Planned Community Comm

A. Trip Generation Source: ITE Trip Generation Manual, 11th Edition (2021)

	Current Trip Generation			Proposed Trip Generation		
	In	Out	Total	In	Out	Total
AM Trips	0	0	0	126	78	243
PM Trips	0	0	0	163	177	340

Internal Trip Allowance ☑ Yes ☐ No (See Memo % Trip Discount)

Pass-By Trip Allowance ☑ Yes ☐ No (See Memo % Trip Discount)

A pass-by trip discount of 25% is allowed for appropriate land uses. The pass-by trips at adjacent study area intersections and project driveways shall be indicated on a report figure.

B. Trip Geographic Distribution: N 15 % S 40 % E 25 % W 0 %

(attach exhibit for detailed assignment)

C. Background Traffic

Project Build-out Year:	2027	Annual Ambient Growth Rate:	3 %
Phase Year(s)	Ph1-2025, Ph2-2027		
Other projects to be analyzed:	The Wren & Vallarta Shopping Center		
Model/Forecast methodology	RIVCOM 4 2018 BY & 2045 HY		

D. Study intersections: *(NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies.)*

1. Date Palm Drive & McCallum Way
2. Date Palm Drive & Rosemount Road
3. Date Palm Drive & 30th Avenue
4. Date Palm Drive & Tachevah Drive
5. Date Palm Drive & Project Driveway
6. Existing Driveway & McCallum Way
7.
8.
9.
10.

E. Study Roadway Segments: *(NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies.)*

1. Date Palm Dr, McCallum Wy to Project Dwy
2. Date Palm Dr, Project Dwy to Rosemount Rd
3. Date Palm Dr, Rosemount Rd to 30th Ave
4. Date Palm Dr, 30th Ave to Tachevah Dr
5.
6.
7.
8.
9.
10.

F. Other Jurisdictional

Is this project within a City's Sphere of Influence or one-mile radius of City boundaries? ☑ Yes ☐ No
If yes, name of jurisdiction(s): Rancho Mirage

G. Site Plan (please attach reduced copy)

H. Specific issues to be addressed in the Study (in addition to the standard analysis described in the Guideline) (To be filled out by Transportation Department)
(NOTE: If the traffic study states that "a traffic signal is warranted" (or "a traffic signal appears to be warranted," or similar statement) at an existing unsignalized intersection under existing conditions, 8-hour approach traffic volume information must be submitted in addition to the peak hourly turning movement counts for that intersection.)

Date Palm Dr/Rosemount Rd - traffic signal warrant and queue analysis for exclusive SBL & NBR

I. Existing Conditions

Traffic count data must be new or recent. Provide traffic count dates if using other than new counts.
Date of counts 05/09/2023

***NOTE* Traffic Study Submittal Form and appropriate fee must be submitted with this form.**

Recommended by:

Traffic Consultant Date

Scoping Agreement Submitted on ____________
Revised on ____________

Approved Scoping Agreement

Riverside County Transportation Department Date

Date: June 2, 2023

To: John Corella, P.E., City Engineer/Public Works Director, Cathedral City

From: George Ghossain, Principal Engineer, Integrated Engineering Group

Subject: Scoping Agreement for Date Palm Drive Mixed Use Project

---

Integrated Engineering Group (IEG) is pleased to submit this scoping agreement for the Date Palm Drive Mixed Use project (Project) located at the northeast corner of the Date Palm Drive and McCallum Way intersection within Cathedral City, California. The project is proposing the construction of the following two land use scenarios, each in two phases:

Scenario 1

- Phase 1:
    - 115,054 sf of mini warehouse (self-storage facility including office space)
- Phase 2:
    - 11,159 sf of strip retail plaza
    - 7,030 sf of fast-food restaurant with drive-through window

Scenario 2

- Phase 1:
    - 115,054 sf of mini warehouse (self-storage facility including office space)
- Phase 2:
    - 54,725 sf of shopping plaza (including 50,000 sf of supermarket and 4,725 sf of retail)

Our goal is to obtain comments from Cathedral City staff, to ensure this scoping agreement addresses the analysis requirements for the project, according to the County of Riverside Transportation Analysis Guidelines for Level of Service (LOS) and Vehicle Miles Traveled (VMT), December 2020 (Guidelines).

The preliminary site plans for the Project scenarios are shown in **Attachment 1**. Rosemount Road does not currently extend to Date Palm Drive. However, it is anticipated that the appropriate dedications and easements will be in place prior to Project opening. Therefore, this report will address the following access by phase:

- Phase 1 – Rosemount Road extension not constructed prior to opening year 2025. Access would be limited to one proposed driveway along Date Palm Drive and one existing driveway along McCallum Way.
- Phase 2 – Rosemount Road extension in place prior to opening year 2027. Access to the project site will be provided via one proposed driveway along Date Palm Drive, one proposed driveway along Rosemount Road, and one existing driveway along McCallum Way. Additionally, the Project will construct a traffic signal at the new intersection of Rosemount Road and Date Palm Drive.

TRIP GENERATION FOR POTENTIAL USES

Trip generation is a measure or forecast of the number of trips that begin or end at the project site. The traffic generated is a function of the extent and type of development proposed for the site. These trips will result in some traffic increases on the streets where they occur. Per the Guidelines, project vehicular traffic generation characteristics should be estimated based on established rates contained in the *Trip Generation Manual (TGM), 11th Edition*, published by the Institute of Transportation Engineers (ITE). Project ITE average trip generation rates are shown in **Table 1**.

Table 1
Project Trip Generation Rate

Land Use[1]	Units[2]	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Strip Retail Plaza (<40k)[3]	TSF	822	1.66	1.11	2.77	3.77	3.77	7.54	62.78
Shopping Plaza (40-150k)[4]	TSF	821	2.19	1.34	3.53	4.72	5.12	9.84	102.78
Fast Food Restaurant w/ Drive-through Window	TSF	934	22.75	21.86	44.61	17.18	15.85	33.03	467.48
Mini-Warehouse	TSF	151	0.05	0.04	0.09	0.07	0.08	0.15	1.45

[1]Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Eleventh Edition (2021).
[2]TSF = Thousand Square Feet
[3]Peak hour and daily trip rates for LU 822 Strip Retail Plaza are based on fitted curve equations for total 11,159 sf of retail proposed for Scenario 1.
[4]PM peak hour and daily trip rates for LU 821 Shopping Plaza are based on fitted curve equations for total 54,725 sf of shopping plaza (supermarket plus retail) proposed for Scenario 2.

Table 2 summarizes the calculated trip generation associated with Scenario 1. As shown in Table 2, Scenario 1 is anticipated to generate approximately 1,696 total daily trips, 192 AM peak hour trips and 137 PM peak hour trips.

Table 2
Scenario 1 Project Trip Generation

Land Use[1]	Intensity	Units[2]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Phase 1									
Mini-Warehouse	115.054	TSF	6	4	50	8	9	17	167
Phase 2									
Strip Retail Plaza (<40k)	11.159	TSF	19	12	31	42	42	84	701
Internal Capture (11% - AM In, 17% - AM Out, 50% - PM In, 29% - PM Out, & 39% - Daily)[3]			2	2	4	21	12	33	273
Pass-by Reduction (40% - PM Peak Hour & Daily)[5]			0	0	0	8	12	20	171
Subtotal			*17*	*10*	*27*	*13*	*18*	*31*	*257*
Fast Food Restaurant w/ Drive-through Window	7.030	TSF	160	154	314	121	111	232	3,286
Internal Capture (1% - AM In, 1% - AM Out, 10% - PM In, 19% - PM Out, 14% - Daily)[3]			2	2	4	12	21	33	460
Pass-by Reduction (50% - AM Peak Hour, 55% - PM Peak Hour & Daily)[4]			79	76	155	49	40	89	1,272
Subtotal			*79*	*76*	*155*	*49*	*40*	*89*	*1,272*
Scenario 1 Total			***102***	***90***	***192***	***70***	***67***	***137***	***1,696***

[1]Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Eleventh Edition (2021).
[2] TSF = Thousand Square Feet
[3] Internal Capture percentage is based on NCHRP Report 684, as recommended in the ITE Trip Generation Handbook, 3rd Edition, and included in **Attachment 2**.
[4] Pass-by reduction percentage is based on the ITE methodology per 2021 Pass-By Tables for ITE Trip Generation Appendices.
[5] Used the same Pass-by reduction percentage as LU 821 Shopping Plaza.

Table 3 summarizes the calculated trip generation associated with Scenario 2. As shown in Table 1-3, Scenario 2 would be anticipated to generate approximately 3,542 total daily trips, 243 AM peak hour trips and 340 PM peak hour trips. This results in an increase of 1,846 daily trips, an increase of 51 AM peak hour trips, and an increase of 203 PM peak hour trips when compared to Scenario 1. However, Scenario 1 would result in 12 additional AM peak hour outbound trips. Therefore, Scenario 2 will be the governing scenario for analysis and only the intersection AM peak hour will be analyzed for Scenario 1 as supplemental analysis.

Table 1-3
Scenario 2 Project Trip Generation

Land Use[1]	Intensity	Units[2]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Phase 1									
Mini-Warehouse	115.054	TSF	6	4	50	8	9	17	167
Phase 2									
Shopping Plaza (40-150k)	54.725	TSF	120	73	193	258	280	538	5,625
Pass-by Reduction (40% - PM Peak Hour & Daily)[3]			0	0	0	103	112	215	2,250
Subtotal			*120*	*73*	*193*	*155*	*168*	*323*	*3,375*
Scenario 2 Total			***126***	***78***	***243***	***163***	***177***	***340***	***3,542***
Scenario 1 Total			***99***	***89***	***188***	***68***	***65***	***133***	***1,668***
Net Difference (Scenario 2-Scenario 1)			***+24***	***-12***	***+51***	***+93***	***+110***	***+203***	***+1,846***

[1]Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Eleventh Edition (2021).
[2] TSF = Thousand Square Feet
[3] Pass-by reduction percentage is based on the ITE methodology per 2021 Pass-By Tables for ITE Trip Generation Appendices.

STUDY AREA

The study area for this project was developed consistent with the Guidelines, which includes all intersections of two (2) or more “Collector” or higher classification streets, at which the proposed project will add 50 or more peak hour trips. **Attachment 3** presents the study area that includes the key intersection and roadway segment locations identified in the scoping form.

24-hour segment and intersection counts will be conducted for one weekday (Tuesday through Thursday), with turning movements collected during the morning (7:00-9:00am) and evening (4:00-6:00) peak hours. The turning movement counts will be utilized in Synchro to determine level of service (LOS) at all study intersections.

TRIP DISTRIBUTION

Trip distribution and assignment is the process of identifying the probable destinations, directions and traffic routes that project related traffic will likely affect. Trip distribution and assignment information can be estimated from observed traffic patterns, experience or through use of a computerized travel forecast model. Once the proposed developments trips have been estimated, they are assigned to the study area network. For this project, the trip distribution was developed based on the land use characteristics, surrounding land uses in the vicinity of the project site, anticipated travel patterns to and from the project site and existing travel patterns within the study area. **Attachments 3** and **4** show the project's trip distribution and trip assignment, respectively.

ANALYSIS SCENARIOS

Analysis of the intersection operating conditions during the peak periods will be conducted for the following anticipated timeframe scenarios:

- Existing Conditions Year 2023
- Project Completion Year 2025 (Existing Plus Ambient Plus Project Phase 1)
- Project Completion Year 2027 (Existing Plus Ambient Plus Project Phases 1 & 2)
- Cumulative Year 2027 (Existing Plus Ambient Plus Cumulative Plus Project)

Ambient growth is 3% per year.

Specific issues to be addressed in the Study (in addition to the standard analysis described in the Guideline)

The Study will include intersection queue analysis to determine the lengths of the following potential exclusive lanes:

- Southbound left turn lane length at the intersection of Date Palm Drive and Rosemount Road
- Northbound right turn lane at the intersection of Date Palm Drive and Rosemount Road

VEHICLE MILES TRAVELED (VMT) ANALYSIS

IEG will conduct a VMT screening assessment per the Guidelines to demonstrate that the retail and industrial components of the project can be presumed to have a less than significant transportation VMT impact.

Sincerely,

Approved By:

Signature: ______________________________

Name: ______________________________

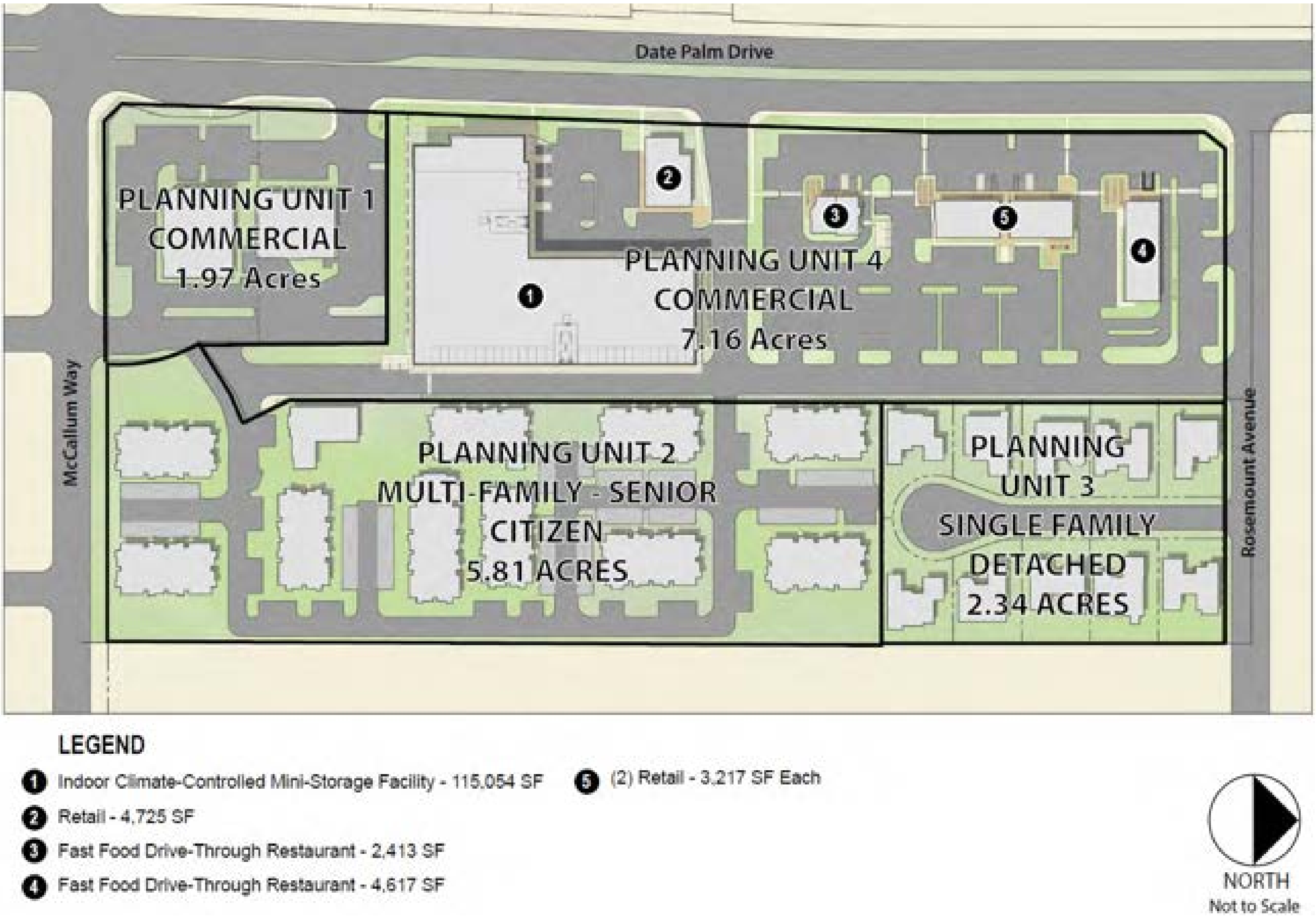
Address: ______________________________

____

____

George Ghossain, MS, PE
Principal Engineer

Attachments:
1 – Project Site Plan
2 – Internal Capture Calculations
3 – Project Study Area & Trip Distribution
4 – Project Trip Assignment

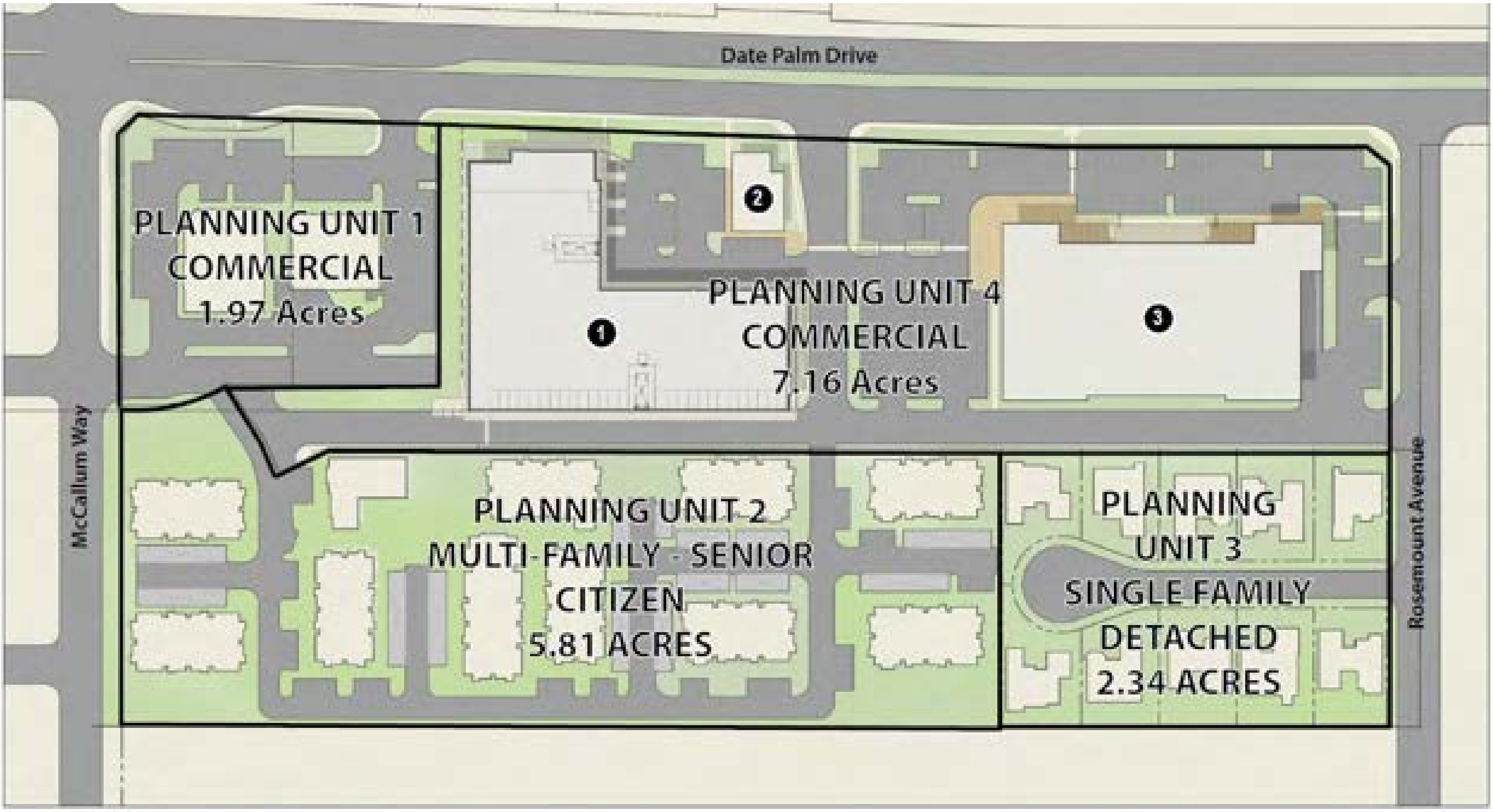


INTEGRATED ENGINEERING GROUP
TRANSPORTATION PLANNING AND ENGINEERING

Date Palm Drive Mixed Use

Project Site Plan (Scenario 1)

Attachment 1a



LEGEND

1. Indoor Climate-Controlled Mini-Storage Facility - 115,054 SF
2. Retail - 4,725 SF
3. Grocery Store or other Big Box Use - 50,000 SF

NORTH
Not to Scale

INTEGRATED ENGINEERING GROUP
TRANSPORTATION PLANNING AND ENGINEERING

Date Palm Drive Mixed Use
Project Site Plan (Scenario 2)
Attachment 1b

Attachment 2 - Internal Capture Calculations

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	Date Palm Dr Mixed Use	**Organization:**	
Project Location:	Date Palm Dr, Cathedral City, CA	**Performed By:**	
Scenario Description:	Scenario 1	**Date:**	
Analysis Year:	2023	**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail				31	19	12
Restaurant				314	160	154
Cinema/Entertainment				0		
Residential				0		
Hotel				0		
All Other Land Uses[2]				0		
Total				345	179	166

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office	1.00			1.00		
Retail	1.00			1.00		
Restaurant	1.00			1.00		
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		2	0	0	0
Restaurant	0	2		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	345	179	166
Internal Capture Percentage	2%	2%	2%
External Vehicle-Trips[3]	337	175	162
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	11%	17%
Restaurant	1%	1%
Cinema/Entertainment	N/A	N/A
Residential	N/A	N/A
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.
[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator
[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A
[4]Person-Trips
*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Date Palm Dr Mixed Use
Analysis Period:	**AM Street Peak Hour**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips				Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*		Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0		1.00	0	0
Retail	1.00	19	19		1.00	12	12
Restaurant	1.00	160	160		1.00	154	154
Cinema/Entertainment	1.00	0	0		1.00	0	0
Residential	1.00	0	0		1.00	0	0
Hotel	1.00	0	0		1.00	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	3		2	0	2	0
Restaurant	48	22		0	6	5
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		6	37	0	0	0
Retail	0		80	0	0	0
Restaurant	0	2		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	3	32	0		0
Hotel	0	1	10	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates				External Trips by Mode*		
	Internal	External	Total		Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0		0	0	0
Retail	2	17	19		17	0	0
Restaurant	2	158	160		158	0	0
Cinema/Entertainment	0	0	0		0	0	0
Residential	0	0	0		0	0	0
Hotel	0	0	0		0	0	0
All Other Land Uses[3]	0	0	0		0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates				External Trips by Mode*		
	Internal	External	Total		Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0		0	0	0
Retail	2	10	12		10	0	0
Restaurant	2	152	154		152	0	0
Cinema/Entertainment	0	0	0		0	0	0
Residential	0	0	0		0	0	0
Hotel	0	0	0		0	0	0
All Other Land Uses[3]	0	0	0		0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	Date Palm Dr Mixed Use	**Organization:**	
Project Location:	Date Palm Dr, Cathedral City, CA	**Performed By:**	
Scenario Description:	Scenario 1	**Date:**	
Analysis Year:	2023	**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail				84	42	42
Restaurant				232	121	111
Cinema/Entertainment				0		
Residential				0		
Hotel				0		
All Other Land Uses[2]				0		
Total				316	163	153

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office	1.00			1.00		
Retail	1.00			1.00		
Restaurant	1.00			1.00		
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		12	0	0	0
Restaurant	0	21		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	316	163	153
Internal Capture Percentage	21%	20%	22%
External Vehicle-Trips[3]	250	130	120
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	50%	29%
Restaurant	10%	19%
Cinema/Entertainment	N/A	N/A
Residential	N/A	N/A
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.
[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator
[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P
[4]Person-Trips
*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Date Palm Dr Mixed Use
Analysis Period:	**PM Street Peak Hour**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips				Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*		Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0		1.00	0	0
Retail	1.00	42	42		1.00	42	42
Restaurant	1.00	121	121		1.00	111	111
Cinema/Entertainment	1.00	0	0		1.00	0	0
Residential	1.00	0	0		1.00	0	0
Hotel	1.00	0	0		1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	1		12	2	11	2
Restaurant	3	46		9	20	8
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		3	2	0	0	0
Retail	0		35	0	0	0
Restaurant	0	21		0	0	0
Cinema/Entertainment	0	2	4		0	0
Residential	0	4	17	0		0
Hotel	0	1	6	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates				External Trips by Mode*		
	Internal	External	Total		Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0		0	0	0
Retail	21	21	42		21	0	0
Restaurant	12	109	121		109	0	0
Cinema/Entertainment	0	0	0		0	0	0
Residential	0	0	0		0	0	0
Hotel	0	0	0		0	0	0
All Other Land Uses[3]	0	0	0		0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates				External Trips by Mode*		
	Internal	External	Total		Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0		0	0	0
Retail	12	30	42		30	0	0
Restaurant	21	90	111		90	0	0
Cinema/Entertainment	0	0	0		0	0	0
Residential	0	0	0		0	0	0
Hotel	0	0	0		0	0	0
All Other Land Uses[3]	0	0	0		0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

Land Use	Unadjusted Project Trips[1]			Internal Capture %[2]		Internal Capture Project Trips[3]			PM Total %[4]
	PM In	PM Out	PM Total	PM In	PM Out	PM In	PM Out	PM Total	
Retail	42	42	84	50%	29%	21	12	33	39%
Restaurant	121	111	232	10%	19%	12	21	33	14%

[1]Trip generation based on rates from Institute of Transportation Engineers (ITE), Trip Generation Manual, Eleventh Edition (2021)

[2]Internal Capture percentage is based on NCHRP Report 684, as recommended in the ITE Trip Generation Handbook, 3rd Edition.

[3]Internal Capture percentage from footnote 2 applied to trip generation from footnote 1

[4]Calculated internal capture percentage for total PM trips based on internal capture PM total trips column divided by unadjusted PM PM total trips column

List of Land Uses with Vehicle Pass-By Rates and Data
Source: ITE *Trip Generation Manual* , 11th Edition

Institutional (Land Uses 500–599)

CODE	LAND USE
565	Day Care Center

Retail (Land Uses 800–899)

CODE	LAND USE
813	Free-Standing Discount Superstore
814	Variety Store
815	Free-Standing Discount Store
816	Hardware/Paint Store
820	Shopping Center (>150k)
821	Shopping Plaza (40-150k)
843	Automobile Parts Sales
848	Tire Store
850	Supermarket
857	Discount Club
862	Home Improvement Superstore
863	Electronics Superstore
880	Pharmacy/Drugstore without Drive-Through Window
881	Pharmacy/Drugstore with Drive-Through Window
890	Furniture Store

Services (Land Uses 900–999)

CODE	LAND USE
912	Drive-in Bank
931	Fine Dining Restaurant
932	High-Turnover (Sit-Down) Restaurant
934	Fast-Food Restaurant with Drive-Through Window
935	Fast-Food Restaurant with Drive-Through Window and No Indoor Seating
938	Coffee/Donut Shop with Drive-Through Window and No Indoor Seating
944	Gasoline/Service Station
945	Convenience Store/Gas Station

Vehicle Pass-By Rates by Land Use

Source: ITE *Trip Generation Manual* , 11th Edition

Land Use Code	821
Land Use	Shopping Plaza (40 - 150k)
Setting	General Urban/Suburban
Time Period	Weekday PM Peak Period
# Data Sites	15
Average Pass-By Rate	40%

Pass-By Characteristics for Individual Sites

GLA (000)	State or Province	Survey Year	# Interviews	Pass-By Trip (%)	Non-Pass-By Trips			Adj Street Peak Hour Volume	Source
					Primary (%)	Diverted (%)	Total (%)		
45	Florida	1992	844	56	24	20	44	—	30
50	Florida	1992	555	41	41	18	59	—	30
52	Florida	1995	665	42	33	25	58	—	30
53	Florida	1993	162	59	—	—	41	—	30
57.23	Kentucky	1993	247	31	53	16	69	2659	34
60	Florida	1995	1583	40	38	22	60	—	30
69.4	Kentucky	1993	109	25	42	33	75	1559	34
77	Florida	1992	365	46	—	—	54	—	30
78	Florida	1991	702	55	23	22	45	—	30
82	Florida	1992	336	34	—	—	66	—	30
92.857	Kentucky	1993	133	22	50	28	78	3555	34
100.888	Kentucky	1993	281	28	50	22	72	2111	34
121.54	Kentucky	1993	210	53	30	17	47	2636	34
144	New Jersey	1990	176	32	44	24	68	—	24
146.8	Kentucky	1993	—	36	39	25	64	—	34

79.097	California	2002	—	15	64	21	85	—	18
79.097	Oregon	2001	—	13	52	35	87	—	18
79.324	California	2002	—	20	58	22	80	—	18
79.336	Washington	2001	—	34	39	27	66	—	18
79.771	Nevada	2002	—	38	44	18	62	—	18
80	Nevada	2002	478	38	44	18	62	—	18
80	California	2002	617	12	68	20	88	—	18
80	California	2002	538	25	52	23	75	—	18
80.147	California	2002	—	12	68	20	88	—	18
80.147	California	2002	—	25	52	23	75	—	18
81	New York	1997	—	31	46	23	69	—	26
87.4	New York	1997	—	32	55	13	68	—	26
88	California	2010	497	15	49	36	85	—	27
89.8	New York	1997	—	38	47	15	62	—	26
93	Washington	2010	440	21	41	38	79	—	27
94	Oregon	2002	536	7	45	48	93	—	27
95	California	2010	—	16	56	28	84	—	27
96	California	2010	—	19	48	33	81	—	27
96	California	2010	—	15	64	21	85	—	27
99	California	2010	—	17	54	29	83	—	27
104	California	2010	—	18	55	27	82	—	27
105.3	New York	1997	—	33	48	19	67	—	26
123.5	New York	1997	—	26	44	30	74	—	26

Vehicle Pass-By Rates by Land Use									
Source: ITE *Trip Generation Manual* , 11th Edition									
Land Use Code	934								
Land Use	Fast-Food Restaurant with Drive-Through Window								
Setting	General Urban/Suburban								
Time Period	Weekday AM Peak Period								
# Data Sites	5								
Average Pass-By Rate	50%								
	Pass-By Characteristics for Individual Sites								
		Survey		Pass-By	Non-Pass-By Trips			Adj Street Peak	
GFA (000)	State or Province	Year	# Interviews	Trip (%)	Primary (%)	Diverted (%)	Total (%)	Hour Volume	Source
1.4	Kentucky	1993	—	62	22	16	38	1407	2
3	Kentucky	1993	—	43	14	43	57	2903	2
3.3	--	1996	—	68	—	—	32	—	21
3.6	Kentucky	1993	—	32	47	21	68	437	2
4.2	Indiana	1993	—	46	23	31	54	1049	2

Vehicle Pass-By Rates by Land Use

Source: ITE *Trip Generation Manual* , 11th Edition

Land Use Code	934
Land Use	Fast-Food Restaurant with Drive-Through Window
Setting	General Urban/Suburban
Time Period	Weekday PM Peak Period
# Data Sites	11
Average Pass-By Rate	55%

Pass-By Characteristics for Individual Sites

GFA (000)	State or Province	Survey Year	# Interviews	Pass-By Trip (%)	Non-Pass-By Trips Primary (%)	Non-Pass-By Trips Diverted (%)	Non-Pass-By Trips Total (%)	Adj Street Peak Hour Volume	Source
1.3	Kentucky	1993	—	68	22	10	32	2055	2
1.9	Kentucky	1993	33	67	24	9	33	2447	2
2.8	Florida	1995	47	66	—	—	34	—	30
2.9	Florida	1996	271	41	41	18	59	—	30
3	Kentucky	1993	—	31	31	38	69	4250	2
3.1	Florida	1995	28	71	—	—	29	—	30
3.1	Florida	1996	29	38	—	—	62	—	30
3.2	Florida	1996	202	40	39	21	60	—	30
3.3	—	1996	—	62	—	—	38	—	21
4.2	Indiana	1993	—	56	25	19	44	1632	2
4.3	Florida	1994	304	62	—	—	38	—	30

LEGEND # Instersection # Driveway

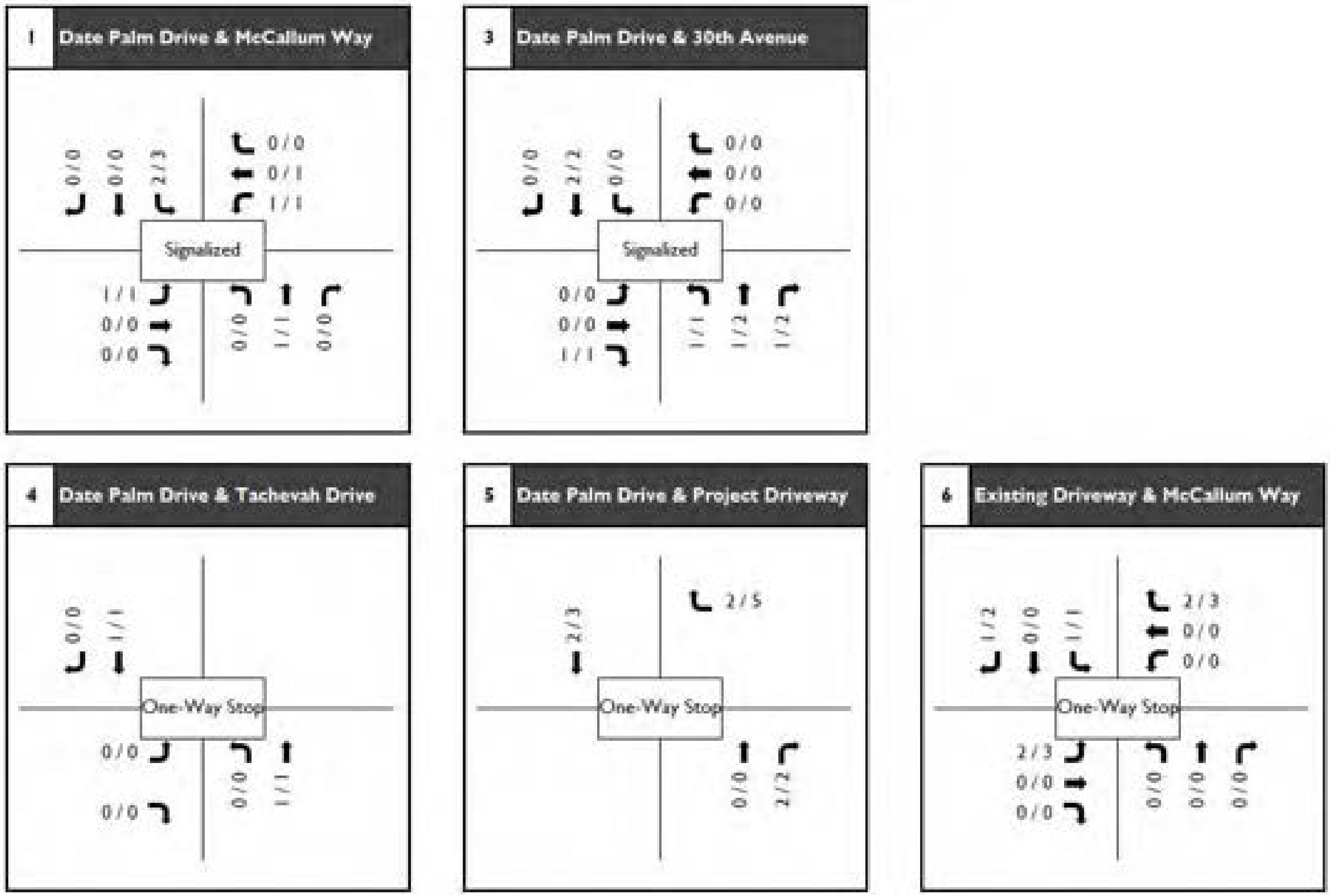
INTEGRATED ENGINEERING GROUP
TRANSPORTATION PLANNING AND ENGINEERING

Date Palm Drive Mixed Use - Study Area and Trip Distribution (Phase 1 Only)
Attachment 3a

LEGEND # Instersection # Driveway

INTEGRATED ENGINEERING GROUP
TRANSPORTATION PLANNING AND ENGINEERING

Date Palm Drive Mixed Use - Study Area and Trip Distribution (Phase 1 and 2 Total)
Attachment 3b



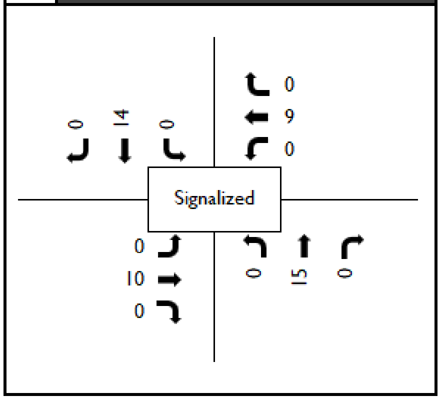
Roadway Segment	Phase 1 ADT
Total ADT	**167**
Date Palm Drive	
McCallum Way to Project Driveway	71
Project Driveway to 30th Avenue	84
30th Avenue to Tachevah Drive	33

XX / XX AM / PM Peak Hour Volumes

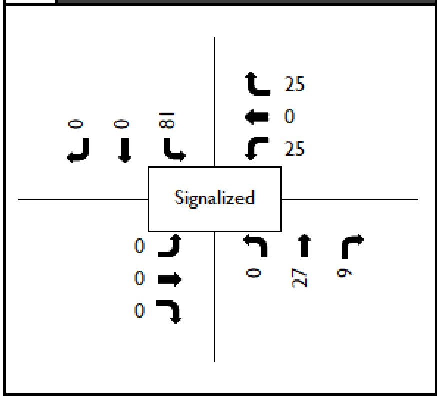
INTEGRATED ENGINEERING GROUP
TRANSPORTATION PLANNING AND ENGINEERING

Date Palm Drive Mixed Use
Scenarios 1 & 2 Phase 1 Volumes
Attachment 4a

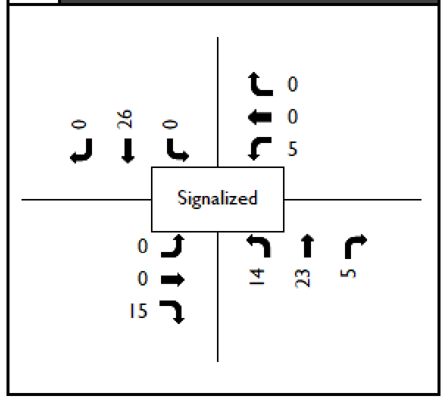
1 **Date Palm Drive & McCallum Way**



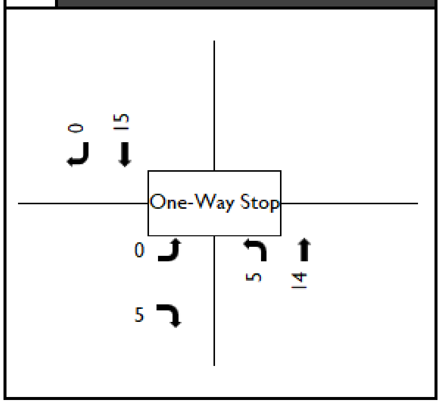
2 **Date Palm Drive & Rosemount Road**



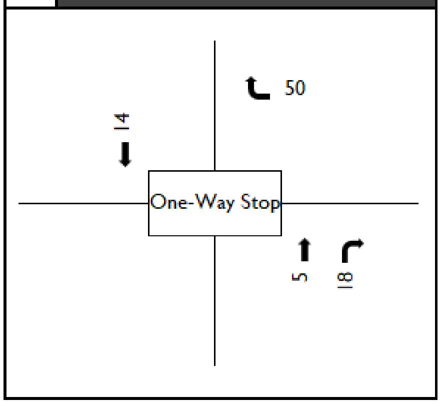
3 **Date Palm Drive & 30th Avenue**



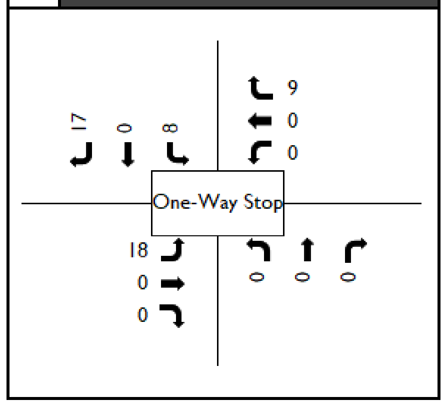
4 **Date Palm Drive & Tachevah Drive**



5 **Date Palm Drive & Project Driveway**



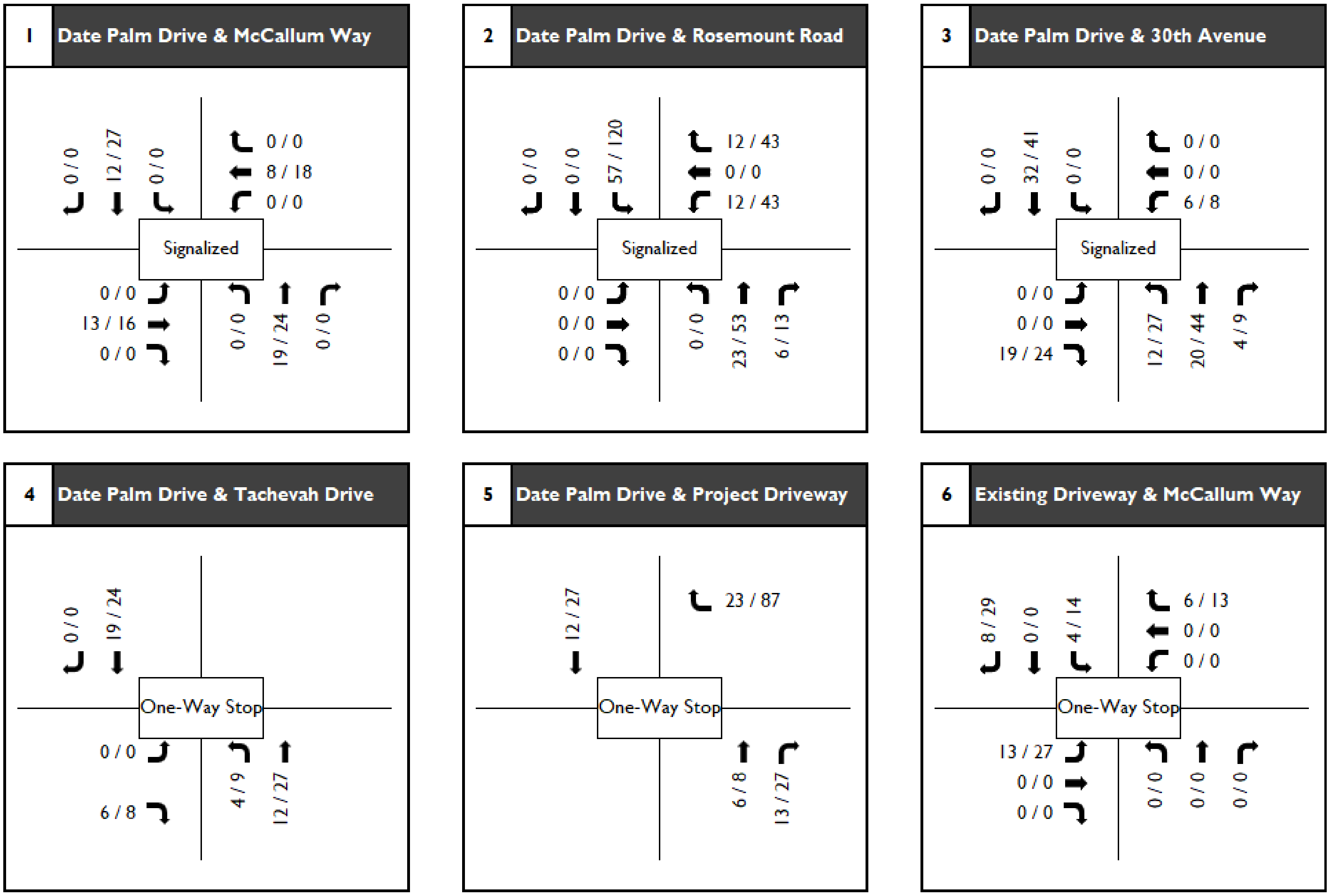
6 **Existing Driveway & McCallum Way**



XX / XX AM / PM Peak Hour Volumes

INTEGRATED ENGINEERING GROUP
TRANSPORTATION PLANNING AND ENGINEERING

Date Palm Drive Mixed Use
Scenario 1 Phases 1 & 2
AM Peak Hour Intersection Volumes
Attachment 4b



Roadway Segment	Phase 1 & 2
Total ADT	3542
Date Palm Drive	
McCallum Way to Project Driveway	531
Project Driveway to Rosemount Road	620
Rosemount Road to 30th Avenue	1,594
30th Avenue to Tachevah Drive	708

XX / XX AM / PM Peak Hour Volumes

INTEGRATED ENGINEERING GROUP
TRANSPORTATION PLANNING AND ENGINEERING

Date Palm Drive Mixed Use
Scenario 2 Phases 1 & 2 Volumes
Attachment 4c

APPENDIX B -

TRAFFIC VOLUME DATA

Tuesday, May 09, 2023 | CITY: Cathedral City | PROJECT: SC4010

ADT1 Date Palm north of Mccallum. | **Prepared by AimTD LLC tel. 714 253 7888**

AM Period	NB		SB			PM Period	NB		SB		
0:00	21		21			12:00	126		128		
0:15	15		19			12:15	151		145		
0:30	21		11			12:30	150		130		
0:45	14	71	13	64	135	12:45	149	576	148	551	1127
1:00	14		6			13:00	173		155		
1:15	21		17			13:15	182		121		
1:30	10		6			13:30	161		157		
1:45	6	51	9	38	89	13:45	174	690	164	597	1287
2:00	16		9			14:00	197		141		
2:15	10		12			14:15	162		163		
2:30	7		7			14:30	165		173		
2:45	7	40	10	38	78	14:45	190	714	207	684	1398
3:00	9		11			15:00	207		165		
3:15	10		6			15:15	204		163		
3:30	10		13			15:30	205		172		
3:45	10	39	16	46	85	15:45	231	847	253	753	1600
4:00	11		6			16:00	280		195		
4:15	15		10			16:15	271		174		
4:30	17		25			16:30	243		184		
4:45	20	63	34	75	138	16:45	220	1014	182	735	1749
5:00	33		30			17:00	265		190		
5:15	33		33			17:15	236		172		
5:30	62		63			17:30	197		151		
5:45	42	170	109	235	405	17:45	204	902	158	671	1573
6:00	59		102			18:00	206		160		
6:15	67		134			18:15	140		125		
6:30	71		143			18:30	183		141		
6:45	86	283	169	548	831	18:45	168	697	135	561	1258
7:00	91		188			19:00	136		126		
7:15	94		169			19:15	151		117		
7:30	126		248			19:30	116		129		
7:45	95	406	288	893	1299	19:45	152	555	135	507	1062
8:00	130		200			20:00	148		120		
8:15	134		266			20:15	137		90		
8:30	167		236			20:30	120		101		
8:45	132	563	240	942	1505	20:45	110	515	73	384	899
9:00	86		155			21:00	117		70		
9:15	125		131			21:15	111		72		
9:30	116		156			21:30	116		62		
9:45	121	448	144	586	1034	21:45	87	431	79	283	714
10:00	104		141			22:00	73		60		
10:15	104		144			22:15	85		48		
10:30	118		139			22:30	63		42		
10:45	109	435	164	588	1023	22:45	62	283	47	197	480
11:00	110		124			23:00	62		32		
11:15	119		157			23:15	39		28		
11:30	152		181			23:30	33		28		
11:45	133	514	158	620	1134	23:45	40	174	30	118	292
Total Vol.		3083		4673	**7756**			7398		6041	**13439**

Daily Totals

NB	SB	**Combined**
10481	10714	**21195**

	AM			PM		
Split %	39.7%	60.3%	**36.6%**	55.0%	45.0%	**63.4%**
Peak Hour	8:00	7:30	**7:45**	15:45	15:45	**15:45**
Volume	563	1002	**1516**	1025	806	**1831**
P.H.F.	0.84	0.87	**0.94**	0.94	0.80	**0.95**

Tuesday, May 09, 2023 CITY: Cathedral City PROJECT: SC4010

ADT2 Date Palm south of 30th. **Prepared by AimTD LLC tel. 714 253 7888**

AM Period	NB		SB			PM Period	NB		SB		
0:00	19		24			12:00	130		125		
0:15	16		18			12:15	143		144		
0:30	20		10			12:30	157		133		
0:45	14	69	13	65	134	12:45	152	582	155	557	1139
1:00	14		6			13:00	169		140		
1:15	10		13			13:15	182		135		
1:30	11		6			13:30	159		155		
1:45	6	41	11	36	77	13:45	173	683	151	581	1264
2:00	15		9			14:00	186		151		
2:15	10		11			14:15	167		155		
2:30	7		8			14:30	154		177		
2:45	7	39	10	38	77	14:45	193	700	191	674	1374
3:00	10		11			15:00	200		153		
3:15	9		9			15:15	206		159		
3:30	10		12			15:30	201		193		
3:45	11	40	16	48	88	15:45	260	867	237	742	1609
4:00	10		7			16:00	264		176		
4:15	16		12			16:15	250		187		
4:30	18		24			16:30	243		162		
4:45	19	63	37	80	143	16:45	233	990	181	706	1696
5:00	28		28			17:00	231		182		
5:15	35		34			17:15	250		175		
5:30	65		73			17:30	211		169		
5:45	41	169	108	243	412	17:45	193	885	140	666	1551
6:00	60		98			18:00	212		156		
6:15	69		141			18:15	151		130		
6:30	70		137			18:30	184		147		
6:45	83	282	172	548	830	18:45	176	723	143	576	1299
7:00	93		203			19:00	141		128		
7:15	108		193			19:15	157		119		
7:30	116		236			19:30	115		138		
7:45	112	429	283	915	1344	19:45	155	568	120	505	1073
8:00	121		212			20:00	163		126		
8:15	124		266			20:15	134		91		
8:30	165		237			20:30	124		96		
8:45	136	546	211	926	1472	20:45	110	531	73	386	917
9:00	98		169			21:00	117		65		
9:15	116		125			21:15	116		77		
9:30	121		152			21:30	123		60		
9:45	123	458	139	585	1043	21:45	79	435	73	275	710
10:00	112		147			22:00	81		62		
10:15	121		133			22:15	86		48		
10:30	148		133			22:30	63		44		
10:45	139	520	159	572	1092	22:45	57	287	46	200	487
11:00	113		136			23:00	65		30		
11:15	120		150			23:15	37		27		
11:30	146		171			23:30	38		33		
11:45	137	516	146	603	1119	23:45	40	180	26	116	296
Total Vol.		3172		4659	**7831**			7431		5984	**13415**

Daily Totals

NB	SB	Combined
10603	10643	**21246**

	AM NB	AM SB	AM	PM NB	PM SB	PM
Split %	40.5%	59.5%	**36.9%**	55.4%	44.6%	**63.1%**
Peak Hour	11:45	7:45	**7:45**	15:45	15:30	**15:45**
Volume	567	998	**1520**	1017	793	**1779**
P.H.F.	0.90	0.88	**0.95**	0.97	0.84	**0.89**

Tuesday, May 09, 2023 CITY: Cathedral City PROJECT: SC4010

ADT4 Date Palm north of Tortuga. **Prepared by AimTD LLC tel. 714 253 7888**

AM Period	NB		SB			PM Period	NB		SB		
0:00	19		29			12:00	146		148		
0:15	19		20			12:15	161		158		
0:30	23		13			12:30	166		123		
0:45	13	74	14	76	150	12:45	157	630	150	579	1209
1:00	13		17			13:00	191		131		
1:15	10		15			13:15	193		144		
1:30	11		6			13:30	159		165		
1:45	9	43	9	47	90	13:45	179	722	175	615	1337
2:00	17		11			14:00	215		169		
2:15	13		11			14:15	177		166		
2:30	9		8			14:30	183		180		
2:45	10	49	11	41	90	14:45	239	814	213	728	1542
3:00	15		11			15:00	216		197		
3:15	10		10			15:15	198		233		
3:30	11		14			15:30	212		226		
3:45	18	54	17	52	106	15:45	327	953	235	891	1844
4:00	13		7			16:00	297		197		
4:15	26		14			16:15	282		204		
4:30	30		30			16:30	271		203		
4:45	27	96	34	85	181	16:45	262	1112	202	806	1918
5:00	38		34			17:00	283		210		
5:15	53		42			17:15	270		227		
5:30	65		55			17:30	243		207		
5:45	68	224	107	238	462	17:45	204	1000	176	820	1820
6:00	88		109			18:00	234		176		
6:15	109		147			18:15	192		152		
6:30	129		152			18:30	219		148		
6:45	135	461	189	597	1058	18:45	167	812	137	613	1425
7:00	158		258			19:00	143		121		
7:15	202		243			19:15	185		126		
7:30	207		279			19:30	126		126		
7:45	176	743	292	1072	1815	19:45	156	610	122	495	1105
8:00	185		274			20:00	171		127		
8:15	181		294			20:15	135		93		
8:30	223		251			20:30	124		105		
8:45	188	777	228	1047	1824	20:45	93	523	73	398	921
9:00	128		182			21:00	104		91		
9:15	149		130			21:15	105		89		
9:30	150		160			21:30	129		77		
9:45	136	563	145	617	1180	21:45	76	414	74	331	745
10:00	131		147			22:00	79		76		
10:15	136		151			22:15	69		67		
10:30	115		155			22:30	70		56		
10:45	130	512	164	617	1129	22:45	67	285	49	248	533
11:00	136		135			23:00	62		39		
11:15	146		151			23:15	38		36		
11:30	150		194			23:30	38		45		
11:45	149	581	160	640	1221	23:45	36	174	32	152	326
Total Vol.		4177		5129	**9306**			8049		6676	**14725**

Daily Totals

NB	SB	Combined
12226	11805	**24031**

	AM			PM		
Split %	44.9%	55.1%	**38.7%**	54.7%	45.3%	**61.3%**
Peak Hour	8:00	7:30	**7:30**	15:45	15:00	**15:45**
Volume	777	1139	**1888**	1177	891	**2016**
P.H.F.	0.87	0.97	**0.97**	0.91	0.95	**0.90**

T218

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, May 9, 23	LOCATION:	Cathedral City	PROJECT #:	SC4010
	NORTH & SOUTH:	Date Palm	LOCATION #:	1
	EAST & WEST:	Mccallum	CONTROL:	SIGNAL

NOTES:

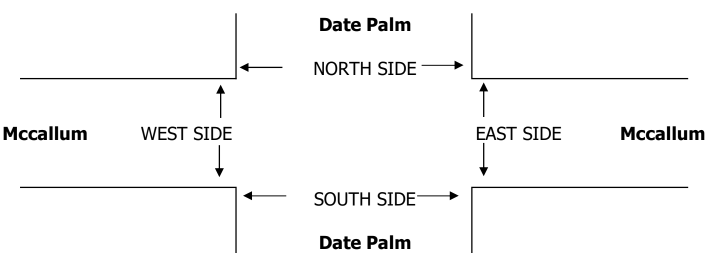
AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

Add U-Turns to Left Turns

		NORTHBOUND Date Palm			SOUTHBOUND Date Palm			EASTBOUND Mccallum			WESTBOUND Mccallum			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1	3	0	1	3	0	1	1	0	1	1	0	
AM	7:00 AM	6	71	6	14	163	11	12	29	26	12	17	8	375
AM	7:15 AM	3	79	14	6	152	11	8	52	20	16	37	7	405
AM	7:30 AM	10	98	10	13	228	7	20	45	34	18	48	8	539
AM	7:45 AM	5	73	6	14	264	10	12	15	26	18	50	10	503
AM	8:00 AM	7	109	10	22	164	14	12	50	22	11	21	8	450
AM	8:15 AM	12	112	12	32	223	11	15	61	23	12	27	6	546
AM	8:30 AM	16	136	14	16	208	12	13	65	23	18	34	18	573
AM	8:45 AM	9	106	13	13	219	8	10	15	15	9	35	16	468
AM	VOLUMES	68	784	85	130	1,621	84	102	332	189	114	269	81	3,859
AM	APPROACH %	7%	84%	9%	7%	88%	5%	16%	53%	30%	25%	58%	17%	
AM	APP/DEPART	937	/	969	1,835	/	1,927	623	/	545	464	/	418	0
AM	BEGIN PEAK HR		7:45 AM											
AM	VOLUMES	40	430	42	84	859	47	52	191	94	59	132	42	2,072
AM	APPROACH %	8%	84%	8%	8%	87%	5%	15%	57%	28%	25%	57%	18%	
AM	PEAK HR FACTOR		0.771			0.859			0.834			0.747		0.904
AM	APP/DEPART	512	/	526	990	/	1,015	337	/	315	233	/	216	0
PM	4:00 PM	17	238	22	13	165	17	22	25	17	28	49	18	631
PM	4:15 PM	19	237	14	8	160	6	24	45	18	15	37	10	593
PM	4:30 PM	24	219	11	15	155	14	10	19	15	9	20	14	525
PM	4:45 PM	23	188	16	13	163	6	26	22	22	18	21	5	523
PM	5:00 PM	29	234	14	12	172	6	18	17	16	8	25	12	563
PM	5:15 PM	37	212	14	7	145	20	15	26	22	19	32	9	558
PM	5:30 PM	19	168	9	9	133	9	19	25	23	13	24	9	460
PM	5:45 PM	26	177	14	12	138	8	16	20	17	15	14	9	466
PM	VOLUMES	194	1,673	114	89	1,231	86	150	199	150	125	222	86	4,319
PM	APPROACH %	10%	84%	6%	6%	88%	6%	30%	40%	30%	29%	51%	20%	
PM	APP/DEPART	1,981	/	1,916	1,406	/	1,508	499	/	395	433	/	500	0
PM	BEGIN PEAK HR		4:00 PM											
PM	VOLUMES	83	882	63	49	643	43	82	111	72	70	127	47	2,272
PM	APPROACH %	8%	86%	6%	7%	87%	6%	31%	42%	27%	29%	52%	19%	
PM	PEAK HR FACTOR		0.928			0.942			0.761			0.642		0.900
PM	APP/DEPART	1,028	/	1,014	735	/	786	265	/	220	244	/	252	0

U-TURNS					
	NB	SB	EB	WB	TTL
LANES	0	0	0	0	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	2	0	0	0	2
8:00 AM	0	1	0	0	1
8:15 AM	0	1	0	0	1
8:30 AM	1	0	0	0	1
8:45 AM	0	0	0	0	0
VOLUMES	3	2	0	0	5
4:00 PM	0	2	0	0	2
4:15 PM	0	0	0	0	0
4:30 PM	1	0	0	0	1
4:45 PM	0	1	0	0	1
5:00 PM	1	1	0	0	2
5:15 PM	0	0	0	0	0
5:30 PM	0	1	0	0	1
5:45 PM	0	2	0	0	2
VOLUMES	2	7	0	0	9



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	1	1	2	0	0	1	0	1	0	0	0	1	1
AM	7:15 AM	0	1	1	0	2	0	1	1	0	2	0	0	0	0	0
AM	7:30 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
AM	7:45 AM	0	0	0	2	2	0	0	0	2	2	0	0	0	0	0
AM	8:00 AM	1	1	0	3	5	1	1	0	3	5	0	0	0	0	0
AM	8:15 AM	0	2	0	3	5	0	1	0	2	3	0	1	0	1	2
AM	8:30 AM	2	1	1	1	5	1	1	1	1	4	1	0	0	0	1
AM	8:45 AM	0	3	2	0	5	0	2	2	0	4	0	1	0	0	1
AM	TOTAL	4	8	5	10	27	3	6	5	8	22	1	2	0	2	5
	AM BEGIN PEAK HR			7:45 AM			2	3	1	8	14					
PM	4:00 PM	1	0	0	2	3	1	0	0	1	2	0	0	0	1	1
PM	4:15 PM	0	2	1	1	4	0	1	1	1	3	0	1	0	0	1
PM	4:30 PM	0	1	0	1	2	0	1	0	1	2	0	0	0	0	0
PM	4:45 PM	0	1	1	0	2	0	1	1	0	2	0	0	0	0	0
PM	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:15 PM	0	2	0	1	3	0	2	0	1	3	0	0	0	0	0
PM	5:30 PM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0
PM	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	TOTAL	1	8	2	5	16	1	7	2	4	14	0	1	0	1	2
	PM BEGIN PEAK HR			4:00 PM			1	3	2	3	9					

AimTD LLC

TURNING MOVEMENT COUNTS

Cathedral City

SC4010

ALL HOURS

Date Palm (north)

3,241	170	2,852	219	TOTAL
1,406	86	1,231	89	PM
1,835	84	1,621	130	AM

TOTAL	2,885
PM	1,916
AM	969

Mccallum (west)

TOTAL	PM	AM
918	500	418
252	150	102
531	199	332
339	150	189
1,122	499	623

Mccallum (east)

AM	PM	TOTAL
464	433	897
81	86	167
269	222	491
114	125	239
545	395	940

Date Palm (south)

1,927	AM	68	784	85	937
1,508	PM	194	1,673	114	1,981
3,435	TOTAL	262	2,457	199	2,918

PEAK HOUR

AM 7:45 AM

PM 4:00 PM

Date Palm (north)

1,725	90	1,502	133	TOTAL
735	43	643	49	PM
990	47	859	84	AM

TOTAL	1,540
PM	1,014
AM	526

Mccallum (west)

TOTAL	PM	AM
468	252	216
134	82	52
302	111	191
166	72	94
602	265	337

Mccallum (east)

AM	PM	TOTAL
233	244	477
42	47	89
132	127	259
59	70	129
315	220	535

Date Palm (south)

1,015	AM	40	430	42	512
786	PM	83	882	63	1,028
1,801	Total	123	1,312	105	1,540

T218

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Cathedral City	PROJECT #:	SC4010
Tue, May 9, 23	NORTH & SOUTH:	Date Palm	LOCATION #:	3
	EAST & WEST:	30th	CONTROL:	SIGNAL

NOTES:

AM
PM
MD
OTHER
OTHER

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Add U-Turns to Left Turns

		NORTHBOUND Date Palm			SOUTHBOUND Date Palm			EASTBOUND 30th			WESTBOUND 30th			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1	3	0	1	3	0	1	1	0	1	1	0	
AM	7:00 AM	6	84	3	51	188	17	31	24	13	3	17	37	474
	7:15 AM	9	88	11	67	161	19	40	48	29	3	34	68	577
	7:30 AM	14	87	15	64	193	16	50	72	30	13	37	67	658
	7:45 AM	15	87	10	52	255	20	33	57	18	10	35	52	644
	8:00 AM	9	102	10	70	184	17	26	45	15	13	38	56	585
	8:15 AM	13	96	15	100	205	13	15	70	29	31	68	68	723
	8:30 AM	15	132	18	78	178	12	19	66	26	31	73	70	718
	8:45 AM	16	113	7	40	167	11	22	33	23	20	52	53	557
	VOLUMES	97	789	89	522	1,531	125	236	415	183	124	354	471	4,936
	APPROACH %	10%	81%	9%	24%	70%	6%	28%	50%	22%	13%	37%	50%	
	APP/DEPART	975	/	1,499	2,178	/	1,841	834	/	1,024	949	/	572	0
	BEGIN PEAK HR		7:45 AM											
	VOLUMES	52	417	53	300	822	62	93	238	88	85	214	246	2,670
	APPROACH %	10%	80%	10%	25%	69%	5%	22%	57%	21%	16%	39%	45%	
	PEAK HR FACTOR		0.791			0.905			0.919			0.783		0.923
	APP/DEPART	522	/	759	1,184	/	998	419	/	588	545	/	325	0
PM	4:00 PM	50	206	8	46	129	23	21	37	24	16	79	91	730
	4:15 PM	35	207	8	32	152	24	28	31	22	7	41	61	648
	4:30 PM	34	198	11	41	131	27	12	32	19	9	56	60	630
	4:45 PM	28	197	8	35	147	20	22	26	21	9	43	47	603
	5:00 PM	19	207	5	26	158	26	26	37	14	9	37	54	618
	5:15 PM	28	211	11	45	154	20	23	28	14	4	45	44	627
	5:30 PM	21	186	4	34	150	28	17	26	12	4	37	42	561
	5:45 PM	25	149	19	40	108	27	16	43	17	8	36	45	533
	VOLUMES	240	1,561	74	299	1,129	195	165	260	143	66	374	444	4,950
	APPROACH %	13%	83%	4%	18%	70%	12%	29%	46%	25%	7%	42%	50%	
	APP/DEPART	1,875	/	2,172	1,623	/	1,372	568	/	631	884	/	775	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	147	808	35	154	559	94	83	126	86	41	219	259	2,611
	APPROACH %	15%	82%	4%	19%	69%	12%	28%	43%	29%	8%	42%	50%	
	PEAK HR FACTOR		0.938			0.970			0.899			0.698		0.894
	APP/DEPART	990	/	1,150	807	/	706	295	/	315	519	/	440	0

U-TURNS

	NB	SB	EB	WB	TTL
LANES	0	0	0	0	
7:00 AM	0	0	0	1	1
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	1	0	0	1
8:00 AM	0	2	0	0	2
8:15 AM	1	0	0	0	1
8:30 AM	2	0	0	0	2
8:45 AM	1	0	0	0	1
VOLUMES	4	3	0	1	8
4:00 PM	7	0	0	0	7
4:15 PM	6	0	0	0	6
4:30 PM	3	0	0	0	3
4:45 PM	4	0	0	0	4
5:00 PM	1	0	0	0	1
5:15 PM	3	1	0	0	4
5:30 PM	3	1	0	0	4
5:45 PM	7	0	0	0	7
VOLUMES	34	2	0	0	36

Date Palm

NORTH SIDE

30th WEST SIDE EAST SIDE **30th**

SOUTH SIDE

Date Palm

		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	6	0	0	6	0	2	0	0	2	0	4	0	0	4
	7:15 AM	5	0	0	1	6	2	0	0	1	3	3	0	0	0	3
	7:30 AM	2	4	0	0	6	0	4	0	0	4	2	0	0	0	2
	7:45 AM	3	2	0	0	5	3	1	0	0	4	0	1	0	0	1
	8:00 AM	2	5	0	0	7	2	3	0	0	5	0	2	0	0	2
	8:15 AM	6	10	2	0	18	3	8	2	0	13	3	2	0	0	5
	8:30 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	8:45 AM	0	2	0	1	3	0	0	0	0	0	0	2	0	1	3
	TOTAL	18	31	2	2	53	10	18	2	1	31	8	13	0	1	22
	AM BEGIN PEAK HR			7:45 AM			8	12	2	0	22					
PM	4:00 PM	0	2	0	1	3	0	0	0	1	1	0	2	0	0	2
	4:15 PM	0	1	0	1	2	0	1	0	1	2	0	0	0	0	0
	4:30 PM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	2	0	0	0	2	1	0	0	0	1	1	0	0	0	1
	5:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	5:30 PM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	2	6	0	3	11	1	3	0	3	7	1	3	0	0	4
	PM BEGIN PEAK HR			4:00 PM			0	1	0	3	4					

AimTD LLC

TURNING MOVEMENT COUNTS

Cathedral City — SC4010 — ALL HOURS

North leg: Date Palm. South leg: Date Palm. West leg: 30th. East leg: 30th.

Date Palm (north leg) – approach

	Total	Left	Through	Right
TOTAL	**3,801**	**320**	**2,660**	**821**
PM	**1,623**	195	1,129	299
AM	**2,178**	125	1,531	522

Date Palm (north leg) – exit

TOTAL	**3,671**
PM	2,172
AM	1,499

30th (west leg) – exit

TOTAL	PM	AM
1,347	775	572

30th (west leg) – approach

	TOTAL	PM	AM
Left	**401**	165	236
Through	**675**	260	415
Right	**326**	143	183
Total	**1,402**	**568**	**834**

30th (east leg) – approach

	AM	PM	TOTAL
Total	**949**	**884**	**1,833**
Right	471	444	**915**
Through	354	374	**728**
Left	124	66	**190**

30th (east leg) – exit

AM	PM	TOTAL
1,024	631	**1,655**

Date Palm (south leg) – exit

AM	1,841
PM	1,372
TOTAL	**3,213**

Date Palm (south leg) – approach

	Left	Through	Right	Total
AM	97	789	89	**975**
PM	240	1,561	74	**1,875**
TOTAL	**337**	**2,350**	**163**	**2,850**

PEAK HOUR

AM 7:45 AM

PM 4:00 PM

North leg: Date Palm. South leg: Date Palm. West leg: 30th. East leg: 30th.

Date Palm (north leg) – approach

	Total	Left	Through	Right
TOTAL	**1,991**	**156**	**1,381**	**454**
PM	**807**	94	559	154
AM	**1,184**	62	822	300

Date Palm (north leg) – exit

TOTAL	**1,909**
PM	1,150
AM	759

30th (west leg) – exit

TOTAL	PM	AM
765	440	325

30th (west leg) – approach

	TOTAL	PM	AM
Left	**176**	83	93
Through	**364**	126	238
Right	**174**	86	88
Total	**714**	**295**	**419**

30th (east leg) – approach

	AM	PM	TOTAL
Total	**545**	**519**	**1,064**
Right	246	259	**505**
Through	214	219	**433**
Left	85	41	**126**

30th (east leg) – exit

AM	PM	TOTAL
588	315	**903**

Date Palm (south leg) – exit

AM	998
PM	706
TOTAL	**1,704**

Date Palm (south leg) – approach

	Left	Through	Right	Total
AM	52	417	53	**522**
PM	147	808	35	**990**
Total	**199**	**1,225**	**88**	**1,512**

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Cathedral City	PROJECT #:	SC4010
Tue, May 9, 23	NORTH & SOUTH:	Date Palm	LOCATION #:	4
	EAST & WEST:	Tachevah	CONTROL:	NO CONTROL

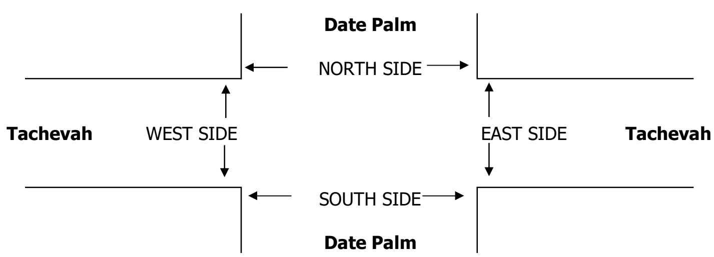
NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

Add U-Turns to Left Turns

		NORTHBOUND Date Palm			SOUTHBOUND Date Palm			EASTBOUND Tachevah			WESTBOUND Tachevah				U-TURNS				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
	LANES:	1	3	X	X	3	0	0	X	0	X	X	X		0	0	0	0	
AM	7:00 AM	5	153	0	0	246	2	7	0	12	0	0	0	425	0	0	0	0	0
	7:15 AM	3	195	0	0	228	2	8	0	15	0	0	0	451	0	0	0	0	0
	7:30 AM	11	196	0	0	263	3	7	0	16	0	0	0	496	0	0	0	0	0
	7:45 AM	8	168	0	0	272	4	13	0	20	0	0	0	485	0	0	0	1	1
	8:00 AM	12	173	0	0	248	1	4	0	26	0	0	0	464	0	0	0	0	0
	8:15 AM	6	175	0	0	260	3	4	0	34	0	0	0	482	0	0	0	0	0
	8:30 AM	21	199	0	0	235	5	4	0	18	0	0	0	482	0	0	0	0	0
	8:45 AM	11	177	0	0	204	2	4	0	24	0	0	0	422	0	0	0	0	0
	VOLUMES	77	1,436	0	0	1,956	22	51	0	165	0	0	0	3,708	0	0	0	1	1
	APPROACH %	5%	95%	0%	0%	99%	1%	24%	0%	76%	0%	0%	0%						
	APP/DEPART	1,513	/	1,487	1,978	/	2,121	216	/	1	1	/	99	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	37	712	0	0	1,043	11	28	0	96	0	0	0	1,928					
	APPROACH %	5%	95%	0%	0%	99%	1%	23%	0%	77%	0%	0%	0%						
	PEAK HR FACTOR		0.905			0.955			0.816			0.250		0.972					
	APP/DEPART	749	/	740	1,054	/	1,139	124	/	1	1	/	48	0					
PM	4:00 PM	23	274	0	0	186	9	5	0	11	0	0	0	508	0	0	0	0	0
	4:15 PM	22	260	0	0	192	6	7	0	12	0	0	0	499	0	0	0	0	0
	4:30 PM	18	253	0	0	187	16	4	0	21	0	0	0	499	0	0	0	0	0
	4:45 PM	22	240	0	0	191	11	10	0	11	0	0	0	485	0	0	0	0	0
	5:00 PM	19	259	0	0	200	12	4	0	10	0	0	0	504	0	0	0	0	0
	5:15 PM	19	251	0	0	212	9	5	0	15	0	0	0	511	0	0	0	0	0
	5:30 PM	16	227	0	0	198	6	4	0	9	0	0	0	460	0	0	0	0	0
	5:45 PM	17	187	0	0	163	3	1	0	13	0	0	0	384	0	0	0	0	0
	VOLUMES	156	1,951	0	0	1,529	72	40	0	102	0	0	0	3,850	0	0	0	0	0
	APPROACH %	7%	93%	0%	0%	96%	4%	28%	0%	72%	0%	0%	0%						
	APP/DEPART	2,107	/	1,991	1,601	/	1,631	142	/	0	0	/	228	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	78	1,003	0	0	790	48	23	0	57	0	0	0	1,999					
	APPROACH %	7%	93%	0%	0%	94%	6%	29%	0%	71%	0%	0%	0%						
	PEAK HR FACTOR		0.972			0.948			0.800			0.000		0.978					
	APP/DEPART	1,081	/	1,026	838	/	847	80	/	0	0	/	126	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	AM BEGIN PEAK HR			7:30 AM			0	0	0	0	0					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	PM BEGIN PEAK HR			4:30 PM			0	0	0	0	0					

AimTD LLC

TURNING MOVEMENT COUNTS

Cathedral City — SC4010 — ALL HOURS

Date Palm (north leg)

TOTAL	**3,579**	**94**	**3,485**	**0**		**3,478**
PM	**1,601**	72	1,529	0		1,991
AM	**1,978**	22	1,956	0		1,487

Tachevah (west leg)

	TOTAL	PM	AM
	327	228	99
	91	40	51
	0	0	0
	267	102	165
	358	**142**	**216**

Tachevah (east leg)

AM	PM	TOTAL
1	0	1
0	0	0
0	0	0
0	0	0
1	0	1

Date Palm (south leg)

2,121	AM	77	1,436	0	**1,513**
1,631	PM	156	1,951	0	**2,107**
3,752	TOTAL	**233**	**3,387**	**0**	**3,620**

Cathedral City

SC4010

ALL HOURS

PEAK HOUR

AM 7:30 AM

PM 4:30 PM

Date Palm (north leg)

TOTAL	**1,892**	**59**	**1,833**	**0**		**1,766**
PM	**838**	48	790	0		1,026
AM	**1,054**	11	1,043	0		740

Tachevah (west leg)

	TOTAL	PM	AM
	174	126	48
	51	23	28
	0	0	0
	153	57	96
	204	**80**	**124**

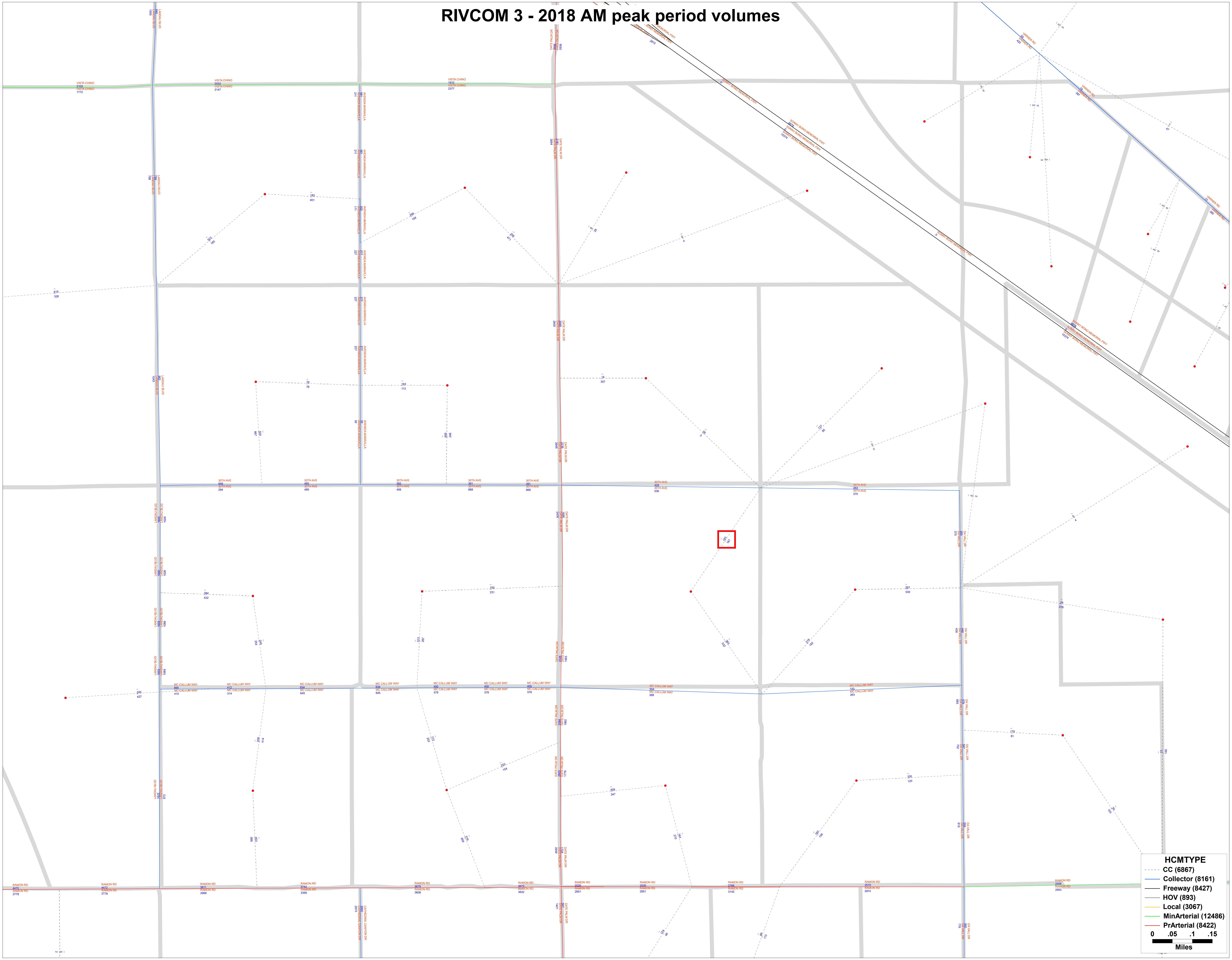
Tachevah (east leg)

AM	PM	TOTAL
1	0	1
0	0	0
0	0	0
0	0	0
1	0	1

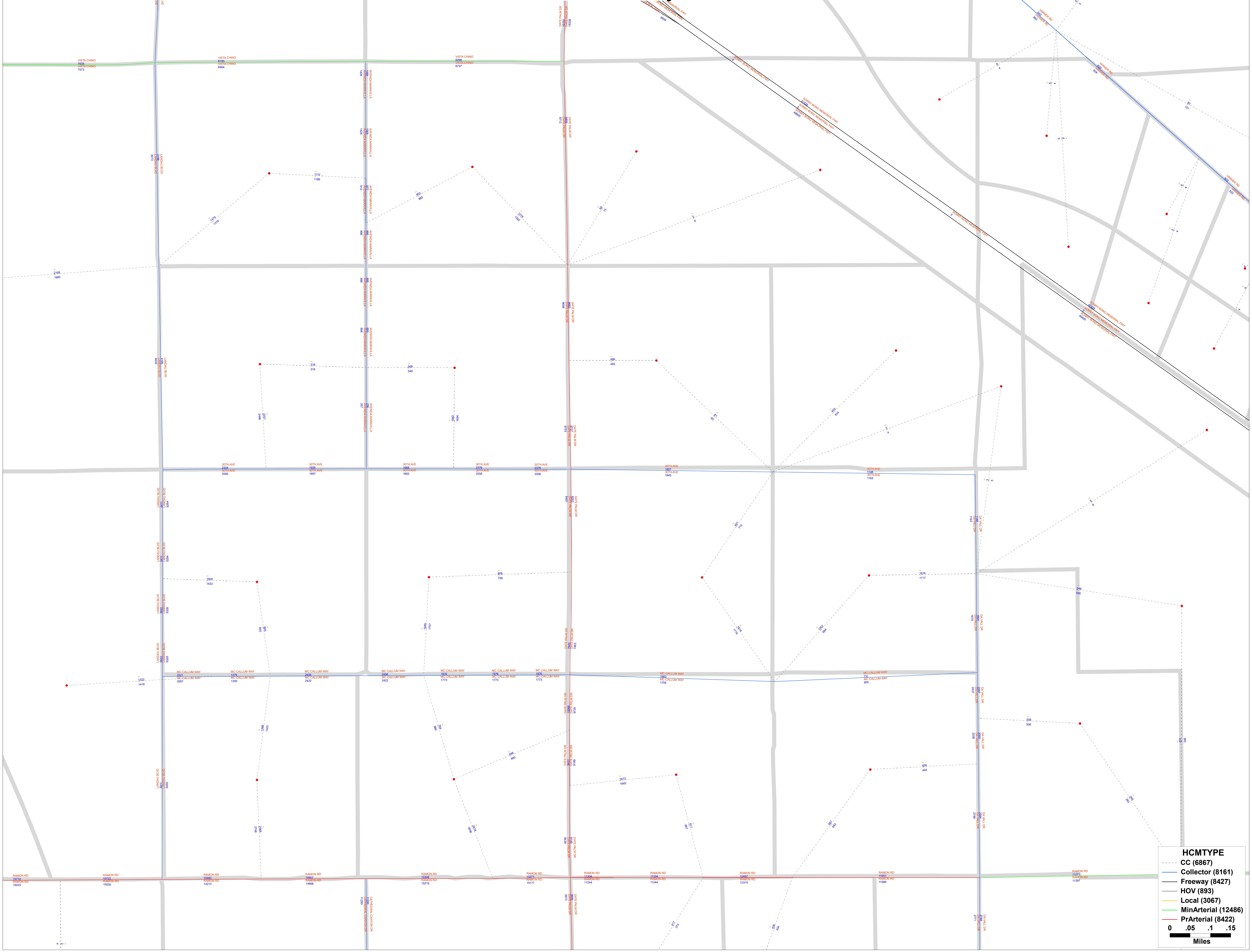
Date Palm (south leg)

1,139	AM	37	712	0	**749**
847	PM	78	1,003	0	**1,081**
1,986	Total	**115**	**1,715**	**0**	**1,830**

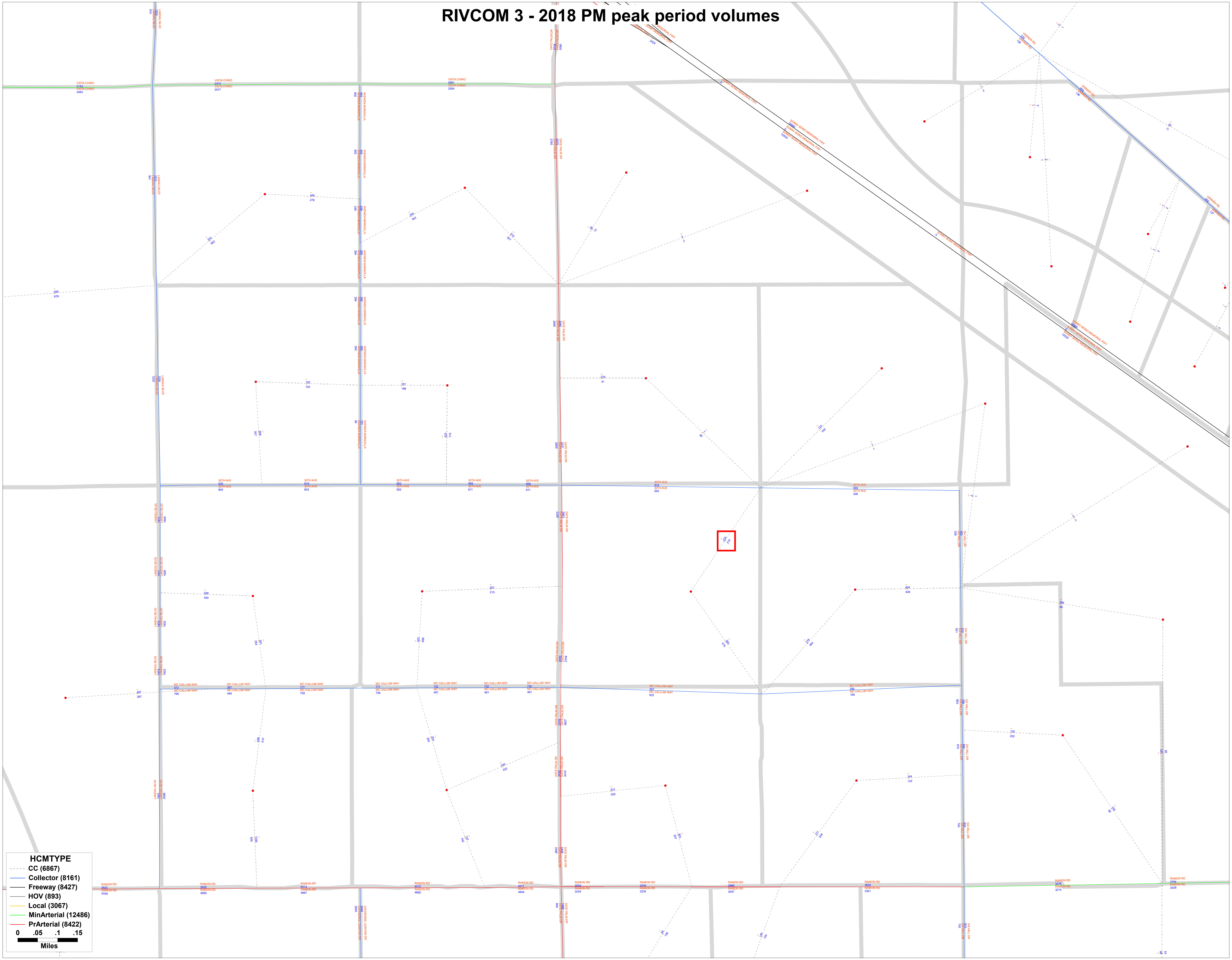
RIVCOM 3 - 2018 AM peak period volumes



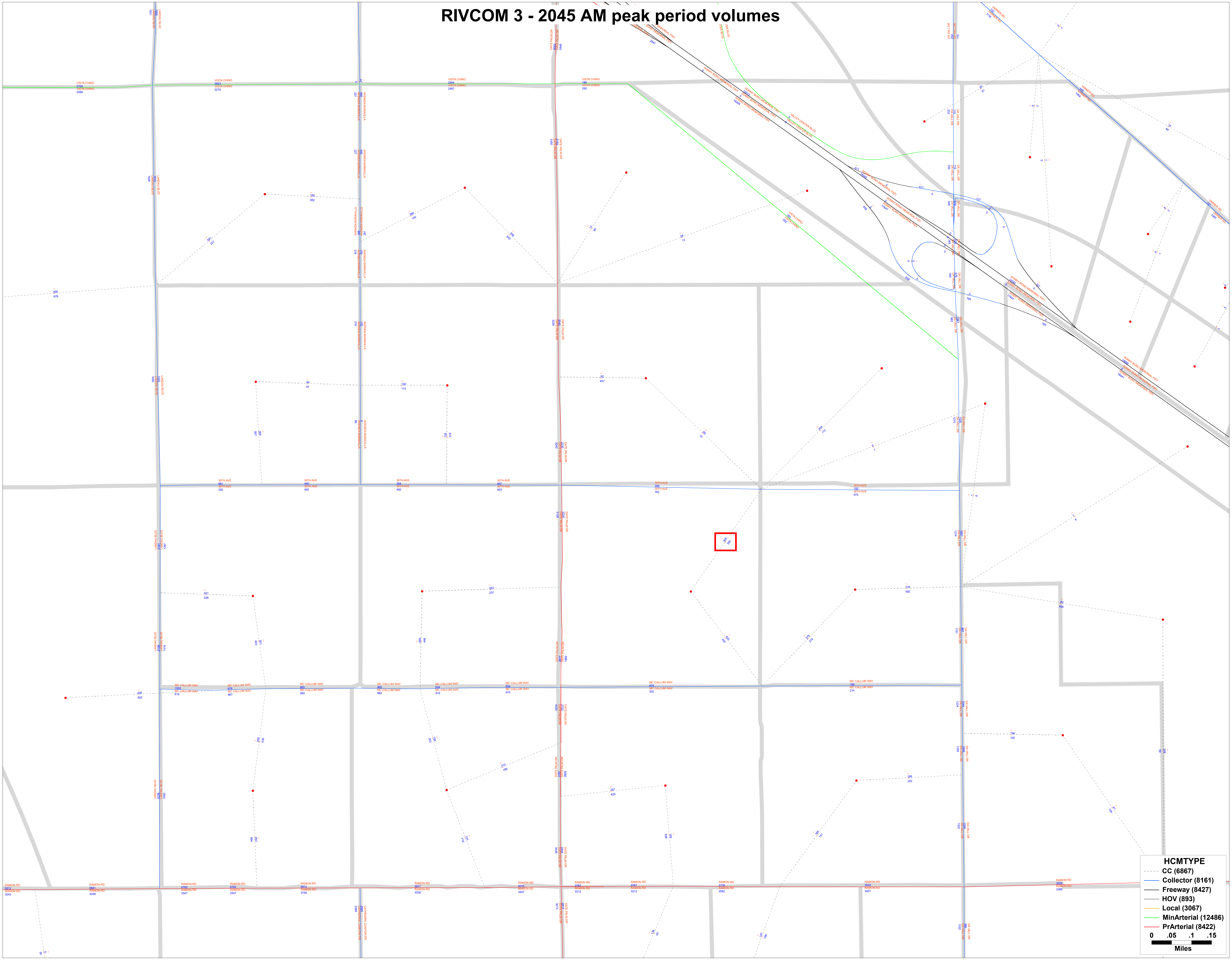
RIVCOM 3 - 2018 Daily volumes



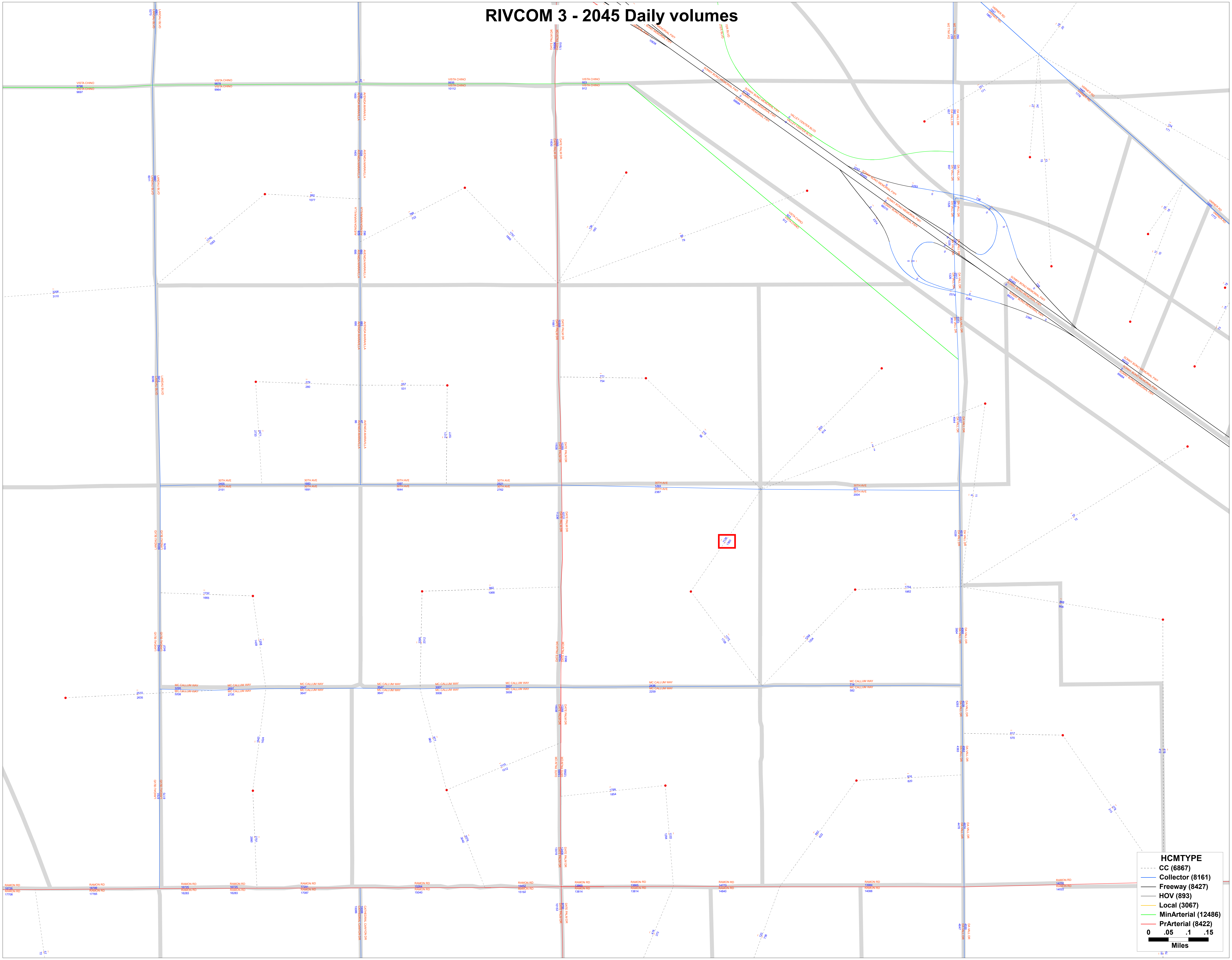
RIVCOM 3 - 2018 PM peak period volumes



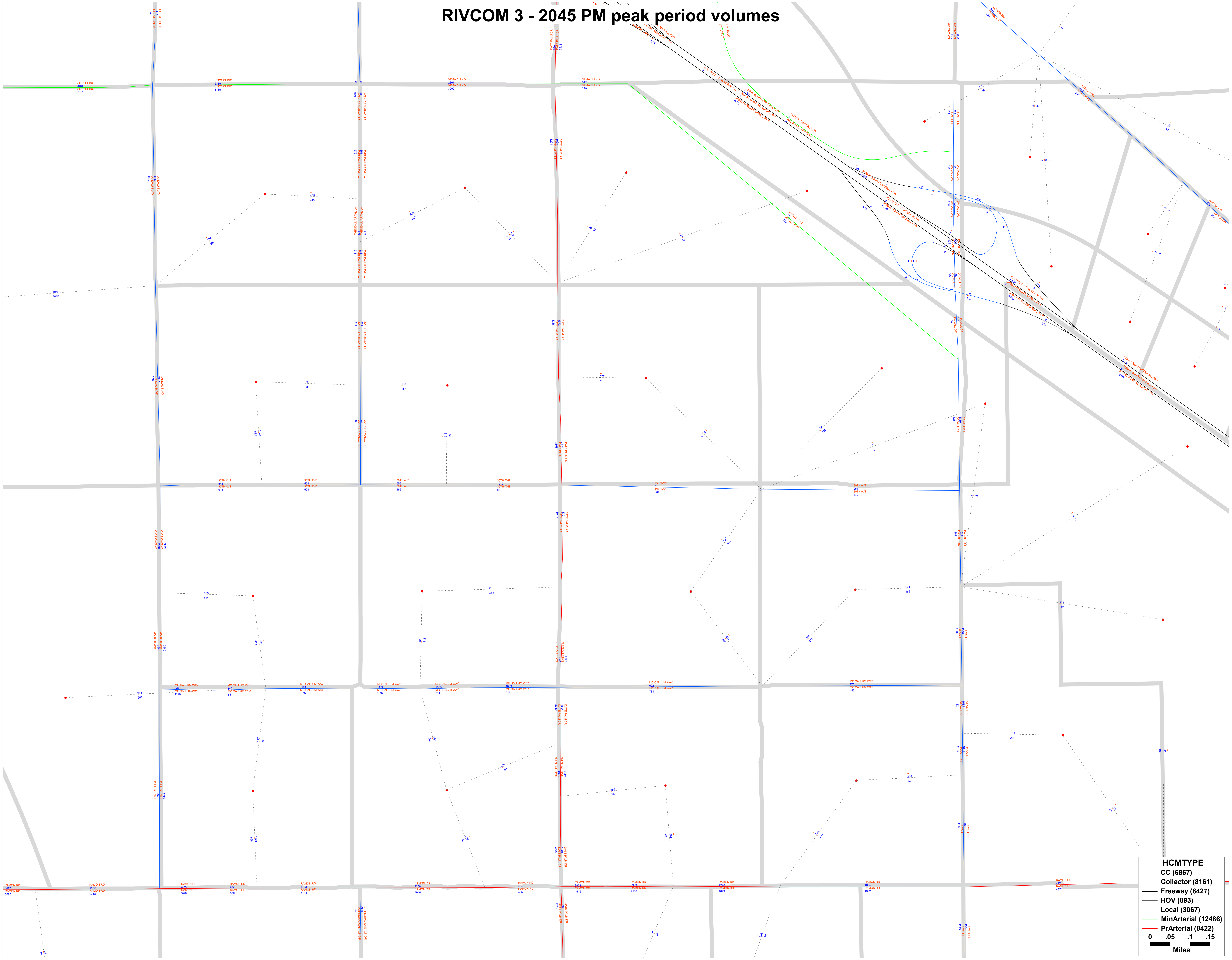
RIVCOM 3 - 2045 AM peak period volumes



RIVCOM 3 - 2045 Daily volumes



RIVCOM 3 - 2045 PM peak period volumes



	AM		PM	
	In	**Out**	**In**	**Out**
Model 2018	183	187	226	219
Model 2045	308	350	367	411
Annual Growth	2.88%		2.77%	
Model 2023 Interpolated	209	187	257	219

AimTD LLC

TURNING MOVEMENT COUNTS

Cathedral City — SC4010 — ALL HOURS

Date Palm (north)

TOTAL	**3,801**	**320**	**2,660**	**821**
PM	**1,623**	195	1,129	299
AM	**2,178**	125	1,531	522

TOTAL	**3,671**
PM	2,172
AM	1,499

30th (west)

TOTAL	**1,347**
PM	775
AM	572

TOTAL	**401**	**675**	**326**	**1,402**
PM	165	260	143	**568**
AM	236	415	183	**834**

30th (east)

AM	**949**	471	354	124
PM	**884**	444	374	66
TOTAL	**1,833**	**915**	**728**	**190**

AM	1,024
PM	631
TOTAL	**1,655**

Date Palm (south)

AM	1,841
PM	1,372
TOTAL	**3,213**

AM	97	789	89	**975**
PM	240	1,561	74	**1,875**
TOTAL	**337**	**2,350**	**163**	**2,850**

PEAK HOUR

AM 7:45 AM

PM 4:00 PM

Date Palm (north)

TOTAL	**1,991**	**156**	**1,381**	**454**
PM	**807**	94	559	154
AM	**1,184**	62	822	300

TOTAL	**1,909**
PM	1,150
AM	759

30th (west)

TOTAL	**765**
PM	440
AM	325

TOTAL	**176**	**364**	**174**	**714**
PM	83	126	86	**295**
AM	93	238	88	**419**

30th (east)

AM	**545**	246	214	85
PM	**519**	259	219	41
TOTAL	**1,064**	**505**	**433**	**126**

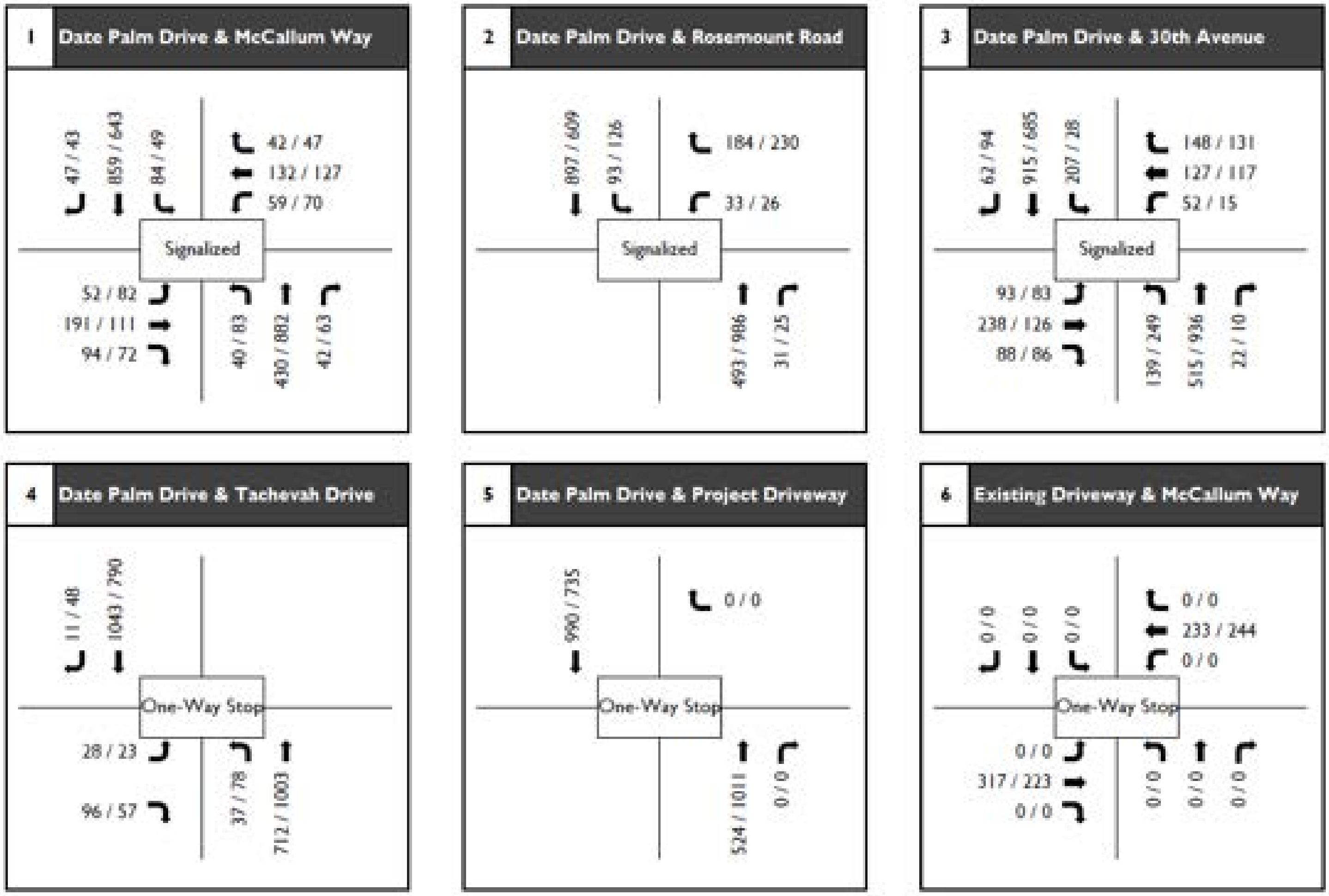
AM	588
PM	315
TOTAL	**903**

AM	PM
45%	50%
39%	42%
16%	8%

Date Palm (south)

AM	998
PM	706
Total	**1,704**

AM	52	417	53	**522**
PM	147	808	35	**990**
Total	**199**	**1,225**	**88**	**1,512**



XX / XX AM / PM Peak Hour Volumes

INTEGRATED ENGINEERING GROUP
TRANSPORTATION PLANNING AND ENGINEERING

Date Palm Drive Mixed Use
Developed Year 2023
AM/PM Peak Hour Intersection Volumes

APPENDIX C -

EXISTING CONDITIONS PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	191	94	59	132	42	40	430	42	84	859	47
Future Volume (veh/h)	52	191	94	59	132	42	40	430	42	84	859	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	58	212	104	66	147	47	44	478	47	93	954	52
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	456	362	178	356	415	133	87	1374	133	147	1604	87
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.05	0.29	0.29	0.08	0.32	0.32
Sat Flow, veh/h	1187	1178	578	1062	1352	432	1781	4726	458	1781	4946	269
Grp Volume(v), veh/h	58	0	316	66	0	194	44	342	183	93	656	350
Grp Sat Flow(s),veh/h/ln	1187	0	1756	1062	0	1784	1781	1702	1780	1781	1702	1811
Q Serve(g_s), s	1.5	0.0	5.7	2.1	0.0	3.2	0.9	3.0	3.0	1.9	6.1	6.1
Cycle Q Clear(g_c), s	4.7	0.0	5.7	7.8	0.0	3.2	0.9	3.0	3.0	1.9	6.1	6.1
Prop In Lane	1.00		0.33	1.00		0.24	1.00		0.26	1.00		0.15
Lane Grp Cap(c), veh/h	456	0	539	356	0	548	87	990	518	147	1104	587
V/C Ratio(X)	0.13	0.00	0.59	0.19	0.00	0.35	0.50	0.35	0.35	0.63	0.59	0.60
Avail Cap(c_a), veh/h	913	0	1215	765	0	1235	237	1268	663	379	1540	819
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.9	0.0	11.0	14.3	0.0	10.1	17.4	10.5	10.5	16.7	10.6	10.6
Incr Delay (d2), s/veh	0.1	0.0	1.0	0.2	0.0	0.4	4.4	0.2	0.4	4.4	0.5	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	1.9	0.5	0.0	1.1	0.4	0.8	0.8	0.8	1.5	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.1	0.0	12.0	14.5	0.0	10.5	21.9	10.7	10.9	21.1	11.1	11.6
LnGrp LOS	B	A	B	B	A	B	C	B	B	C	B	B
Approach Vol, veh/h		374			260			569			1099	
Approach Delay, s/veh		12.0			11.5			11.6			12.1	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.1	14.9		15.5	5.8	16.2		15.5				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	8.0	14.0		26.0	5.0	17.0		26.0				
Max Q Clear Time (g_c+I1), s	3.9	5.0		7.7	2.9	8.1		9.8				
Green Ext Time (p_c), s	0.1	2.0		2.1	0.0	3.9		1.3				
Intersection Summary												
HCM 6th Ctrl Delay			11.9									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	238	88	85	214	246	52	417	53	300	822	62
Future Volume (veh/h)	93	238	88	85	214	246	52	417	53	300	822	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	101	259	96	92	233	267	57	453	58	326	893	67
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	129	502	412	119	492	405	93	807	101	373	1614	121
Arrive On Green	0.07	0.27	0.27	0.07	0.26	0.26	0.05	0.18	0.18	0.21	0.33	0.33
Sat Flow, veh/h	1781	1870	1536	1781	1870	1541	1781	4590	577	1781	4845	362
Grp Volume(v), veh/h	101	259	96	92	233	267	57	334	177	326	627	333
Grp Sat Flow(s),veh/h/ln	1781	1870	1536	1781	1870	1541	1781	1702	1763	1781	1702	1804
Q Serve(g_s), s	3.2	6.7	2.8	2.9	6.0	8.9	1.8	5.1	5.3	10.1	8.6	8.7
Cycle Q Clear(g_c), s	3.2	6.7	2.8	2.9	6.0	8.9	1.8	5.1	5.3	10.1	8.6	8.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.33	1.00		0.20
Lane Grp Cap(c), veh/h	129	502	412	119	492	405	93	599	310	373	1134	601
V/C Ratio(X)	0.78	0.52	0.23	0.77	0.47	0.66	0.61	0.56	0.57	0.87	0.55	0.55
Avail Cap(c_a), veh/h	155	849	697	155	849	699	187	1247	646	373	1604	850
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.1	17.8	16.4	26.3	17.8	18.8	26.6	21.6	21.6	21.9	15.6	15.6
Incr Delay (d2), s/veh	18.9	0.8	0.3	15.8	0.7	1.8	6.5	0.8	1.7	19.9	0.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	2.5	0.9	1.6	2.3	2.8	0.8	1.8	2.0	5.5	2.6	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.1	18.6	16.6	42.1	18.5	20.7	33.1	22.4	23.3	41.8	16.0	16.4
LnGrp LOS	D	B	B	D	B	C	C	C	C	D	B	B
Approach Vol, veh/h		456			592			568			1286	
Approach Delay, s/veh		24.1			23.1			23.7			22.7	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	14.1	7.8	19.4	7.0	23.1	8.2	19.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	12.0	21.0	5.0	26.0	6.0	27.0	5.0	26.0
Max Q Clear Time (g_c+I1), s	12.1	7.3	4.9	8.7	3.8	10.7	5.2	10.9
Green Ext Time (p_c), s	0.0	2.4	0.0	1.5	0.0	5.0	0.0	1.9

Intersection Summary	
HCM 6th Ctrl Delay	23.2
HCM 6th LOS	C

Intersection						
Int Delay, s/veh	1.9					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	28	96	37	712	1043	11
Future Vol, veh/h	28	96	37	712	1043	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	0	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	29	99	38	734	1075	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1451	543	1086	0	-	0
Stage 1	1081	-	-	-	-	-
Stage 2	370	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	183	414	356	-	-	-
Stage 1	216	-	-	-	-	-
Stage 2	613	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	163	414	356	-	-	-
Mov Cap-2 Maneuver	163	-	-	-	-	-
Stage 1	193	-	-	-	-	-
Stage 2	613	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	24.8	0.8	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	356	-	307	-	-
HCM Lane V/C Ratio	0.107	-	0.416	-	-
HCM Control Delay (s)	16.3	-	24.8	-	-
HCM Lane LOS	C	-	C	-	-
HCM 95th %tile Q(veh)	0.4	-	2	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	111	72	70	127	47	83	882	63	49	643	43
Future Volume (veh/h)	82	111	72	70	127	47	83	882	63	49	643	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	91	123	80	78	141	52	92	980	70	54	714	48
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	413	281	183	401	348	128	149	1653	118	103	1533	102
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.08	0.34	0.34	0.06	0.31	0.31
Sat Flow, veh/h	1187	1051	683	1177	1302	480	1781	4863	347	1781	4879	326
Grp Volume(v), veh/h	91	0	203	78	0	193	92	685	365	54	497	265
Grp Sat Flow(s),veh/h/ln	1187	0	1734	1177	0	1782	1781	1702	1806	1781	1702	1801
Q Serve(g_s), s	2.4	0.0	3.5	2.1	0.0	3.2	1.8	6.0	6.0	1.1	4.2	4.2
Cycle Q Clear(g_c), s	5.6	0.0	3.5	5.6	0.0	3.2	1.8	6.0	6.0	1.1	4.2	4.2
Prop In Lane	1.00		0.39	1.00		0.27	1.00		0.19	1.00		0.18
Lane Grp Cap(c), veh/h	413	0	464	401	0	477	149	1157	614	103	1070	566
V/C Ratio(X)	0.22	0.00	0.44	0.19	0.00	0.40	0.62	0.59	0.59	0.52	0.46	0.47
Avail Cap(c_a), veh/h	956	0	1257	940	0	1292	348	1614	856	248	1424	754
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.1	0.0	10.9	13.2	0.0	10.8	15.9	9.8	9.8	16.4	9.9	9.9
Incr Delay (d2), s/veh	0.3	0.0	0.7	0.2	0.0	0.6	4.1	0.5	0.9	4.0	0.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	1.1	0.5	0.0	1.1	0.7	1.4	1.5	0.4	1.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.4	0.0	11.5	13.5	0.0	11.3	20.0	10.3	10.7	20.4	10.2	10.5
LnGrp LOS	B	A	B	B	A	B	B	B	B	C	B	B
Approach Vol, veh/h		294			271			1142			816	
Approach Delay, s/veh		12.1			12.0			11.2			11.0	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.1	16.2		13.6	7.0	15.3		13.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	5.0	17.0		26.0	7.0	15.0		26.0
Max Q Clear Time (g_c+I1), s	3.1	8.0		7.6	3.8	6.2		7.6
Green Ext Time (p_c), s	0.0	4.1		1.5	0.0	2.9		1.3

Intersection Summary			
HCM 6th Ctrl Delay			11.3
HCM 6th LOS			B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	126	86	41	219	259	147	808	35	154	559	94
Future Volume (veh/h)	83	126	86	41	219	259	147	808	35	154	559	94
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	92	140	96	46	243	288	163	898	39	171	621	104
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	123	499	417	82	457	386	205	1375	60	214	1231	203
Arrive On Green	0.07	0.27	0.27	0.05	0.24	0.24	0.12	0.27	0.27	0.12	0.28	0.28
Sat Flow, veh/h	1781	1870	1562	1781	1870	1583	1781	5016	217	1781	4411	728
Grp Volume(v), veh/h	92	140	96	46	243	288	163	609	328	171	477	248
Grp Sat Flow(s),veh/h/ln	1781	1870	1562	1781	1870	1583	1781	1702	1830	1781	1702	1735
Q Serve(g_s), s	2.8	3.2	2.6	1.4	6.2	9.2	4.9	8.6	8.7	5.1	6.4	6.6
Cycle Q Clear(g_c), s	2.8	3.2	2.6	1.4	6.2	9.2	4.9	8.6	8.7	5.1	6.4	6.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		0.42
Lane Grp Cap(c), veh/h	123	499	417	82	457	386	205	933	501	214	950	484
V/C Ratio(X)	0.75	0.28	0.23	0.56	0.53	0.75	0.79	0.65	0.65	0.80	0.50	0.51
Avail Cap(c_a), veh/h	163	890	743	163	890	753	228	1308	703	228	1308	666
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.0	15.9	15.6	25.5	18.0	19.1	23.6	17.5	17.6	23.4	16.5	16.6
Incr Delay (d2), s/veh	12.6	0.3	0.3	5.9	1.0	2.9	16.0	0.8	1.5	17.0	0.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	1.2	0.8	0.7	2.3	3.1	2.7	2.9	3.2	2.8	2.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.6	16.2	15.9	31.4	18.9	22.0	39.5	18.3	19.0	40.4	16.9	17.4
LnGrp LOS	D	B	B	C	B	C	D	B	B	D	B	B
Approach Vol, veh/h		328			577			1100			896	
Approach Delay, s/veh		22.1			21.4			21.7			21.5	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	19.0	6.5	18.6	10.3	19.3	7.8	17.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	21.0	5.0	26.0	7.0	21.0	5.0	26.0
Max Q Clear Time (g_c+I1), s	7.1	10.7	3.4	5.2	6.9	8.6	4.8	11.2
Green Ext Time (p_c), s	0.0	4.0	0.0	0.9	0.0	3.2	0.0	2.0

Intersection Summary			
HCM 6th Ctrl Delay			21.6
HCM 6th LOS			C

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	23	57	78	1003	790	48
Future Vol, veh/h	23	57	78	1003	790	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	0	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	58	80	1023	806	49

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1400	428	855	0	-	0
Stage 1	831	-	-	-	-	-
Stage 2	569	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	194	492	460	-	-	-
Stage 1	306	-	-	-	-	-
Stage 2	483	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	160	492	460	-	-	-
Mov Cap-2 Maneuver	160	-	-	-	-	-
Stage 1	253	-	-	-	-	-
Stage 2	483	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.9	1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	460	-	308	-	-
HCM Lane V/C Ratio	0.173	-	0.265	-	-
HCM Control Delay (s)	14.5	-	20.9	-	-
HCM Lane LOS	B	-	C	-	-
HCM 95th %tile Q(veh)	0.6	-	1	-	-

APPENDIX D -

PROJECT COMPLETION YEAR 2025 CONDITIONS PEAK HOUR INTERSECTION ANALYSIS

WORKSHEETS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	203	100	64	141	45	43	458	45	92	912	50
Future Volume (veh/h)	57	203	100	64	141	45	43	458	45	92	912	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	63	226	111	71	157	50	48	509	50	102	1013	56
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	451	376	185	346	432	138	92	1383	134	152	1611	89
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.05	0.29	0.29	0.09	0.33	0.33
Sat Flow, veh/h	1173	1177	578	1042	1354	431	1781	4726	458	1781	4942	273
Grp Volume(v), veh/h	63	0	337	71	0	207	48	365	194	102	697	372
Grp Sat Flow(s),veh/h/ln	1173	0	1756	1042	0	1785	1781	1702	1780	1781	1702	1810
Q Serve(g_s), s	1.7	0.0	6.4	2.4	0.0	3.5	1.0	3.4	3.4	2.2	6.9	6.9
Cycle Q Clear(g_c), s	5.3	0.0	6.4	8.8	0.0	3.5	1.0	3.4	3.4	2.2	6.9	6.9
Prop In Lane	1.00		0.33	1.00		0.24	1.00		0.26	1.00		0.15
Lane Grp Cap(c), veh/h	451	0	560	346	0	570	92	996	521	152	1110	590
V/C Ratio(X)	0.14	0.00	0.60	0.21	0.00	0.36	0.52	0.37	0.37	0.67	0.63	0.63
Avail Cap(c_a), veh/h	847	0	1152	697	0	1172	225	1203	629	360	1461	777
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.4	0.0	11.4	15.1	0.0	10.4	18.3	11.1	11.1	17.6	11.3	11.3
Incr Delay (d2), s/veh	0.1	0.0	1.0	0.3	0.0	0.4	4.5	0.2	0.4	5.1	0.6	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	2.2	0.5	0.0	1.2	0.5	0.9	1.0	0.9	1.8	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.6	0.0	12.4	15.4	0.0	10.8	22.8	11.3	11.6	22.7	11.9	12.4
LnGrp LOS	B	A	B	B	A	B	C	B	B	C	B	B
Approach Vol, veh/h		400			278			607			1171	
Approach Delay, s/veh		12.4			11.9			12.3			13.0	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.4	15.6		16.6	6.1	16.9		16.6				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	8.0	14.0		26.0	5.0	17.0		26.0				
Max Q Clear Time (g_c+I1), s	4.2	5.4		8.4	3.0	8.9		10.8				
Green Ext Time (p_c), s	0.1	2.1		2.3	0.0	3.9		1.3				
Intersection Summary												
HCM 6th Ctrl Delay			12.6									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	253	95	91	228	261	57	444	58	319	875	66
Future Volume (veh/h)	99	253	95	91	228	261	57	444	58	319	875	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	108	275	103	99	248	284	62	483	63	347	951	72
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	138	506	415	127	494	407	94	814	104	404	1705	129
Arrive On Green	0.08	0.27	0.27	0.07	0.26	0.26	0.05	0.18	0.18	0.23	0.35	0.35
Sat Flow, veh/h	1781	1870	1536	1781	1870	1541	1781	4578	587	1781	4842	366
Grp Volume(v), veh/h	108	275	103	99	248	284	62	357	189	347	668	355
Grp Sat Flow(s),veh/h/ln	1781	1870	1536	1781	1870	1541	1781	1702	1761	1781	1702	1803
Q Serve(g_s), s	3.8	7.9	3.3	3.4	7.1	10.5	2.2	6.1	6.2	11.8	10.0	10.0
Cycle Q Clear(g_c), s	3.8	7.9	3.3	3.4	7.1	10.5	2.2	6.1	6.2	11.8	10.0	10.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.33	1.00		0.20
Lane Grp Cap(c), veh/h	138	506	415	127	494	407	94	606	313	404	1199	635
V/C Ratio(X)	0.78	0.54	0.25	0.78	0.50	0.70	0.66	0.59	0.60	0.86	0.56	0.56
Avail Cap(c_a), veh/h	169	771	633	169	771	635	226	1187	614	565	1835	972
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.6	19.7	18.0	28.8	19.7	20.9	29.3	23.8	23.9	23.4	16.5	16.5
Incr Delay (d2), s/veh	17.1	0.9	0.3	15.2	0.8	2.2	7.8	0.9	1.9	9.3	0.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	3.1	1.1	1.9	2.8	3.5	1.0	2.2	2.5	5.2	3.1	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.7	20.6	18.3	44.0	20.5	23.1	37.1	24.7	25.7	32.7	16.9	17.3
LnGrp LOS	D	C	B	D	C	C	D	C	C	C	B	B
Approach Vol, veh/h		486			631			608			1370	
Approach Delay, s/veh		25.7			25.4			26.3			21.0	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.3	15.2	8.5	21.1	7.3	26.2	8.9	20.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	20.0	22.0	6.0	26.0	8.0	34.0	6.0	26.0
Max Q Clear Time (g_c+I1), s	13.8	8.2	5.4	9.9	4.2	12.0	5.8	12.5
Green Ext Time (p_c), s	0.5	2.6	0.0	1.6	0.0	6.0	0.0	1.9

Intersection Summary	
HCM 6th Ctrl Delay	23.7
HCM 6th LOS	C

Intersection						
Int Delay, s/veh	2.2					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	30	102	40	757	1108	12
Future Vol, veh/h	30	102	40	757	1108	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	31	105	41	780	1142	12

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1542	577	1154	0	-	0
Stage 1	1148	-	-	-	-	-
Stage 2	394	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	164	394	330	-	-	-
Stage 1	196	-	-	-	-	-
Stage 2	595	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	144	394	330	-	-	-
Mov Cap-2 Maneuver	144	-	-	-	-	-
Stage 1	172	-	-	-	-	-
Stage 2	595	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	29	0.9	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	330	-	283	-	-
HCM Lane V/C Ratio	0.125	-	0.481	-	-
HCM Control Delay (s)	17.5	-	29	-	-
HCM Lane LOS	C	-	D	-	-
HCM 95th %tile Q(veh)	0.4	-	2.5	-	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	2	556	2	0	1053
Future Vol, veh/h	0	2	556	2	0	1053
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	2	604	2	0	1145

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	303	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	591	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	591	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	591	-
HCM Lane V/C Ratio	-	-	0.004	-
HCM Control Delay (s)	-	-	11.1	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	337	0	0	248	2	0	0	0	1	0	1
Future Vol, veh/h	2	337	0	0	248	2	0	0	0	1	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	366	0	0	270	2	0	0	0	1	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	272	0	0	366	0	0	642	642	366	641	641	271
Stage 1	-	-	-	-	-	-	370	370	-	271	271	-
Stage 2	-	-	-	-	-	-	272	272	-	370	370	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1291	-	-	1193	-	-	387	392	679	388	393	768
Stage 1	-	-	-	-	-	-	650	620	-	735	685	-
Stage 2	-	-	-	-	-	-	734	685	-	650	620	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1291	-	-	1193	-	-	386	391	679	387	392	768
Mov Cap-2 Maneuver	-	-	-	-	-	-	386	391	-	387	392	-
Stage 1	-	-	-	-	-	-	649	619	-	734	685	-
Stage 2	-	-	-	-	-	-	733	685	-	649	619	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	12
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1291	-	-	1193	-	-	515
HCM Lane V/C Ratio	-	0.002	-	-	-	-	-	0.004
HCM Control Delay (s)	0	7.8	0	-	0	-	-	12
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	118	77	76	136	50	89	937	67	55	683	46
Future Volume (veh/h)	88	118	77	76	136	50	89	937	67	55	683	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	98	131	86	84	151	56	99	1041	74	61	759	51
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	405	290	191	393	361	134	152	1665	118	111	1558	104
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.09	0.34	0.34	0.06	0.32	0.32
Sat Flow, veh/h	1173	1047	687	1162	1300	482	1781	4865	345	1781	4879	326
Grp Volume(v), veh/h	98	0	217	84	0	207	99	728	387	61	528	282
Grp Sat Flow(s),veh/h/ln	1173	0	1734	1162	0	1782	1781	1702	1806	1781	1702	1801
Q Serve(g_s), s	2.8	0.0	3.9	2.4	0.0	3.6	2.0	6.8	6.8	1.3	4.7	4.8
Cycle Q Clear(g_c), s	6.4	0.0	3.9	6.3	0.0	3.6	2.0	6.8	6.8	1.3	4.7	4.8
Prop In Lane	1.00		0.40	1.00		0.27	1.00		0.19	1.00		0.18
Lane Grp Cap(c), veh/h	405	0	481	393	0	494	152	1165	618	111	1087	575
V/C Ratio(X)	0.24	0.00	0.45	0.21	0.00	0.42	0.65	0.62	0.63	0.55	0.49	0.49
Avail Cap(c_a), veh/h	886	0	1193	870	0	1227	377	1532	813	236	1262	668
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.8	0.0	11.3	13.9	0.0	11.2	16.7	10.4	10.4	17.2	10.4	10.4
Incr Delay (d2), s/veh	0.3	0.0	0.7	0.3	0.0	0.6	4.6	0.6	1.0	4.1	0.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	1.3	0.6	0.0	1.2	0.8	1.6	1.8	0.5	1.2	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.1	0.0	11.9	14.2	0.0	11.7	21.3	10.9	11.4	21.3	10.7	11.0
LnGrp LOS	B	A	B	B	A	B	C	B	B	C	B	B
Approach Vol, veh/h		315			291			1214			871	
Approach Delay, s/veh		12.6			12.4			12.0			11.5	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.4	16.9		14.5	7.2	16.1		14.5				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	5.0	17.0		26.0	8.0	14.0		26.0				
Max Q Clear Time (g_c+I1), s	3.3	8.8		8.4	4.0	6.8		8.3				
Green Ext Time (p_c), s	0.0	4.1		1.6	0.1	2.8		1.4				
Intersection Summary												
HCM 6th Ctrl Delay			11.9									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	134	93	44	233	275	157	860	40	164	596	100
Future Volume (veh/h)	89	134	93	44	233	275	157	860	40	164	596	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	99	149	103	49	259	306	174	956	44	182	662	111
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	127	517	432	84	472	400	216	1393	64	216	1228	203
Arrive On Green	0.07	0.28	0.28	0.05	0.25	0.25	0.12	0.28	0.28	0.12	0.28	0.28
Sat Flow, veh/h	1781	1870	1562	1781	1870	1583	1781	5002	230	1781	4408	730
Grp Volume(v), veh/h	99	149	103	49	259	306	174	650	350	182	509	264
Grp Sat Flow(s),veh/h/ln	1781	1870	1562	1781	1870	1583	1781	1702	1828	1781	1702	1734
Q Serve(g_s), s	3.2	3.6	3.0	1.6	6.9	10.3	5.5	9.8	9.9	5.8	7.3	7.5
Cycle Q Clear(g_c), s	3.2	3.6	3.0	1.6	6.9	10.3	5.5	9.8	9.9	5.8	7.3	7.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.13	1.00		0.42
Lane Grp Cap(c), veh/h	127	517	432	84	472	400	216	948	509	216	948	483
V/C Ratio(X)	0.78	0.29	0.24	0.58	0.55	0.77	0.81	0.69	0.69	0.84	0.54	0.55
Avail Cap(c_a), veh/h	154	842	703	154	842	712	216	1237	664	216	1237	630
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.4	16.4	16.2	27.0	18.7	20.0	24.7	18.6	18.6	24.9	17.7	17.7
Incr Delay (d2), s/veh	18.8	0.3	0.3	6.3	1.0	3.1	19.7	1.1	2.0	25.0	0.5	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	1.4	0.9	0.7	2.7	3.5	3.2	3.4	3.7	3.5	2.3	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.2	16.7	16.5	33.3	19.7	23.1	44.4	19.6	20.6	49.9	18.2	18.7
LnGrp LOS	D	B	B	C	B	C	D	B	C	D	B	B
Approach Vol, veh/h		351			614			1174			955	
Approach Delay, s/veh		24.7			22.5			23.6			24.3	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	20.1	6.7	20.0	11.0	20.1	8.1	18.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	21.0	5.0	26.0	7.0	21.0	5.0	26.0
Max Q Clear Time (g_c+I1), s	7.8	11.9	3.6	5.6	7.5	9.5	5.2	12.3
Green Ext Time (p_c), s	0.0	4.0	0.0	1.0	0.0	3.3	0.0	2.0

Intersection Summary	
HCM 6th Ctrl Delay	23.7
HCM 6th LOS	C

Intersection						
Int Delay, s/veh	1.5					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	25	61	83	1066	840	51
Future Vol, veh/h	25	61	83	1066	840	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	62	85	1088	857	52

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1488	455	909	0	-	0
Stage 1	883	-	-	-	-	-
Stage 2	605	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	175	472	433	-	-	-
Stage 1	285	-	-	-	-	-
Stage 2	463	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	141	472	433	-	-	-
Mov Cap-2 Maneuver	141	-	-	-	-	-
Stage 1	229	-	-	-	-	-
Stage 2	463	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	23.5	1.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	433	-	281	-	-
HCM Lane V/C Ratio	0.196	-	0.312	-	-
HCM Control Delay (s)	15.3	-	23.5	-	-
HCM Lane LOS	C	-	C	-	-
HCM 95th %tile Q(veh)	0.7	-	1.3	-	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	1073	2	0	783
Future Vol, veh/h	0	5	1073	2	0	783
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	6	1192	2	0	870

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	597	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	382	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	382	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	382	-
HCM Lane V/C Ratio	-	-	0.015	-
HCM Control Delay (s)	-	-	14.6	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	237	0	0	259	3	0	0	0	1	0	2
Future Vol, veh/h	3	237	0	0	259	3	0	0	0	1	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	258	0	0	282	3	0	0	0	1	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	285	0	0	258	0	0	549	549	258	548	548	284
Stage 1	-	-	-	-	-	-	264	264	-	284	284	-
Stage 2	-	-	-	-	-	-	285	285	-	264	264	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1277	-	-	1307	-	-	446	443	781	447	444	755
Stage 1	-	-	-	-	-	-	741	690	-	723	676	-
Stage 2	-	-	-	-	-	-	722	676	-	741	690	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1277	-	-	1307	-	-	444	442	781	446	443	755
Mov Cap-2 Maneuver	-	-	-	-	-	-	444	442	-	446	443	-
Stage 1	-	-	-	-	-	-	739	688	-	721	676	-
Stage 2	-	-	-	-	-	-	720	676	-	739	688	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	0	10.9
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1277	-	-	1307	-	-	613
HCM Lane V/C Ratio	-	0.003	-	-	-	-	-	0.005
HCM Control Delay (s)	0	7.8	0	-	0	-	-	10.9
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0

APPENDIX E -

PROJECT COMPLETION YEAR 2027 CONDITIONS PEAK HOUR INTERSECTION ANALYSIS

WORKSHEETS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	228	106	67	157	48	46	503	48	95	979	53
Future Volume (veh/h)	59	228	106	67	157	48	46	503	48	95	979	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	66	253	118	74	174	53	51	559	53	106	1088	59
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	446	403	188	330	460	140	95	1403	131	150	1616	88
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.05	0.30	0.30	0.08	0.33	0.33
Sat Flow, veh/h	1152	1200	560	1010	1370	417	1781	4743	445	1781	4947	268
Grp Volume(v), veh/h	66	0	371	74	0	227	51	399	213	106	748	399
Grp Sat Flow(s),veh/h/ln	1152	0	1759	1010	0	1788	1781	1702	1783	1781	1702	1811
Q Serve(g_s), s	2.0	0.0	7.5	2.8	0.0	4.1	1.2	4.0	4.0	2.4	8.0	8.0
Cycle Q Clear(g_c), s	6.0	0.0	7.5	10.3	0.0	4.1	1.2	4.0	4.0	2.4	8.0	8.0
Prop In Lane	1.00		0.32	1.00		0.23	1.00		0.25	1.00		0.15
Lane Grp Cap(c), veh/h	446	0	590	330	0	600	95	1007	527	150	1112	592
V/C Ratio(X)	0.15	0.00	0.63	0.22	0.00	0.38	0.54	0.40	0.40	0.71	0.67	0.67
Avail Cap(c_a), veh/h	769	0	1084	614	0	1101	211	1129	592	338	1371	730
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.0	0.0	11.8	16.1	0.0	10.7	19.5	11.9	11.9	18.8	12.3	12.3
Incr Delay (d2), s/veh	0.2	0.0	1.1	0.3	0.0	0.4	4.6	0.3	0.5	6.0	1.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	2.6	0.6	0.0	1.4	0.5	1.1	1.2	1.1	2.2	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.1	0.0	12.9	16.5	0.0	11.1	24.1	12.1	12.4	24.8	13.2	14.1
LnGrp LOS	B	A	B	B	A	B	C	B	B	C	B	B
Approach Vol, veh/h		437			301			663			1253	
Approach Delay, s/veh		12.9			12.4			13.1			14.5	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.6	16.5		18.2	6.2	17.8		18.2				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	8.0	14.0		26.0	5.0	17.0		26.0				
Max Q Clear Time (g_c+I1), s	4.4	6.0		9.5	3.2	10.0		12.3				
Green Ext Time (p_c), s	0.1	2.2		2.5	0.0	3.7		1.4				

Intersection Summary			
HCM 6th Ctrl Delay			13.6
HCM 6th LOS			B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	50	220	578	41	162	1010
Future Volume (veh/h)	50	220	578	41	162	1010
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	54	239	628	45	176	1098
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	378	337	1321	94	227	2698
Arrive On Green	0.21	0.21	0.27	0.27	0.13	0.53
Sat Flow, veh/h	1781	1585	5034	346	1781	5274
Grp Volume(v), veh/h	54	239	438	235	176	1098
Grp Sat Flow(s),veh/h/ln	1781	1585	1702	1808	1781	1702
Q Serve(g_s), s	0.8	4.3	3.3	3.4	3.0	4.0
Cycle Q Clear(g_c), s	0.8	4.3	3.3	3.4	3.0	4.0
Prop In Lane	1.00	1.00		0.19	1.00	
Lane Grp Cap(c), veh/h	378	337	924	491	227	2698
V/C Ratio(X)	0.14	0.71	0.47	0.48	0.78	0.41
Avail Cap(c_a), veh/h	1212	1078	1654	879	404	4301
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.9	11.3	9.4	9.4	13.0	4.4
Incr Delay (d2), s/veh	0.2	2.8	0.4	0.7	5.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.3	0.9	1.0	1.3	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.0	14.0	9.8	10.1	18.7	4.5
LnGrp LOS	B	B	A	B	B	A
Approach Vol, veh/h	293		673			1274
Approach Delay, s/veh	13.3		9.9			6.4
Approach LOS	B		A			A

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	7.9	12.4				20.3		10.6
Change Period (Y+Rc), s	4.0	4.0				4.0		4.0
Max Green Setting (Gmax), s	7.0	15.0				26.0		21.0
Max Q Clear Time (g_c+I1), s	5.0	5.4				6.0		6.3
Green Ext Time (p_c), s	0.1	3.0				8.0		0.8

Intersection Summary	
HCM 6th Ctrl Delay	8.4
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	268	119	65	143	167	169	600	29	233	1062	70
Future Volume (veh/h)	105	268	119	65	143	167	169	600	29	233	1062	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	114	291	129	71	155	182	184	652	32	253	1154	76
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	144	452	371	102	407	334	229	1363	67	300	1534	101
Arrive On Green	0.08	0.24	0.24	0.06	0.22	0.22	0.13	0.27	0.27	0.17	0.31	0.31
Sat Flow, veh/h	1781	1870	1533	1781	1870	1536	1781	4986	244	1781	4893	322
Grp Volume(v), veh/h	114	291	129	71	155	182	184	444	240	253	803	427
Grp Sat Flow(s),veh/h/ln	1781	1870	1533	1781	1870	1536	1781	1702	1825	1781	1702	1811
Q Serve(g_s), s	3.9	8.6	4.3	2.4	4.4	6.5	6.2	6.7	6.8	8.5	13.1	13.1
Cycle Q Clear(g_c), s	3.9	8.6	4.3	2.4	4.4	6.5	6.2	6.7	6.8	8.5	13.1	13.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.13	1.00		0.18
Lane Grp Cap(c), veh/h	144	452	371	102	407	334	229	931	499	300	1067	568
V/C Ratio(X)	0.79	0.64	0.35	0.70	0.38	0.54	0.80	0.48	0.48	0.84	0.75	0.75
Avail Cap(c_a), veh/h	144	788	646	144	788	647	289	1214	651	318	1269	675
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.8	21.0	19.4	28.6	20.6	21.4	26.1	18.7	18.7	24.9	19.0	19.0
Incr Delay (d2), s/veh	24.9	1.5	0.6	8.4	0.6	1.4	12.2	0.4	0.7	17.6	2.1	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	3.4	1.4	1.2	1.7	2.2	3.1	2.3	2.6	4.5	4.4	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.7	22.5	19.9	36.9	21.2	22.8	38.4	19.1	19.5	42.4	21.2	23.0
LnGrp LOS	D	C	B	D	C	C	D	B	B	D	C	C
Approach Vol, veh/h		534			408			868			1483	
Approach Delay, s/veh		28.3			24.6			23.3			25.3	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.4	20.9	7.5	18.9	11.9	23.3	9.0	17.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	11.0	22.0	5.0	26.0	10.0	23.0	5.0	26.0
Max Q Clear Time (g_c+I1), s	10.5	8.8	4.4	10.6	8.2	15.1	5.9	8.5
Green Ext Time (p_c), s	0.0	3.3	0.0	1.7	0.1	4.2	0.0	1.2

Intersection Summary			
HCM 6th Ctrl Delay			25.2
HCM 6th LOS			C

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	32	115	46	814	1193	13
Future Vol, veh/h	32	115	46	814	1193	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	119	47	839	1230	13

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1667	622	1243	0	-	0
Stage 1	1237	-	-	-	-	-
Stage 2	430	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	141	368	298	-	-	-
Stage 1	173	-	-	-	-	-
Stage 2	570	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	119	368	298	-	-	-
Mov Cap-2 Maneuver	119	-	-	-	-	-
Stage 1	146	-	-	-	-	-
Stage 2	570	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	38.4	1	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	298	-	253	-	-
HCM Lane V/C Ratio	0.159	-	0.599	-	-
HCM Control Delay (s)	19.4	-	38.4	-	-
HCM Lane LOS	C	-	E	-	-
HCM 95th %tile Q(veh)	0.6	-	3.5	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	23	596	13	0	1127
Future Vol, veh/h	0	23	596	13	0	1127
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	25	648	14	0	1225

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	331	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	567	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	567	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	567	-
HCM Lane V/C Ratio	-	-	0.044	-
HCM Control Delay (s)	-	-	11.6	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	357	0	0	263	6	0	0	0	4	0	8
Future Vol, veh/h	13	357	0	0	263	6	0	0	0	4	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	388	0	0	286	7	0	0	0	4	0	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	293	0	0	388	0	0	710	709	388	706	706	290
Stage 1	-	-	-	-	-	-	416	416	-	290	290	-
Stage 2	-	-	-	-	-	-	294	293	-	416	416	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1269	-	-	1170	-	-	348	359	660	351	361	749
Stage 1	-	-	-	-	-	-	614	592	-	718	672	-
Stage 2	-	-	-	-	-	-	714	670	-	614	592	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1269	-	-	1170	-	-	340	354	660	347	356	749
Mov Cap-2 Maneuver	-	-	-	-	-	-	340	354	-	347	356	-
Stage 1	-	-	-	-	-	-	605	584	-	708	672	-
Stage 2	-	-	-	-	-	-	706	670	-	605	584	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	0	11.8
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1269	-	-	1170	-	-	540
HCM Lane V/C Ratio	-	0.011	-	-	-	-	-	0.024
HCM Control Delay (s)	0	7.9	0	-	0	-	-	11.8
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	141	82	79	161	53	94	1017	71	56	751	49
Future Volume (veh/h)	93	141	82	79	161	53	94	1017	71	56	751	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	103	157	91	88	179	59	104	1130	79	62	834	54
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	391	325	189	380	397	131	152	1683	118	111	1576	102
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.09	0.35	0.35	0.06	0.32	0.32
Sat Flow, veh/h	1140	1104	640	1130	1345	443	1781	4871	340	1781	4892	316
Grp Volume(v), veh/h	103	0	248	88	0	238	104	789	420	62	579	309
Grp Sat Flow(s),veh/h/ln	1140	0	1743	1130	0	1789	1781	1702	1807	1781	1702	1804
Q Serve(g_s), s	3.3	0.0	4.7	2.8	0.0	4.4	2.3	8.0	8.0	1.4	5.6	5.6
Cycle Q Clear(g_c), s	7.6	0.0	4.7	7.5	0.0	4.4	2.3	8.0	8.0	1.4	5.6	5.6
Prop In Lane	1.00		0.37	1.00		0.25	1.00		0.19	1.00		0.17
Lane Grp Cap(c), veh/h	391	0	514	380	0	527	152	1176	624	111	1097	581
V/C Ratio(X)	0.26	0.00	0.48	0.23	0.00	0.45	0.68	0.67	0.67	0.56	0.53	0.53
Avail Cap(c_a), veh/h	791	0	1124	775	0	1154	265	1436	762	221	1351	716
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.7	0.0	11.7	14.8	0.0	11.6	17.9	11.2	11.2	18.4	11.2	11.2
Incr Delay (d2), s/veh	0.4	0.0	0.7	0.3	0.0	0.6	5.3	0.9	1.7	4.4	0.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	1.6	0.7	0.0	1.5	1.0	2.1	2.4	0.6	1.5	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.0	0.0	12.4	15.1	0.0	12.2	23.3	12.2	13.0	22.8	11.6	11.9
LnGrp LOS	B	A	B	B	A	B	C	B	B	C	B	B
Approach Vol, veh/h		351			326			1313			950	
Approach Delay, s/veh		13.2			13.0			13.3			12.4	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.5	17.9		15.9	7.4	17.0		15.9				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	5.0	17.0		26.0	6.0	16.0		26.0				
Max Q Clear Time (g_c+I1), s	3.4	10.0		9.6	4.3	7.6		9.5				
Green Ext Time (p_c), s	0.0	3.9		1.8	0.0	3.3		1.6				
Intersection Summary												
HCM 6th Ctrl Delay			13.0									
HCM 6th LOS			B									

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	73	302	1163	42	262	686
Future Volume (veh/h)	73	302	1163	42	262	686
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	79	328	1264	46	285	746
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	451	402	1605	58	340	3000
Arrive On Green	0.25	0.25	0.32	0.32	0.19	0.59
Sat Flow, veh/h	1781	1585	5226	184	1781	5274
Grp Volume(v), veh/h	79	328	851	459	285	746
Grp Sat Flow(s),veh/h/ln	1781	1585	1702	1837	1781	1702
Q Serve(g_s), s	1.7	9.8	11.4	11.4	7.8	3.5
Cycle Q Clear(g_c), s	1.7	9.8	11.4	11.4	7.8	3.5
Prop In Lane	1.00	1.00		0.10	1.00	
Lane Grp Cap(c), veh/h	451	402	1080	583	340	3000
V/C Ratio(X)	0.18	0.82	0.79	0.79	0.84	0.25
Avail Cap(c_a), veh/h	744	662	1151	621	354	3147
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.7	17.7	15.6	15.6	19.6	5.0
Incr Delay (d2), s/veh	0.2	4.1	3.5	6.4	15.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	3.6	4.3	5.1	4.3	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.9	21.8	19.2	22.0	35.3	5.1
LnGrp LOS	B	C	B	C	D	A
Approach Vol, veh/h	407		1310			1031
Approach Delay, s/veh	20.4		20.1			13.4
Approach LOS	C		C			B

Timer - Assigned Phs	1	2	6	8
Phs Duration (G+Y+Rc), s	13.6	20.0	33.6	16.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	10.0	17.0	31.0	21.0
Max Q Clear Time (g_c+I1), s	9.8	13.4	5.5	11.8
Green Ext Time (p_c), s	0.0	2.5	5.6	1.0

Intersection Summary	
HCM 6th Ctrl Delay	17.7
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	142	121	25	132	148	308	1098	21	32	812	106
Future Volume (veh/h)	94	142	121	25	132	148	308	1098	21	32	812	106
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	104	158	134	28	147	164	342	1220	23	36	902	118
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	133	371	309	55	289	244	403	2416	46	67	1278	167
Arrive On Green	0.07	0.20	0.20	0.03	0.15	0.15	0.23	0.47	0.47	0.04	0.28	0.28
Sat Flow, veh/h	1781	1870	1560	1781	1870	1582	1781	5159	97	1781	4568	595
Grp Volume(v), veh/h	104	158	134	28	147	164	342	805	438	36	671	349
Grp Sat Flow(s),veh/h/ln	1781	1870	1560	1781	1870	1582	1781	1702	1852	1781	1702	1759
Q Serve(g_s), s	3.5	4.5	4.5	0.9	4.4	5.9	11.1	9.9	9.9	1.2	10.7	10.8
Cycle Q Clear(g_c), s	3.5	4.5	4.5	0.9	4.4	5.9	11.1	9.9	9.9	1.2	10.7	10.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.05	1.00		0.34
Lane Grp Cap(c), veh/h	133	371	309	55	289	244	403	1594	867	67	952	492
V/C Ratio(X)	0.78	0.43	0.43	0.51	0.51	0.67	0.85	0.50	0.51	0.54	0.70	0.71
Avail Cap(c_a), veh/h	177	836	698	148	805	681	590	2030	1105	177	1240	641
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.4	21.2	21.2	28.8	23.4	24.1	22.4	11.2	11.2	28.5	19.5	19.5
Incr Delay (d2), s/veh	14.7	0.8	1.0	7.0	1.4	3.2	7.7	0.2	0.5	6.6	1.3	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	1.8	1.5	0.5	1.8	2.2	4.9	2.9	3.2	0.6	3.5	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.2	22.0	22.2	35.8	24.8	27.3	30.1	11.4	11.6	35.1	20.8	22.0
LnGrp LOS	D	C	C	D	C	C	C	B	B	D	C	C
Approach Vol, veh/h		396			339			1585			1056	
Approach Delay, s/veh		27.4			26.9			15.5			21.7	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	32.3	5.9	16.0	17.6	20.9	8.5	13.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	36.0	5.0	27.0	20.0	22.0	6.0	26.0
Max Q Clear Time (g_c+I1), s	3.2	11.9	2.9	6.5	13.1	12.8	5.5	7.9
Green Ext Time (p_c), s	0.0	8.3	0.0	1.1	0.6	3.9	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	20.0
HCM 6th LOS	B

Intersection						
Int Delay, s/veh	2					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	26	73	97	1156	914	55
Future Vol, veh/h	26	73	97	1156	914	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	74	99	1180	933	56

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1631	495	989	0	-	0
Stage 1	961	-	-	-	-	-
Stage 2	670	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	147	445	396	-	-	-
Stage 1	255	-	-	-	-	-
Stage 2	428	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	110	445	396	-	-	-
Mov Cap-2 Maneuver	110	-	-	-	-	-
Stage 1	191	-	-	-	-	-
Stage 2	428	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	29.3	1.3	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	396	-	247	-	-
HCM Lane V/C Ratio	0.25	-	0.409	-	-
HCM Control Delay (s)	17.1	-	29.3	-	-
HCM Lane LOS	C	-	D	-	-
HCM 95th %tile Q(veh)	1	-	1.9	-	-

Intersection						
Int Delay, s/veh	0.8					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	87	1146	27	0	855
Future Vol, veh/h	0	87	1146	27	0	855
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	97	1273	30	0	950

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	652	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	352	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	352	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.1	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	352	-
HCM Lane V/C Ratio	-	-	0.275	-
HCM Control Delay (s)	-	-	19.1	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	1.1	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	27	251	0	0	275	13	0	0	0	14	0	29
Future Vol, veh/h	27	251	0	0	275	13	0	0	0	14	0	29
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	29	273	0	0	299	14	0	0	0	15	0	32

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	313	0	0	273	0	0	653	644	273	637	637	306
Stage 1	-	-	-	-	-	-	331	331	-	306	306	-
Stage 2	-	-	-	-	-	-	322	313	-	331	331	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1247	-	-	1290	-	-	380	391	766	390	395	734
Stage 1	-	-	-	-	-	-	682	645	-	704	662	-
Stage 2	-	-	-	-	-	-	690	657	-	682	645	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1247	-	-	1290	-	-	356	380	766	382	384	734
Mov Cap-2 Maneuver	-	-	-	-	-	-	356	380	-	382	384	-
Stage 1	-	-	-	-	-	-	664	628	-	685	662	-
Stage 2	-	-	-	-	-	-	660	657	-	664	628	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0	0	11.9
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1247	-	-	1290	-	-	565
HCM Lane V/C Ratio	-	0.024	-	-	-	-	-	0.083
HCM Control Delay (s)	0	8	0	-	0	-	-	11.9
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0.1	-	-	0	-	-	0.3

APPENDIX F -

CUMULATIVE PROJECT TRIP DISTRIBUTION/ASSIGNMENT

7 See Cathedral Cove Center TA Excerpts below

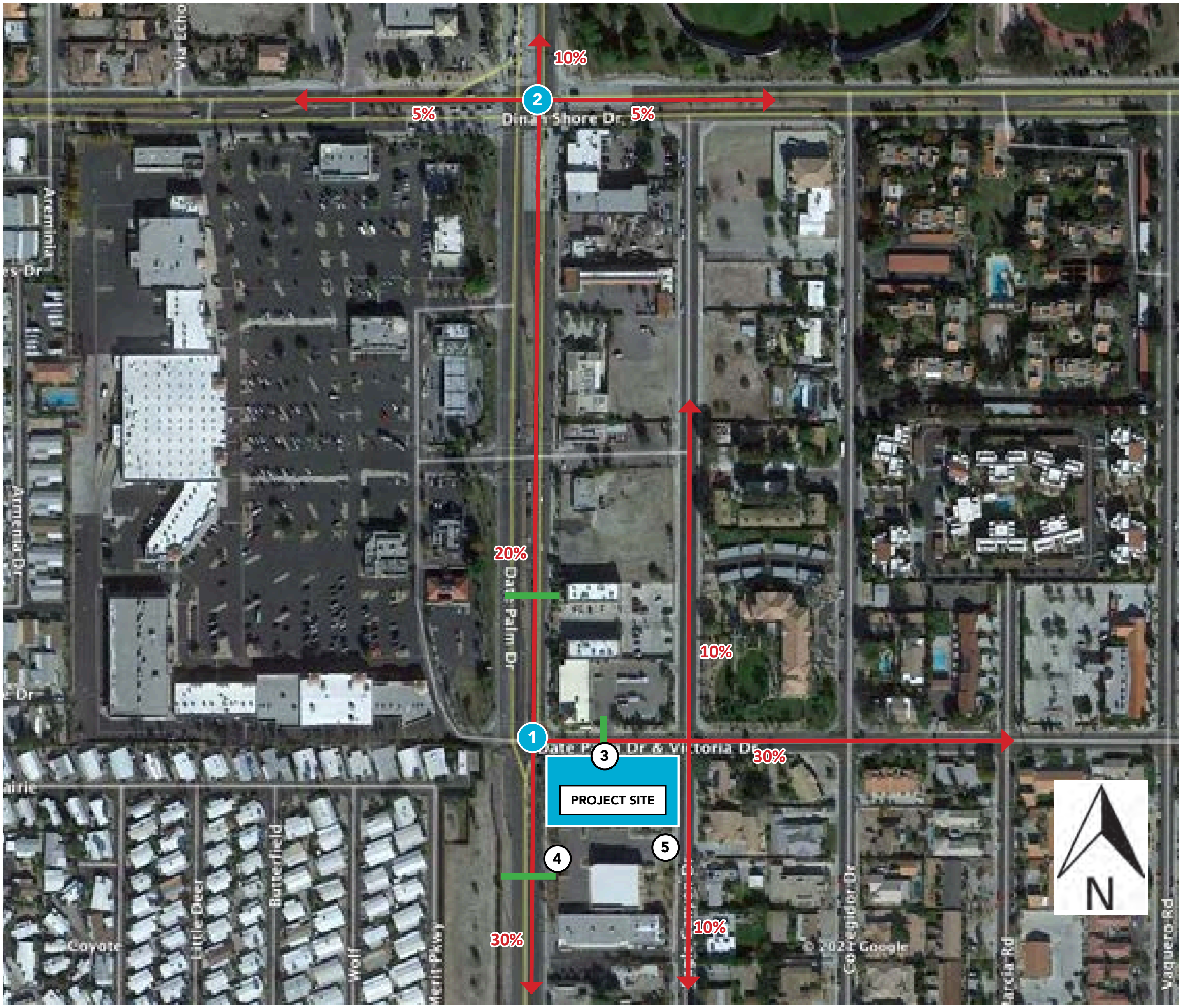
LEGEND # **Cumulative Project**

INTEGRATED ENGINEERING GROUP
TRANSPORTATION PLANNING AND ENGINEERING

Date Palm Drive Mixed Use

Cumulative Project Locations

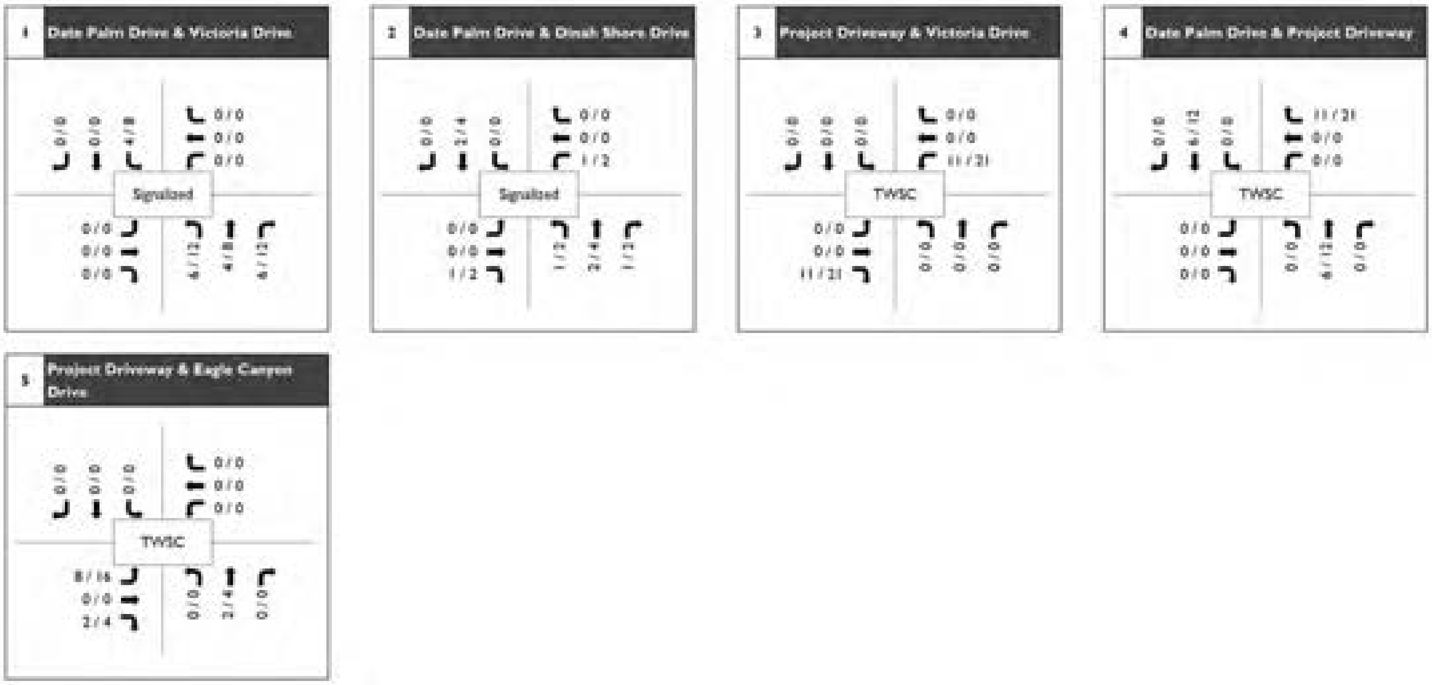
Figure 6-1



LEGEND # Intersection ◯ Project Driveway ▬ Roadway Segment

INTEGRATED ENGINEERING GROUP
TRANSPORTATION PLANNING AND ENGINEERING

Kroger Gas Station
Project Study Area and Trip Distribution
Figure 1-2



LEGEND

(AM/PM) Peak Hour Volumes

INTEGRATED ENGINEERING GROUP
TRANSPORTATION PLANNING AND ENGINEERING

Kroger Gas Station

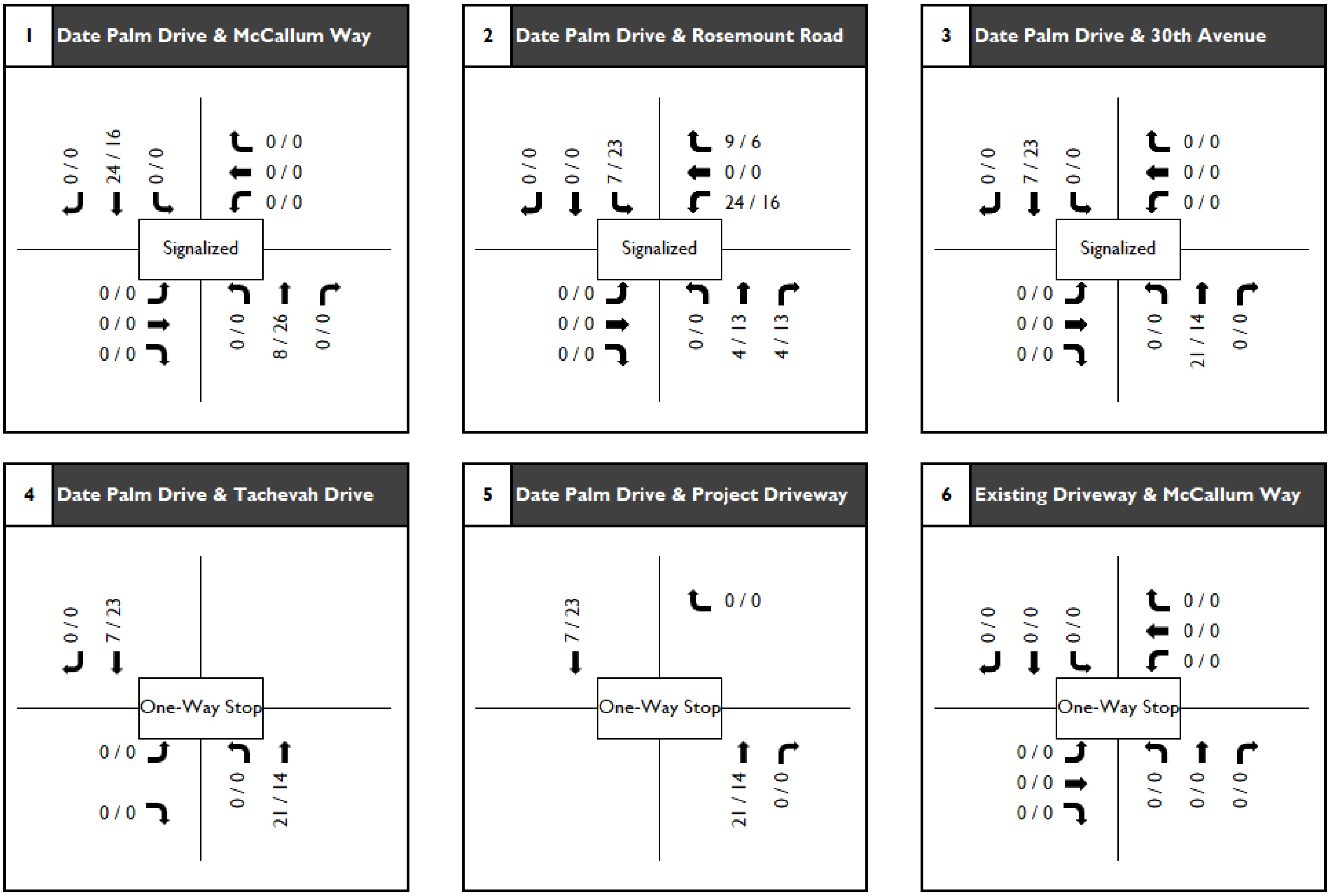
Project Intersection Volumes

Figure 1-3

LEGEND # Intersection

INTEGRATED ENGINEERING GROUP
TRANSPORTATION PLANNING AND ENGINEERING

The Wren Project
Project Study Area and Trip Distribution
Attachment 2



XX / XX AM / PM Peak Hour Volumes

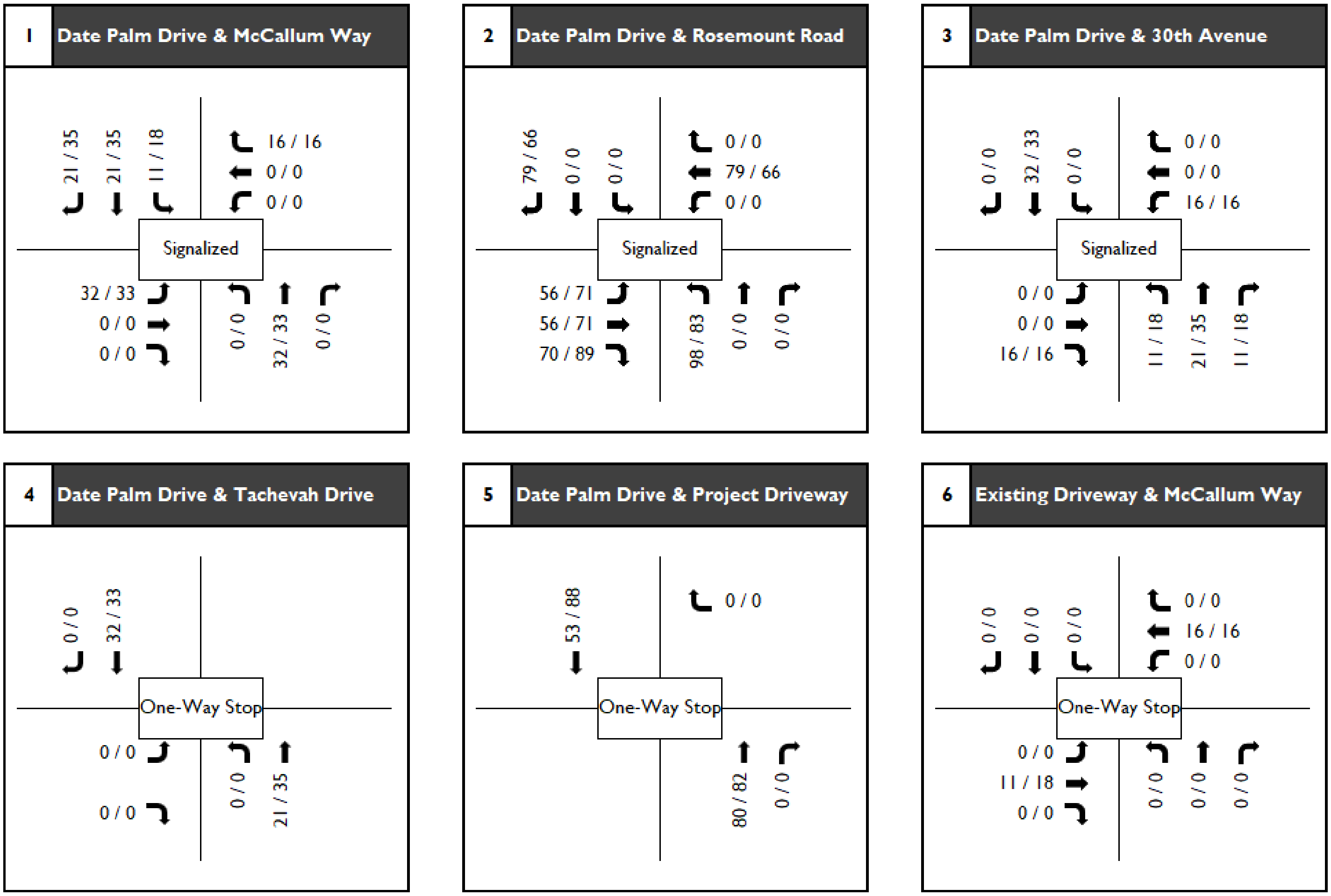
INTEGRATED ENGINEERING GROUP
TRANSPORTATION PLANNING AND ENGINEERING

Wren Project
Trip Assignment

LEGEND # Intersection

INTEGRATED ENGINEERING GROUP
TRANSPORTATION PLANNING AND ENGINEERING

Vallarta Shopping Center
Trip Assignment



XX / XX AM / PM Peak Hour Volumes

INTEGRATED ENGINEERING GROUP
TRANSPORTATION PLANNING AND ENGINEERING

Vallarta Shopping Center
Trip Assignment

Exhibit 4-2 shows the forecast trip percent distribution of the proposed project within the study area and the trip assignment percentages for each intersection movement.

EXHIBIT 4-2: PROJECT TRAFFIC DISTRIBUTION AND ASSIGNMENT PERCENTAGES

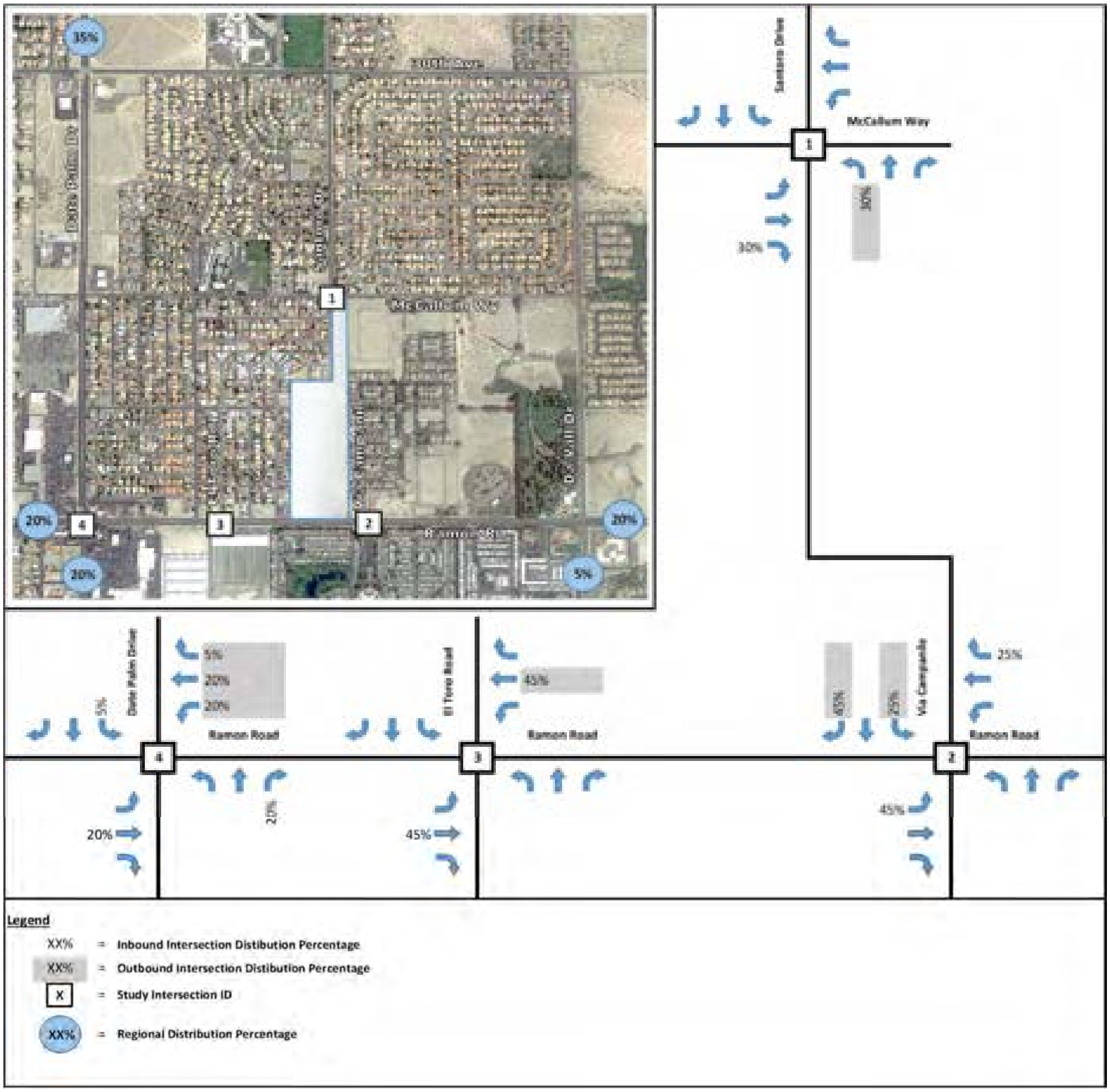


Exhibit 4-3 shows the corresponding forecast assignment of the AM Peak Hour and PM Peak Hour project-generated trips assuming the trip percent distribution shown in **Exhibit 4-2**.

EXHIBIT 4-3: PROJECT TRAFFIC PEAK HOUR TRIP ASSIGNMENT

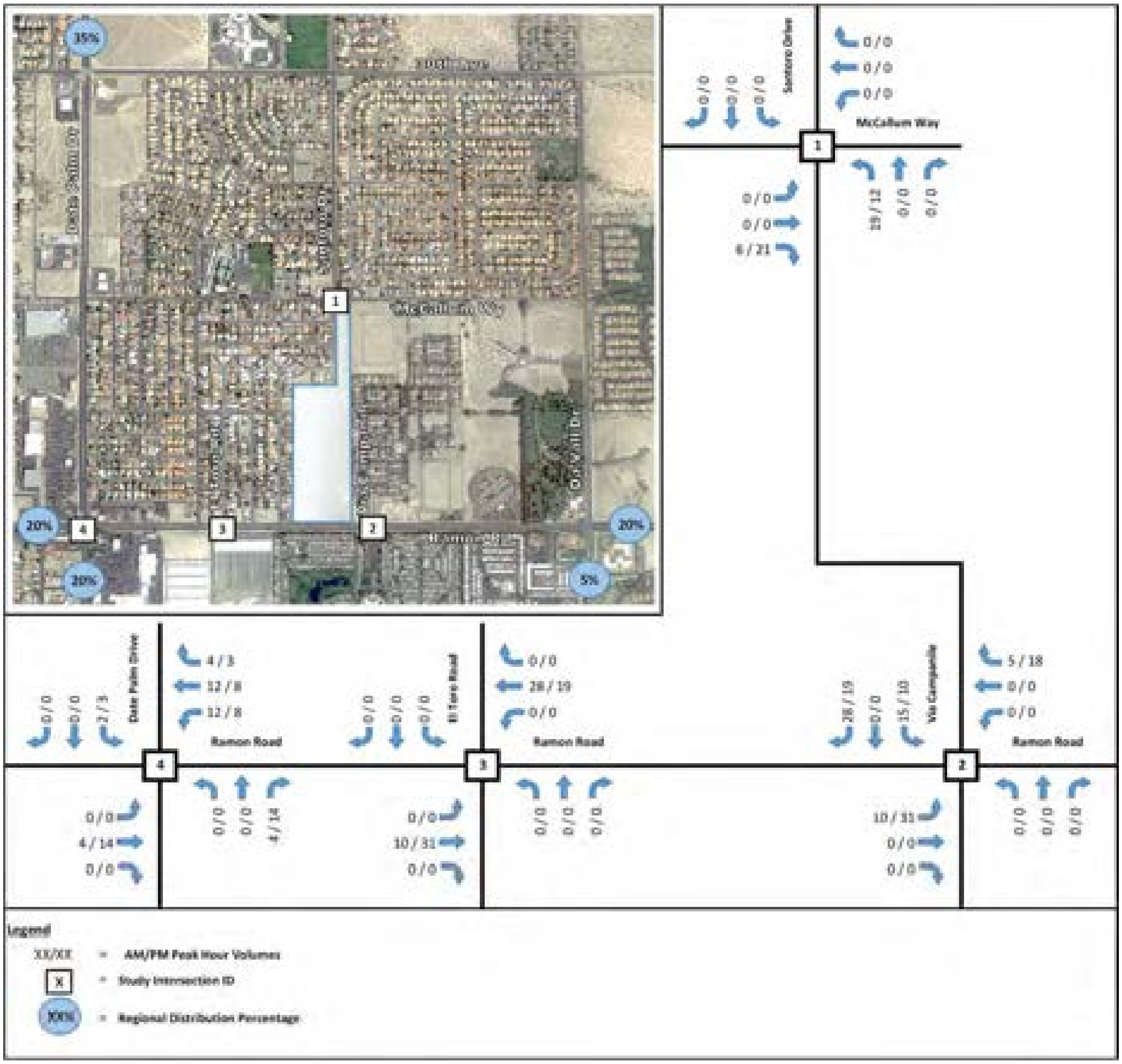
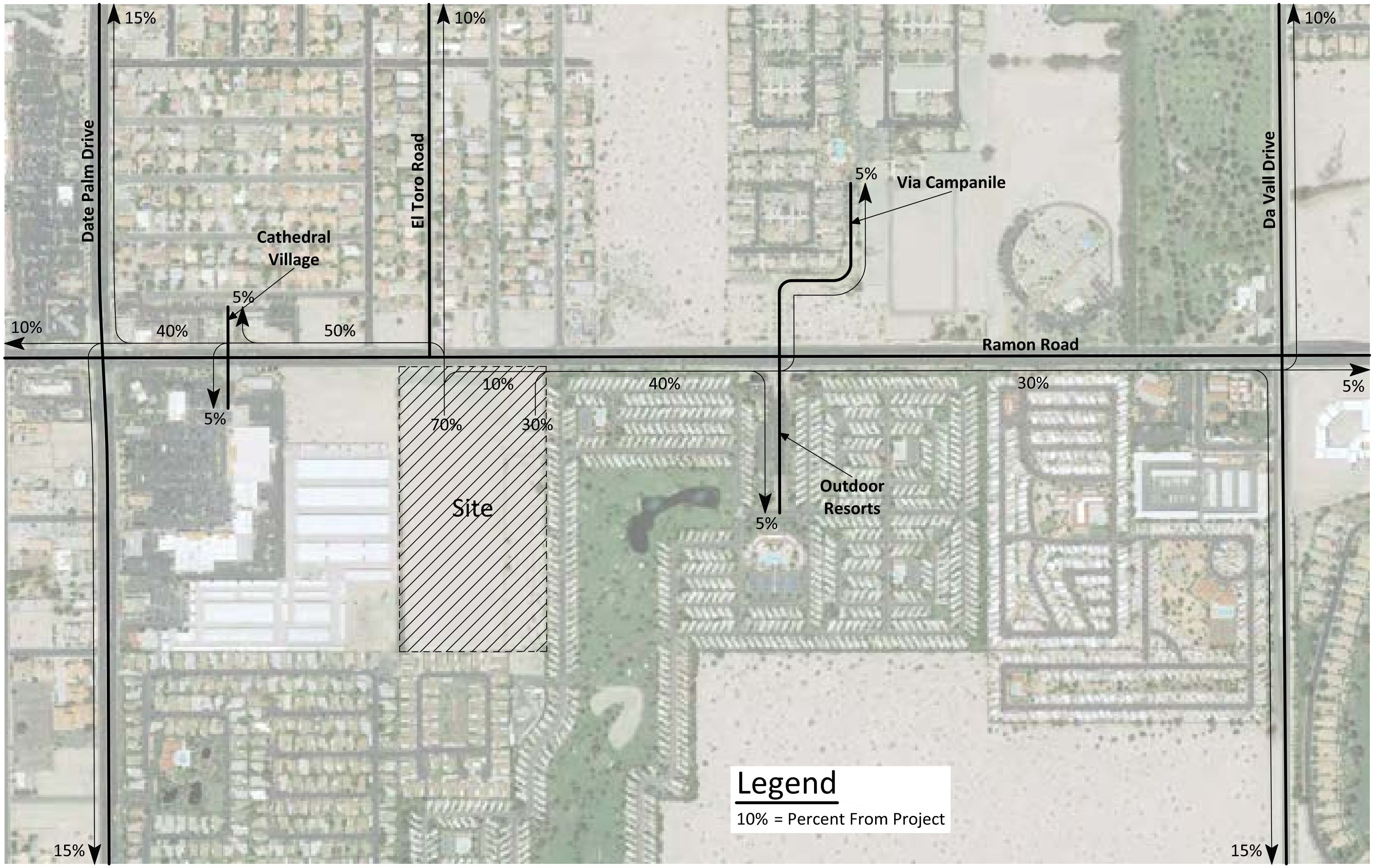


Figure 11
Project Outbound Trip Distribution - Dispensary and Clinic



Kunzman Associates, Inc.

Over 40 Years of Excellent Service

JN 6783c

Figure 12
Project Inbound Trip Distribution - Dispensary and Clinic

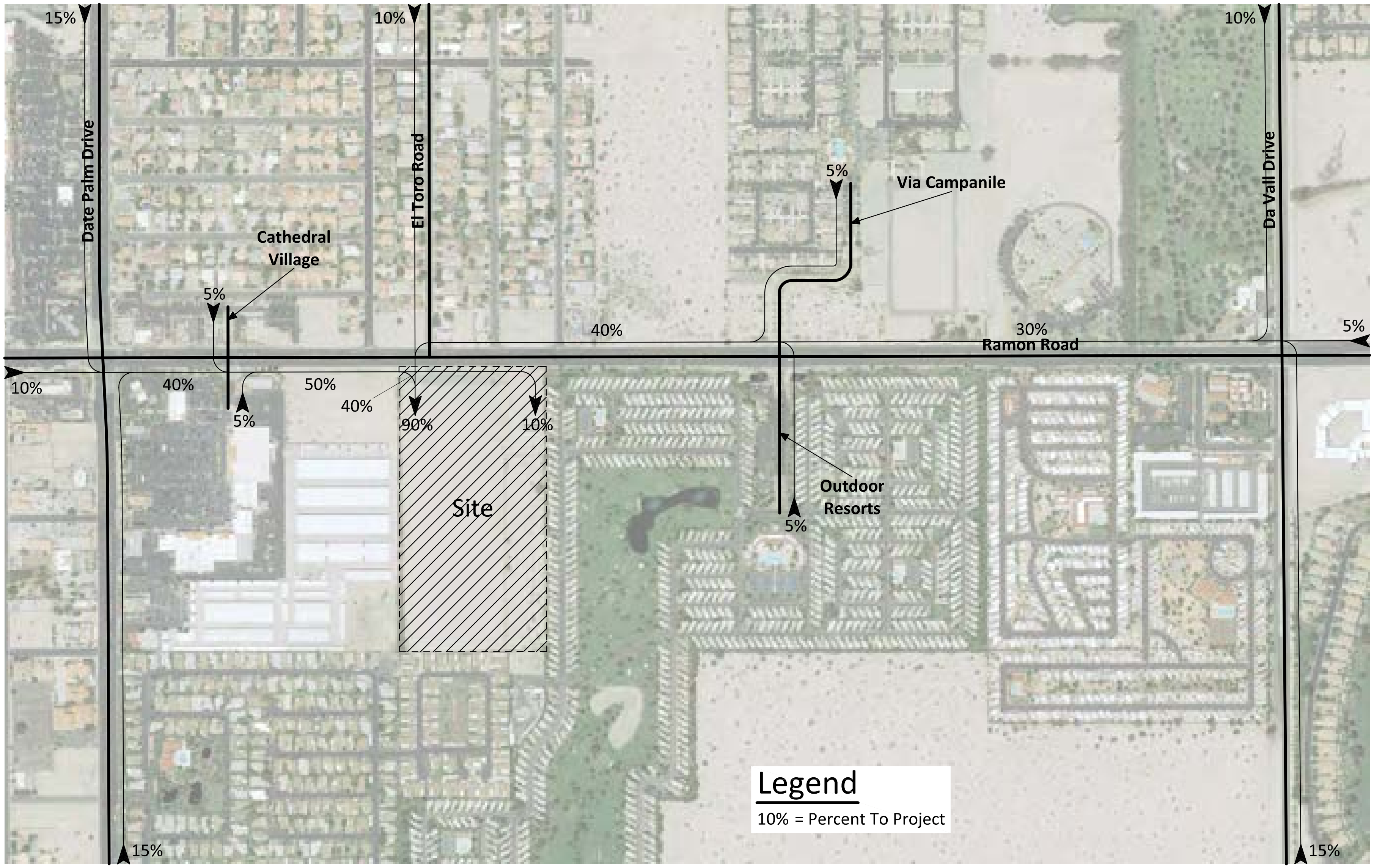


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Figure 13
Project Outbound Trip Distribution - Employees

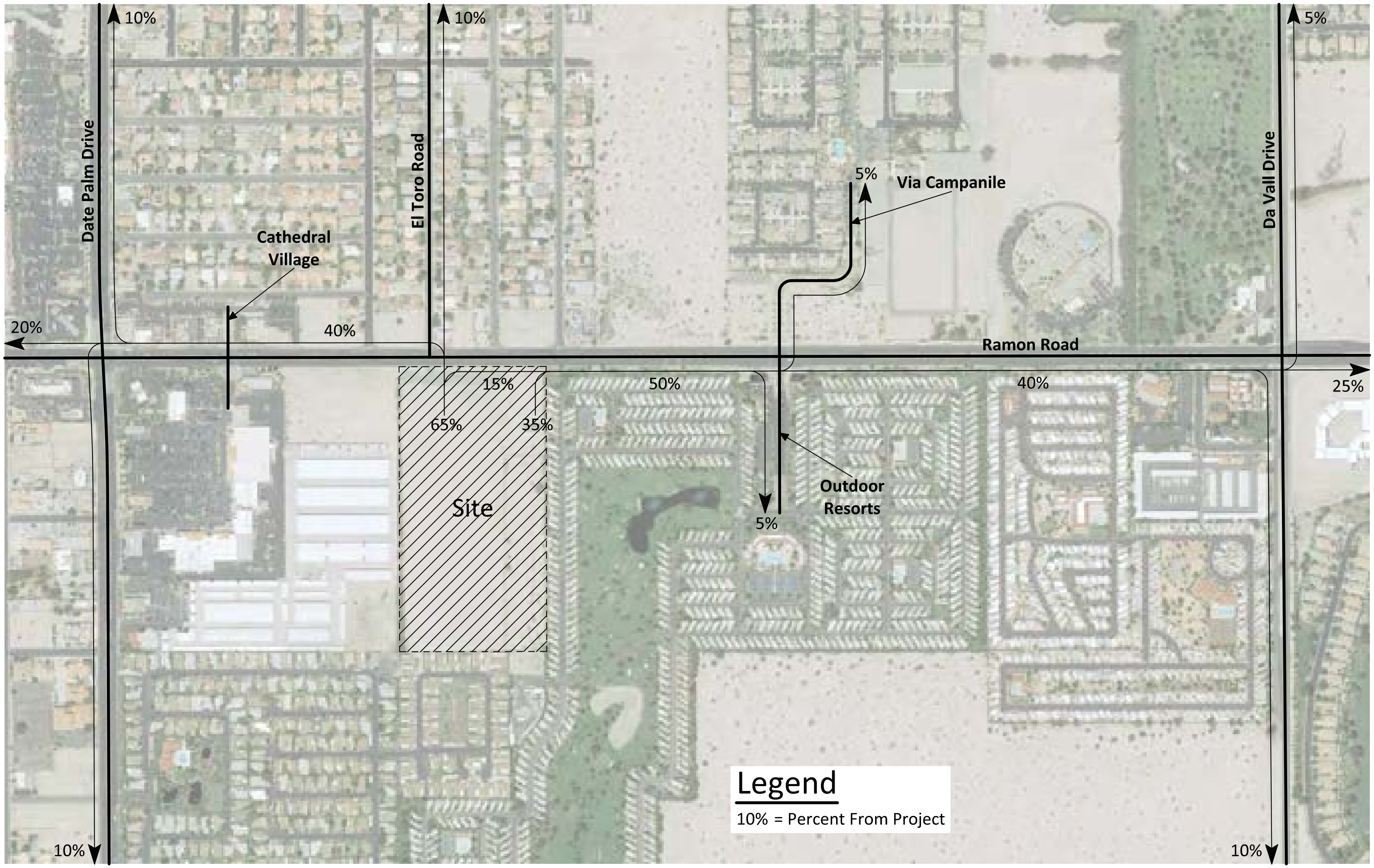

Figure 14
Project Inbound Trip Distribution - Employees

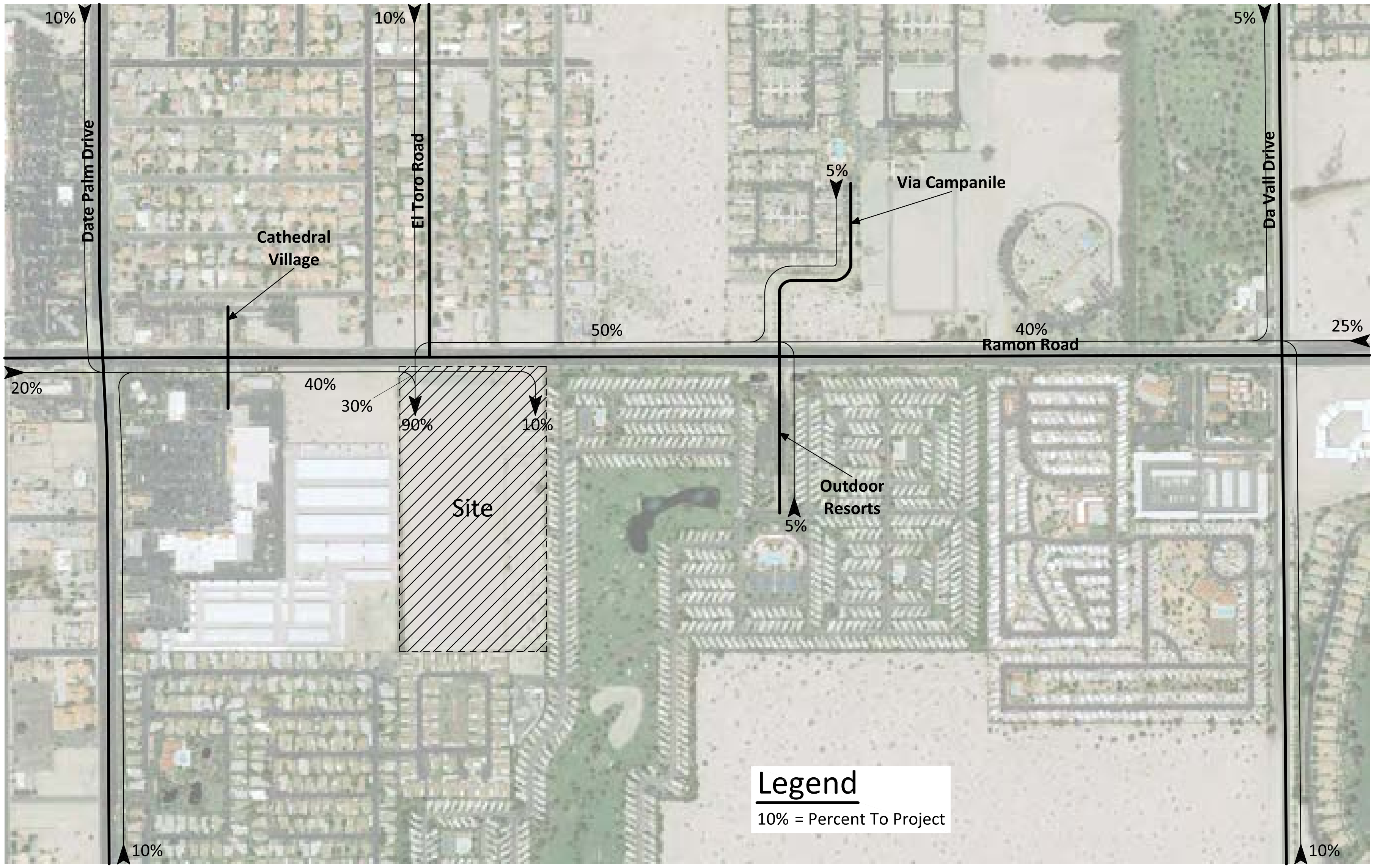

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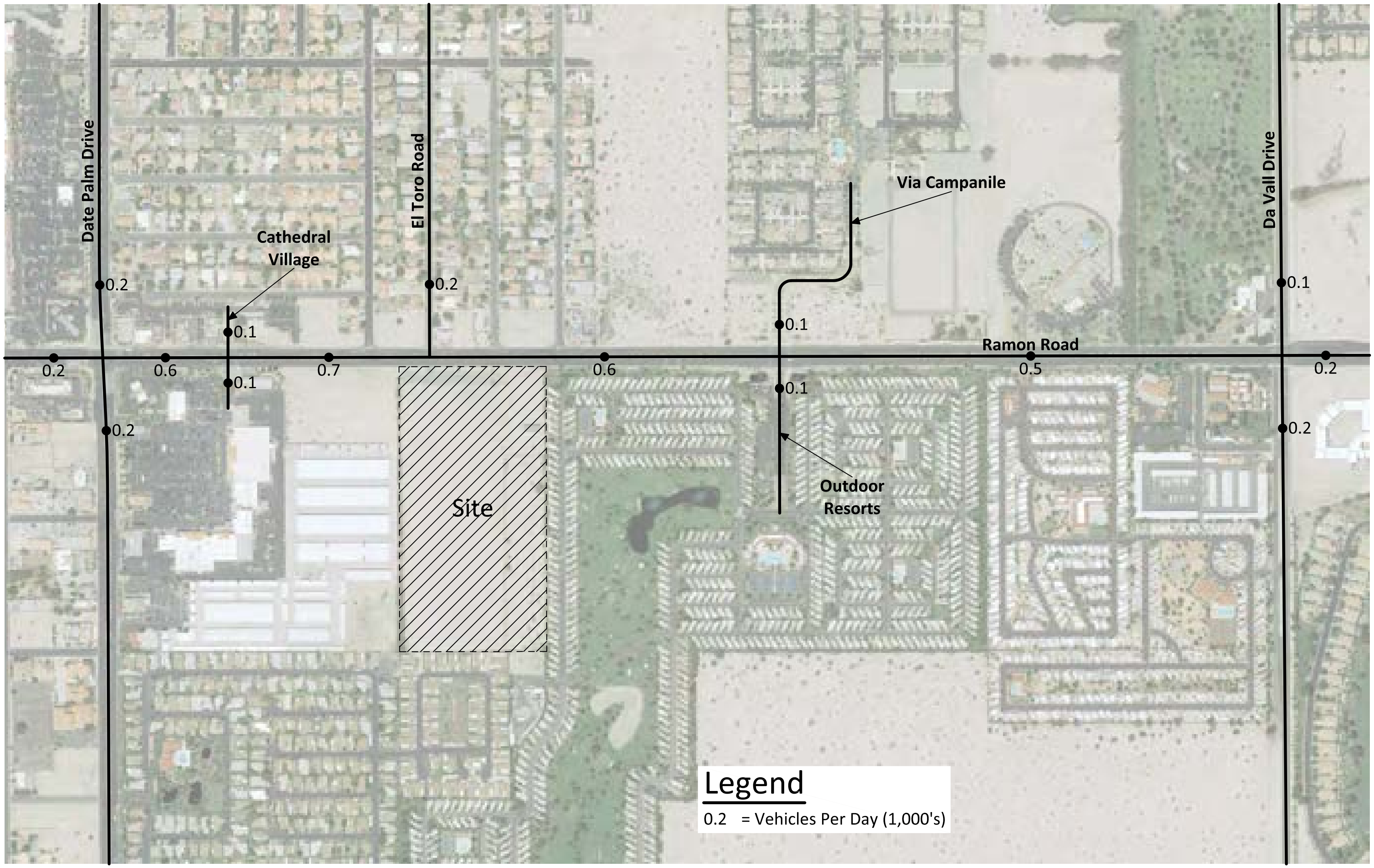
Figure 15
Project Average Daily Traffic Volumes



Kunzman Associates, Inc.

Figure 16
Project Morning Peak Hour Intersection Turning Movement Volumes

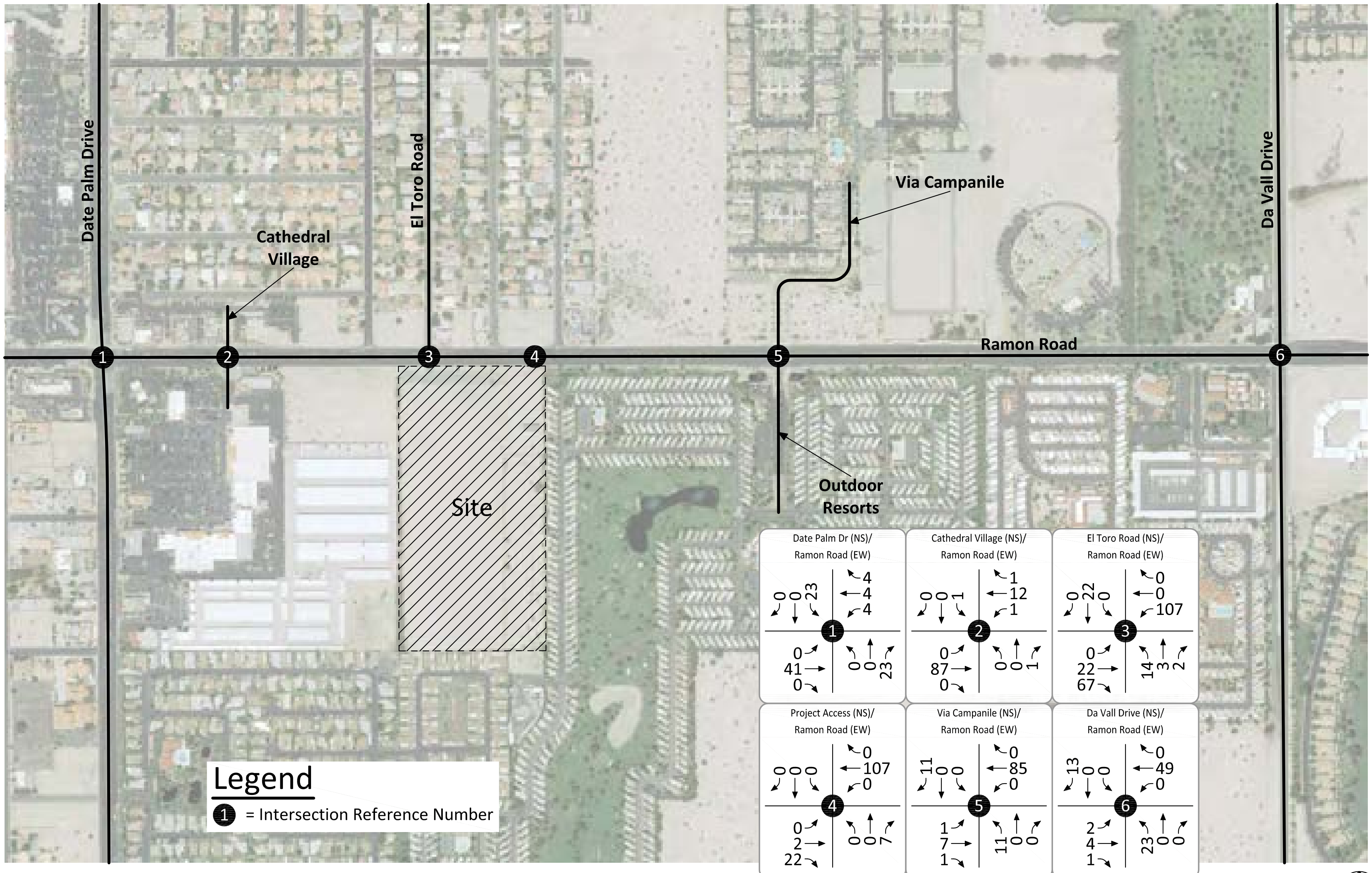


Figure 17
Project Evening Peak Hour Intersection Turning Movement Volumes

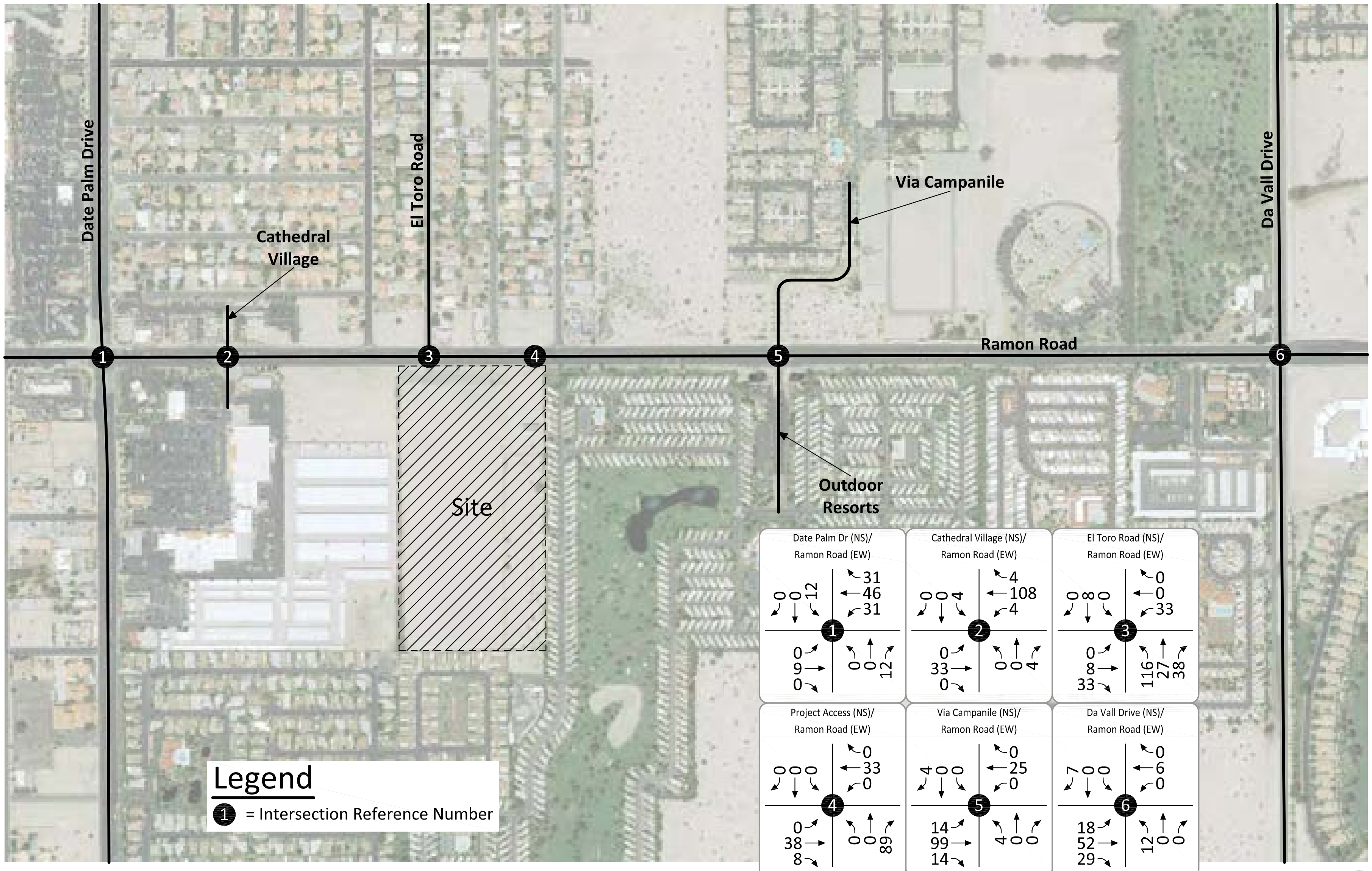


EXHIBIT 4-1: PROJECT NON-RESIDENTIAL TRIP DISTRIBUTION

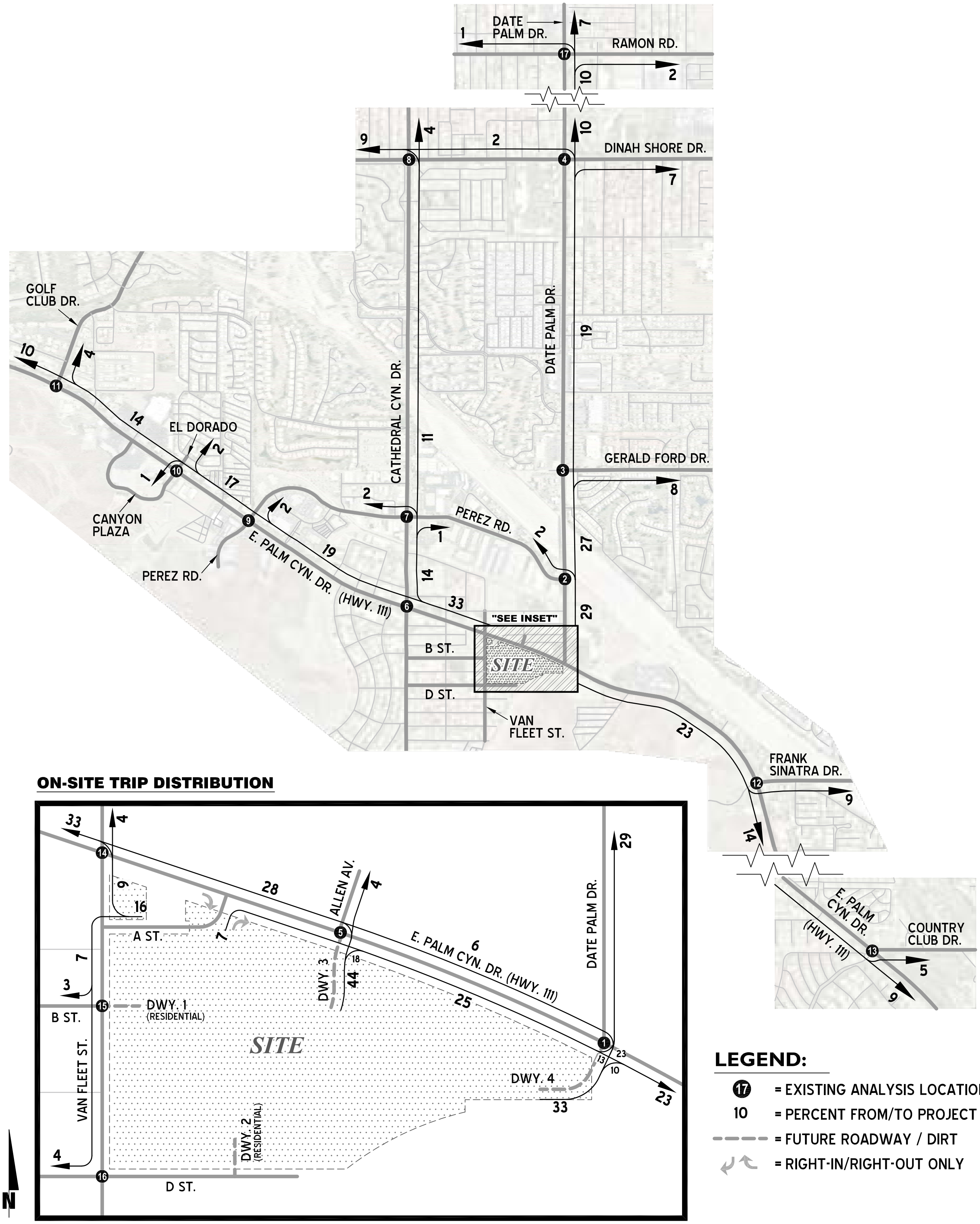
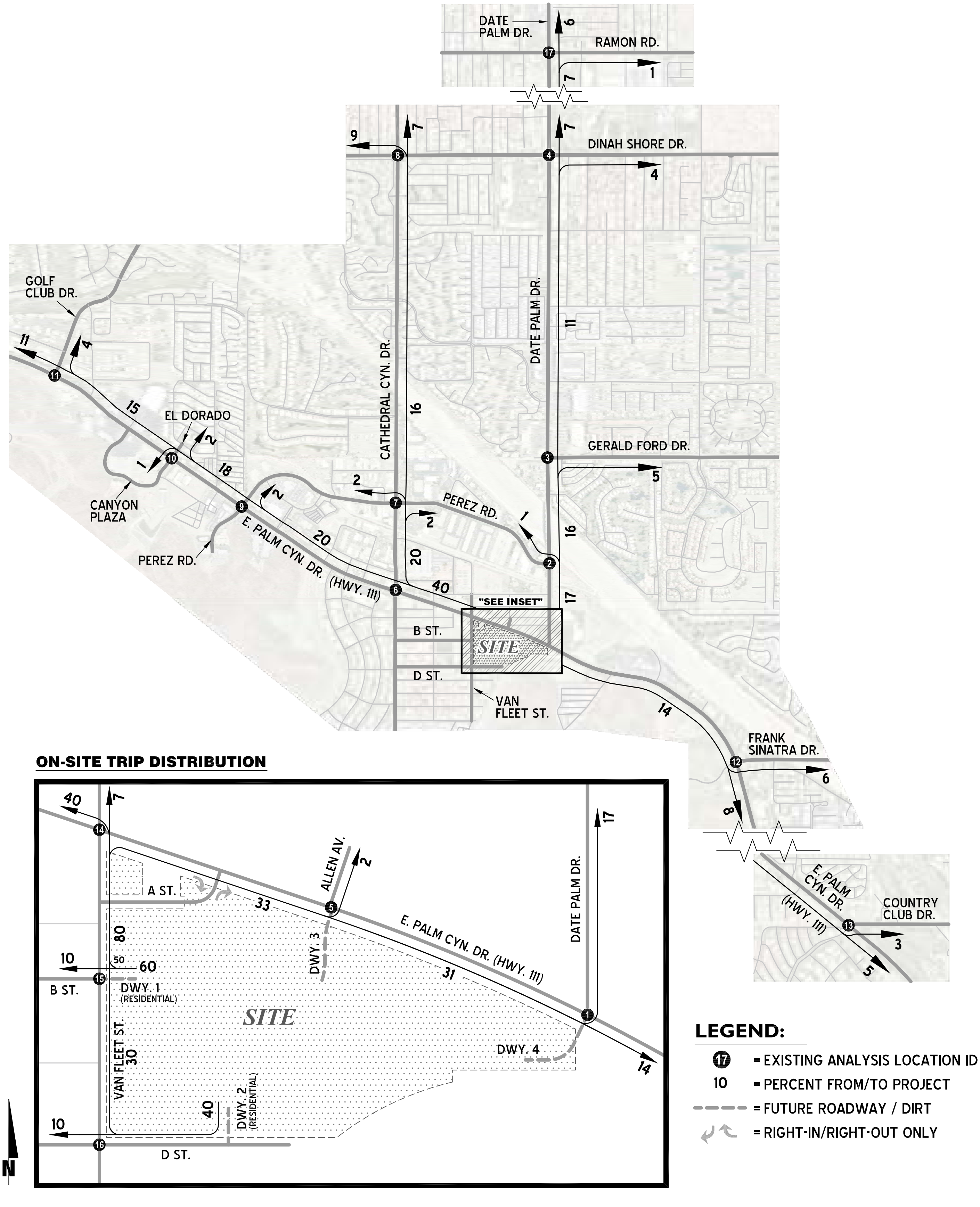


EXHIBIT 4-2: PROJECT RESIDENTIAL TRIP DISTRIBUTION



URBAN CROSSROADS

Legend:

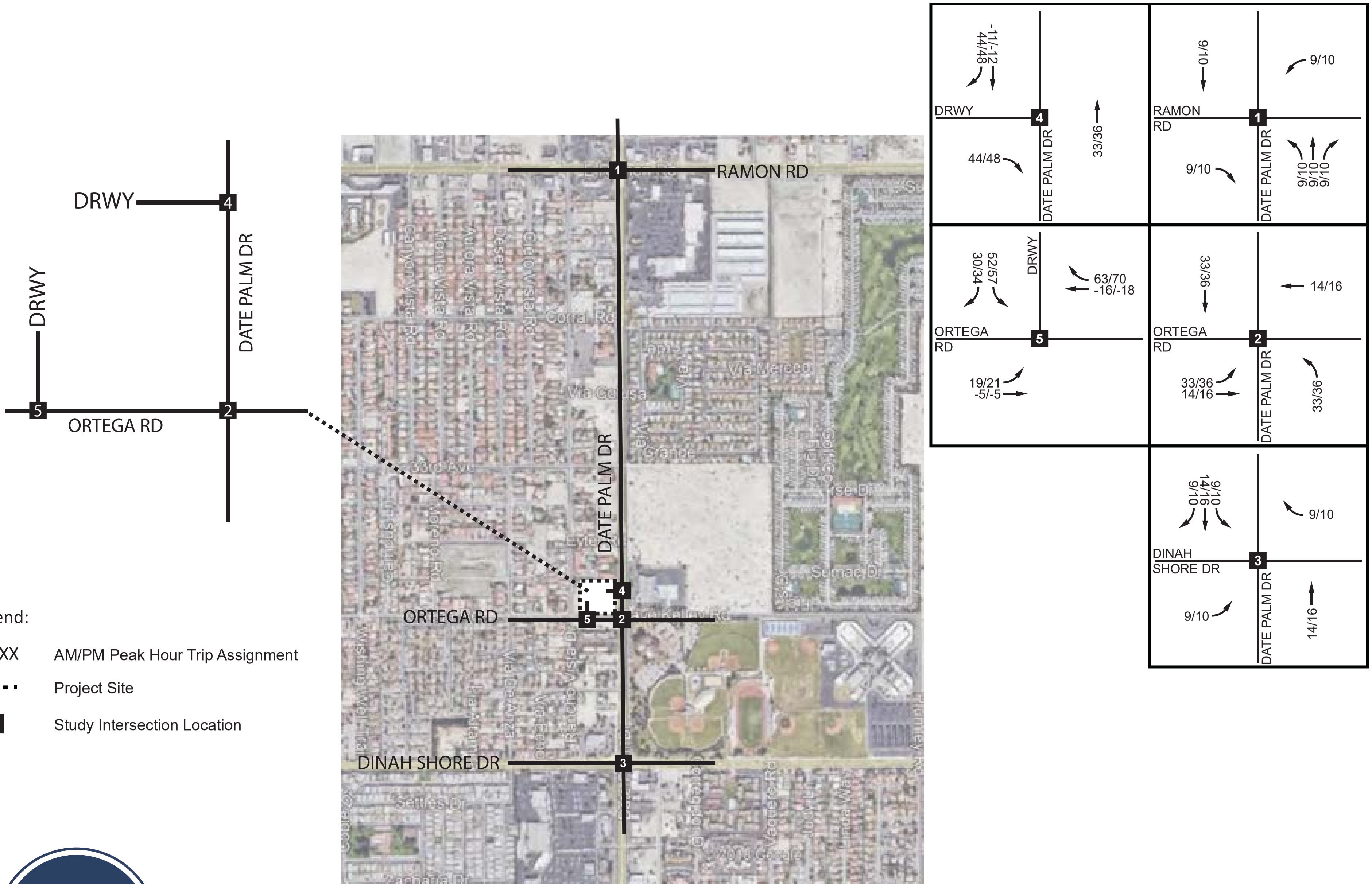
XX%	Percent Trip Distribution (both directions)
[XX%]	[Inbound] Percent Trip Distribution
(XX%)	(Outbound) Percent Trip Distribution
X	Study Intersection Location

TJW ENGINEERING, INC.

Exhibit 5: Projected Trip Distribution of Proposed Project Trips

TEG-19-001 Tower Market Traffic Impact Analysis

Not to Scale



Legend:

XX/XX AM/PM Peak Hour Trip Assignment

Project Site

Study Intersection Location

TJW ENGINEERING, INC.

Exhibit 6: Proposed Project Trip Assignment

TEG-19-001 Tower Market Traffic Impact Analysis

Not to Scale

EXHIBIT 4-3: PROJECT ONLY AM PEAK HOUR INTERSECTION VOLUMES (WITH PASS-BY ADJUSTMENTS)

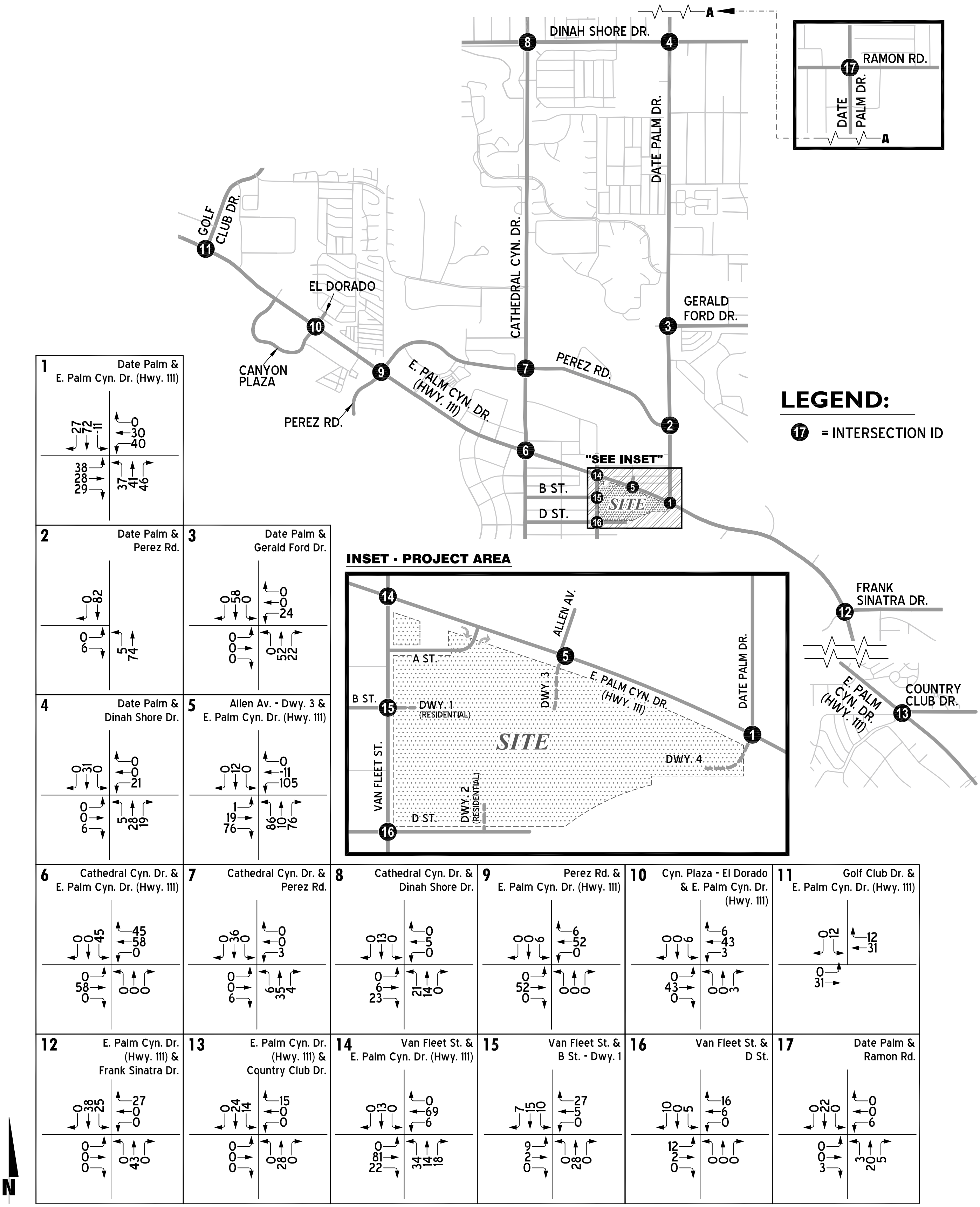


EXHIBIT 4-4: PROJECT ONLY PM PEAK HOUR INTERSECTION VOLUMES (WITH PASS-BY ADJUSTMENTS)

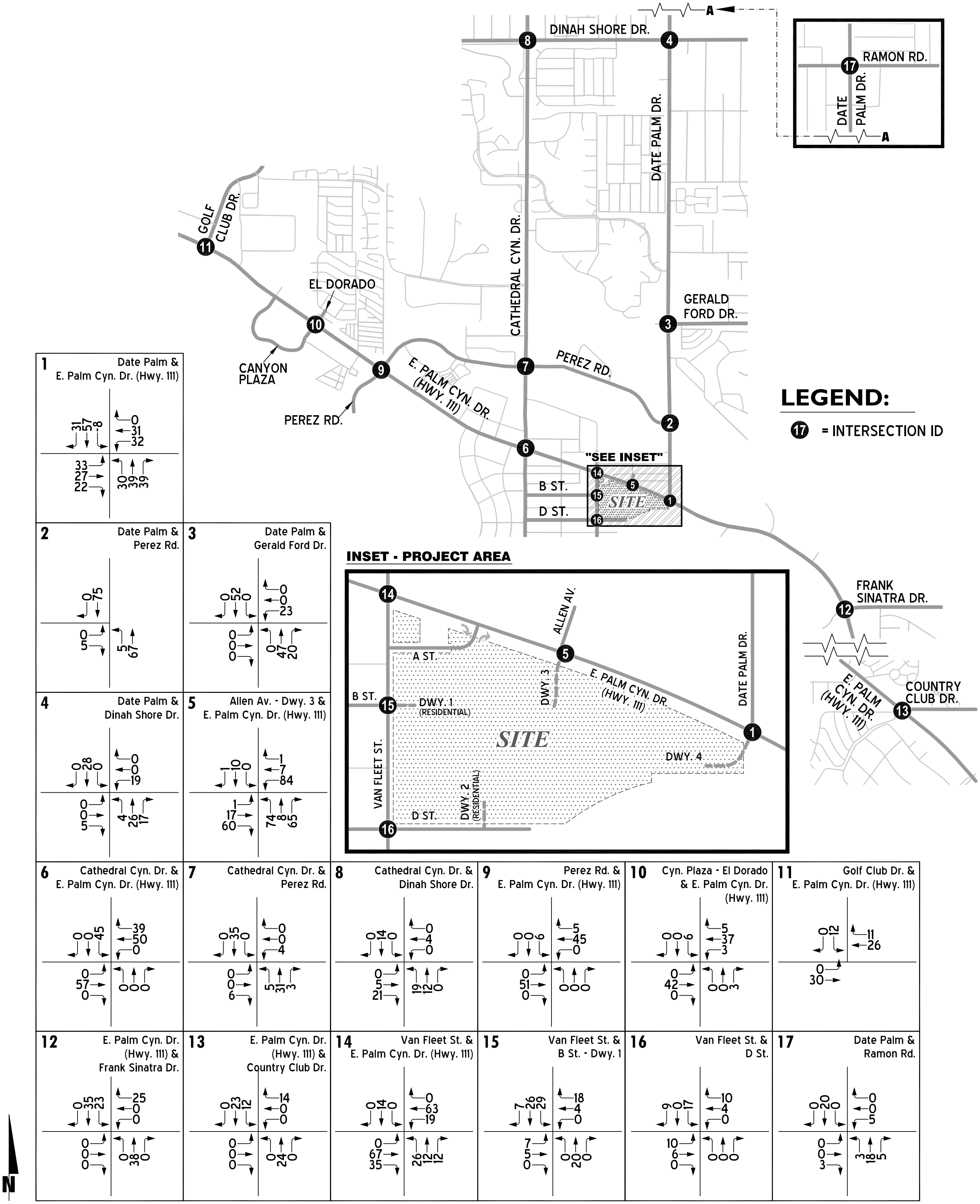


EXHIBIT 4-5: CUMULATIVE DEVELOPMENT MAP

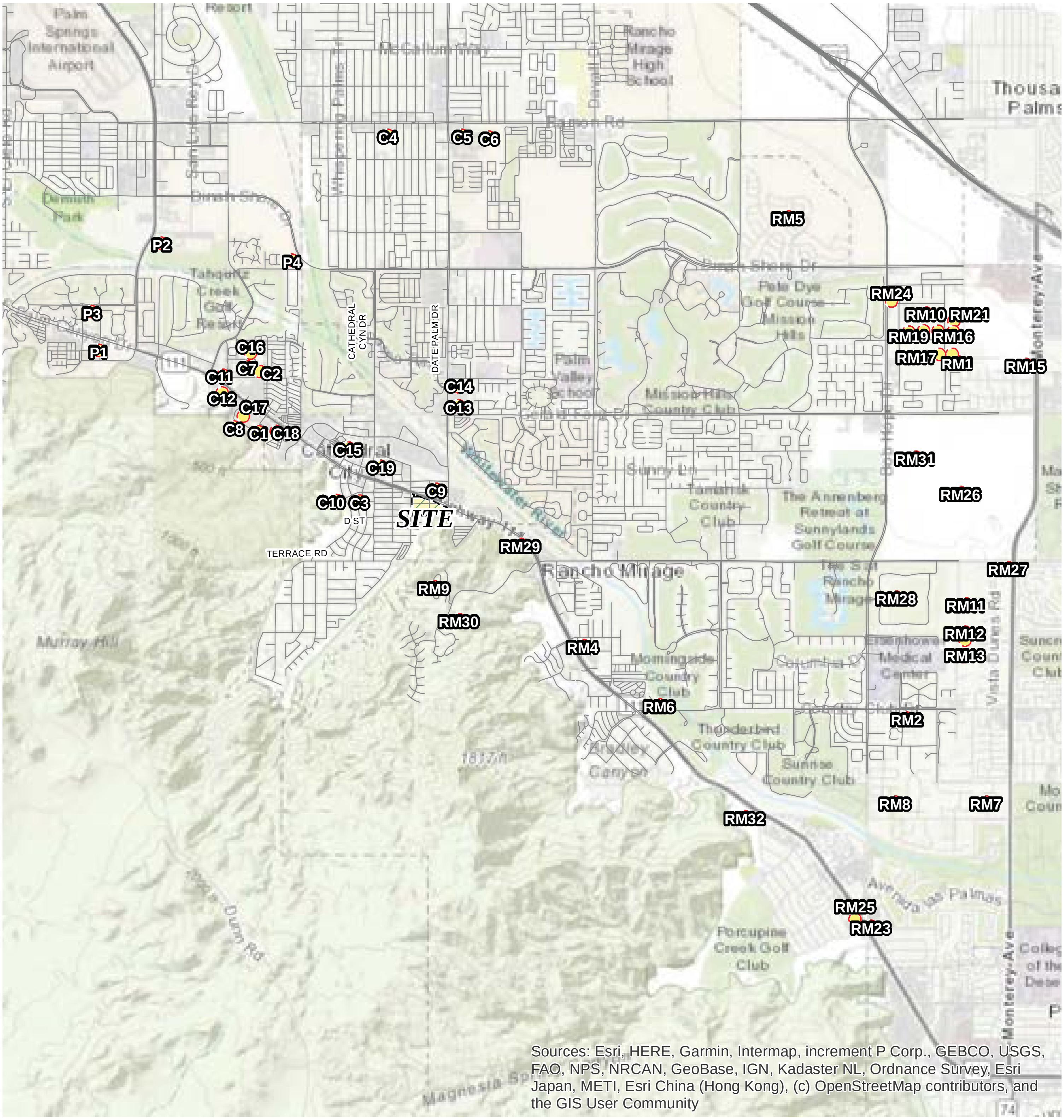
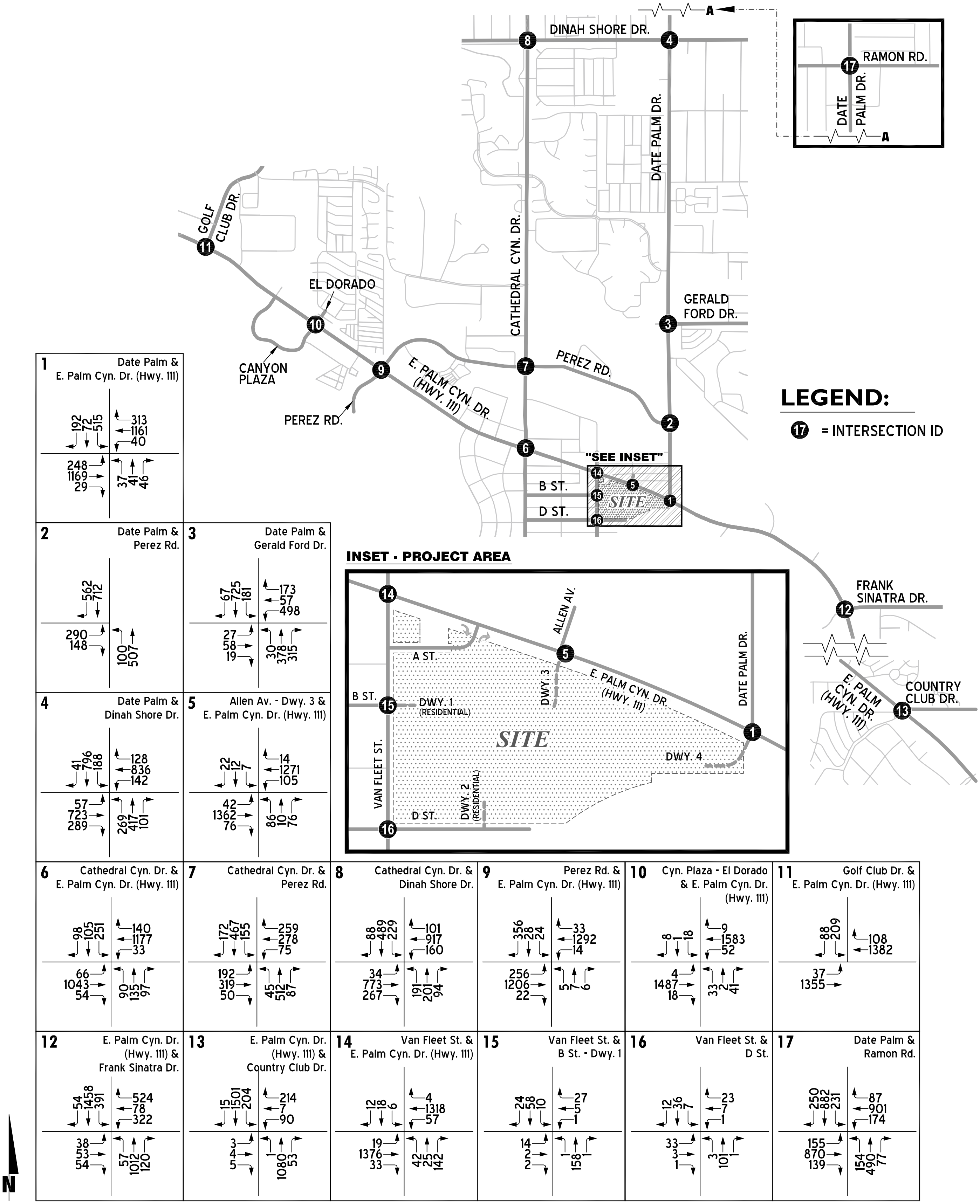
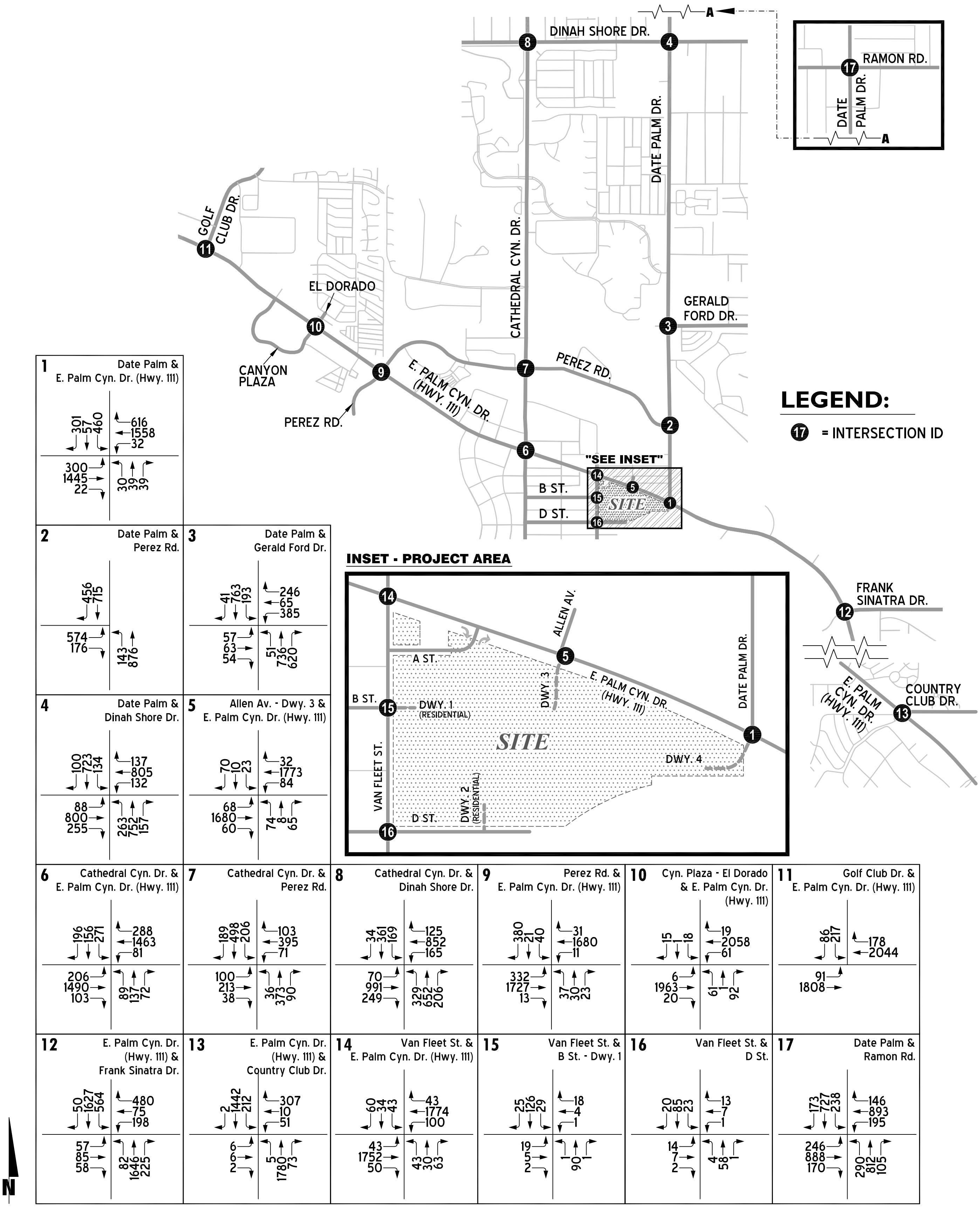


EXHIBIT 6-1: EAPC (2023) AM PEAK HOUR INTERSECTION VOLUMES



URBAN CROSSROADS

EXHIBIT 6-2: EAPC (2023) PM PEAK HOUR INTERSECTION VOLUMES



APPENDIX G -

CUMULATIVE CONDITIONS PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	228	106	67	157	83	46	638	48	112	1137	74
Future Volume (veh/h)	91	228	106	67	157	83	46	638	48	112	1137	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	101	253	118	74	174	92	51	709	53	124	1263	82
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	401	402	188	320	384	203	93	1484	110	160	1680	109
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.05	0.31	0.31	0.09	0.34	0.34
Sat Flow, veh/h	1112	1200	560	1010	1145	605	1781	4844	360	1781	4887	317
Grp Volume(v), veh/h	101	0	371	74	0	266	51	497	265	124	880	465
Grp Sat Flow(s),veh/h/ln	1112	0	1759	1010	0	1750	1781	1702	1800	1781	1702	1801
Q Serve(g_s), s	3.5	0.0	7.9	3.0	0.0	5.3	1.2	5.3	5.4	3.0	10.2	10.2
Cycle Q Clear(g_c), s	8.8	0.0	7.9	10.9	0.0	5.3	1.2	5.3	5.4	3.0	10.2	10.2
Prop In Lane	1.00		0.32	1.00		0.35	1.00		0.20	1.00		0.18
Lane Grp Cap(c), veh/h	401	0	590	320	0	587	93	1043	551	160	1170	619
V/C Ratio(X)	0.25	0.00	0.63	0.23	0.00	0.45	0.55	0.48	0.48	0.77	0.75	0.75
Avail Cap(c_a), veh/h	675	0	1023	569	0	1018	199	1066	564	319	1294	685
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.1	0.0	12.5	17.1	0.0	11.6	20.7	12.6	12.6	19.9	13.0	13.0
Incr Delay (d2), s/veh	0.3	0.0	1.1	0.4	0.0	0.5	4.9	0.3	0.7	7.7	2.3	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	2.8	0.7	0.0	1.8	0.6	1.5	1.7	1.4	3.1	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.4	0.0	13.6	17.5	0.0	12.2	25.5	12.9	13.3	27.7	15.3	17.2
LnGrp LOS	B	A	B	B	A	B	C	B	B	C	B	B
Approach Vol, veh/h		472			340			813			1469	
Approach Delay, s/veh		14.0			13.3			13.8			16.9	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.0	17.7		19.0	6.3	19.4		19.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	8.0	14.0		26.0	5.0	17.0		26.0				
Max Q Clear Time (g_c+I1), s	5.0	7.4		10.8	3.2	12.2		12.9				
Green Ext Time (p_c), s	0.1	2.4		2.6	0.0	3.1		1.7				

Intersection Summary			
HCM 6th Ctrl Delay			15.3
HCM 6th LOS			B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	56	70	74	79	229	98	696	45	169	1129	79
Future Volume (veh/h)	56	56	70	74	79	229	98	696	45	169	1129	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	61	61	76	80	86	249	107	757	49	184	1227	86
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	99	163	204	166	107	311	137	1291	83	230	1539	108
Arrive On Green	0.06	0.22	0.22	0.09	0.25	0.25	0.08	0.26	0.26	0.13	0.32	0.32
Sat Flow, veh/h	1781	757	943	1781	423	1226	1781	4902	316	1781	4872	341
Grp Volume(v), veh/h	61	0	137	80	0	335	107	525	281	184	857	456
Grp Sat Flow(s),veh/h/ln	1781	0	1701	1781	0	1650	1781	1702	1813	1781	1702	1809
Q Serve(g_s), s	1.8	0.0	3.7	2.3	0.0	10.2	3.2	7.2	7.2	5.4	12.3	12.4
Cycle Q Clear(g_c), s	1.8	0.0	3.7	2.3	0.0	10.2	3.2	7.2	7.2	5.4	12.3	12.4
Prop In Lane	1.00		0.55	1.00		0.74	1.00		0.17	1.00		0.19
Lane Grp Cap(c), veh/h	99	0	367	166	0	418	137	896	478	230	1075	571
V/C Ratio(X)	0.62	0.00	0.37	0.48	0.00	0.80	0.78	0.59	0.59	0.80	0.80	0.80
Avail Cap(c_a), veh/h	166	0	666	166	0	646	166	952	507	266	1143	607
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.8	0.0	17.9	23.1	0.0	18.8	24.3	17.2	17.2	22.7	16.8	16.8
Incr Delay (d2), s/veh	6.1	0.0	0.6	2.2	0.0	4.1	17.7	0.8	1.6	13.9	3.8	7.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	1.4	1.0	0.0	3.9	1.9	2.6	2.9	3.0	4.8	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.8	0.0	18.6	25.2	0.0	22.8	42.1	18.0	18.8	36.6	20.6	23.8
LnGrp LOS	C	A	B	C	A	C	D	B	B	D	C	C
Approach Vol, veh/h		198			415			913			1497	
Approach Delay, s/veh		22.3			23.3			21.1			23.5	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.9	18.1	9.0	15.6	8.1	20.9	7.0	17.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	8.0	15.0	5.0	21.0	5.0	18.0	5.0	21.0
Max Q Clear Time (g_c+I1), s	7.4	9.2	4.3	5.7	5.2	14.4	3.8	12.2
Green Ext Time (p_c), s	0.0	2.5	0.0	0.6	0.0	2.6	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	22.7
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	268	135	81	143	167	180	756	40	233	1220	70
Future Volume (veh/h)	105	268	135	81	143	167	180	756	40	233	1220	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	114	291	147	88	155	182	196	822	43	253	1326	76
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	133	441	361	113	419	345	238	1481	77	292	1624	93
Arrive On Green	0.07	0.24	0.24	0.06	0.22	0.22	0.13	0.30	0.30	0.16	0.33	0.33
Sat Flow, veh/h	1781	1870	1532	1781	1870	1537	1781	4968	259	1781	4939	283
Grp Volume(v), veh/h	114	291	147	88	155	182	196	563	302	253	914	488
Grp Sat Flow(s),veh/h/ln	1781	1870	1532	1781	1870	1537	1781	1702	1823	1781	1702	1818
Q Serve(g_s), s	4.2	9.4	5.4	3.3	4.7	7.0	7.2	9.3	9.4	9.3	16.5	16.5
Cycle Q Clear(g_c), s	4.2	9.4	5.4	3.3	4.7	7.0	7.2	9.3	9.4	9.3	16.5	16.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		0.16
Lane Grp Cap(c), veh/h	133	441	361	113	419	345	238	1015	543	292	1120	598
V/C Ratio(X)	0.86	0.66	0.41	0.78	0.37	0.53	0.82	0.55	0.56	0.86	0.82	0.82
Avail Cap(c_a), veh/h	133	726	595	133	726	596	239	1118	599	292	1220	651
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.6	23.2	21.6	30.9	22.0	22.9	28.3	19.8	19.8	27.3	20.6	20.6
Incr Delay (d2), s/veh	39.2	1.7	0.7	21.9	0.5	1.3	20.3	0.5	0.9	22.6	4.1	7.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	3.9	1.8	2.0	1.9	2.4	4.1	3.3	3.6	5.2	5.9	6.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.9	24.9	22.4	52.8	22.5	24.1	48.6	20.3	20.7	49.9	24.8	28.1
LnGrp LOS	E	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		552			425			1061			1655	
Approach Delay, s/veh		33.5			29.5			25.6			29.6	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	24.0	8.2	19.8	12.9	26.0	9.0	19.0				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	11.0	22.0	5.0	26.0	9.0	24.0	5.0	26.0				
Max Q Clear Time (g_c+I1), s	11.3	11.4	5.3	11.4	9.2	18.5	6.2	9.0				
Green Ext Time (p_c), s	0.0	3.8	0.0	1.7	0.0	3.5	0.0	1.2				
Intersection Summary												
HCM 6th Ctrl Delay			29.0									
HCM 6th LOS			C									

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	32	115	46	970	1351	13
Future Vol, veh/h	32	115	46	970	1351	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	119	47	1000	1393	13

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1894	703	1406	0	-	0
Stage 1	1400	-	-	-	-	-
Stage 2	494	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	107	326	248	-	-	-
Stage 1	137	-	-	-	-	-
Stage 2	529	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	87	326	248	-	-	-
Mov Cap-2 Maneuver	87	-	-	-	-	-
Stage 1	111	-	-	-	-	-
Stage 2	529	-	-	-	-	-

Approach	EB		NB		SB	
HCM Control Delay, s	61		1		0	
HCM LOS	F					

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	248	-	204	-	-
HCM Lane V/C Ratio	0.191	-	0.743	-	-
HCM Control Delay (s)	22.9	-	61	-	-
HCM Lane LOS	C	-	F	-	-
HCM 95th %tile Q(veh)	0.7	-	4.9	-	-

Intersection						
Int Delay, s/veh	0.1					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	23	811	13	0	1306
Future Vol, veh/h	0	23	811	13	0	1306
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	25	882	14	0	1420

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	448	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	477	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	477	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	477	-
HCM Lane V/C Ratio	-	-	0.052	-
HCM Control Delay (s)	-	-	13	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.2	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	374	0	0	298	6	0	0	0	4	0	8
Future Vol, veh/h	13	374	0	0	298	6	0	0	0	4	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	407	0	0	324	7	0	0	0	4	0	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	331	0	0	407	0	0	767	766	407	763	763	328
Stage 1	-	-	-	-	-	-	435	435	-	328	328	-
Stage 2	-	-	-	-	-	-	332	331	-	435	435	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1228	-	-	1152	-	-	319	333	644	321	334	713
Stage 1	-	-	-	-	-	-	600	580	-	685	647	-
Stage 2	-	-	-	-	-	-	681	645	-	600	580	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1228	-	-	1152	-	-	311	328	644	317	329	713
Mov Cap-2 Maneuver	-	-	-	-	-	-	311	328	-	317	329	-
Stage 1	-	-	-	-	-	-	591	571	-	675	647	-
Stage 2	-	-	-	-	-	-	673	645	-	591	571	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	0	12.3
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1228	-	-	1152	-	-	503
HCM Lane V/C Ratio	-	0.012	-	-	-	-	-	0.026
HCM Control Delay (s)	0	8	0	-	0	-	-	12.3
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	141	82	79	161	81	94	1238	71	95	965	84
Future Volume (veh/h)	126	141	82	79	161	81	94	1238	71	95	965	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	140	157	91	88	179	90	104	1376	79	106	1072	93
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	377	359	208	393	380	191	140	1688	97	141	1635	142
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.08	0.34	0.34	0.08	0.34	0.34
Sat Flow, veh/h	1109	1104	640	1130	1167	587	1781	4936	283	1781	4770	413
Grp Volume(v), veh/h	140	0	248	88	0	269	104	949	506	106	765	400
Grp Sat Flow(s),veh/h/ln	1109	0	1743	1130	0	1754	1781	1702	1815	1781	1702	1780
Q Serve(g_s), s	5.5	0.0	5.3	3.1	0.0	5.8	2.7	12.1	12.1	2.8	9.0	9.1
Cycle Q Clear(g_c), s	11.3	0.0	5.3	8.5	0.0	5.8	2.7	12.1	12.1	2.8	9.0	9.1
Prop In Lane	1.00		0.37	1.00		0.33	1.00		0.16	1.00		0.23
Lane Grp Cap(c), veh/h	377	0	568	393	0	571	140	1164	621	141	1167	610
V/C Ratio(X)	0.37	0.00	0.44	0.22	0.00	0.47	0.74	0.82	0.82	0.75	0.66	0.66
Avail Cap(c_a), veh/h	624	0	956	645	0	962	225	1220	651	188	1167	610
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.2	0.0	12.6	15.9	0.0	12.7	21.4	14.2	14.2	21.4	13.2	13.2
Incr Delay (d2), s/veh	0.6	0.0	0.5	0.3	0.0	0.6	7.5	4.2	7.6	11.0	1.3	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	1.9	0.8	0.0	2.1	1.2	4.0	4.9	1.4	2.7	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.8	0.0	13.1	16.2	0.0	13.3	28.9	18.5	21.9	32.4	14.5	15.8
LnGrp LOS	B	A	B	B	A	B	C	B	C	C	B	B
Approach Vol, veh/h		388			357			1559			1271	
Approach Delay, s/veh		14.8			14.0			20.3			16.4	
Approach LOS		B			B			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.8	20.2		19.4	7.7	20.3		19.4				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	5.0	17.0		26.0	6.0	16.0		26.0				
Max Q Clear Time (g_c+I1), s	4.8	14.1		13.3	4.7	11.1		10.5				
Green Ext Time (p_c), s	0.0	2.2		1.8	0.0	2.9		1.8				

Intersection Summary			
HCM 6th Ctrl Delay			17.7
HCM 6th LOS			B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	71	89	89	66	308	83	1350	55	285	870	66
Future Volume (veh/h)	71	71	89	89	66	308	83	1350	55	285	870	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	77	77	97	97	72	335	90	1467	60	310	946	72
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	99	171	216	123	69	323	116	1640	67	346	2203	167
Arrive On Green	0.06	0.23	0.23	0.07	0.24	0.24	0.07	0.33	0.33	0.19	0.46	0.46
Sat Flow, veh/h	1781	752	948	1781	288	1341	1781	5032	206	1781	4841	368
Grp Volume(v), veh/h	77	0	174	97	0	407	90	992	535	310	665	353
Grp Sat Flow(s),veh/h/ln	1781	0	1700	1781	0	1629	1781	1702	1833	1781	1702	1804
Q Serve(g_s), s	3.7	0.0	7.7	4.7	0.0	21.0	4.3	24.2	24.2	14.8	11.5	11.6
Cycle Q Clear(g_c), s	3.7	0.0	7.7	4.7	0.0	21.0	4.3	24.2	24.2	14.8	11.5	11.6
Prop In Lane	1.00		0.56	1.00		0.82	1.00		0.11	1.00		0.20
Lane Grp Cap(c), veh/h	99	0	387	123	0	392	116	1110	598	346	1549	821
V/C Ratio(X)	0.78	0.00	0.45	0.79	0.00	1.04	0.78	0.89	0.89	0.90	0.43	0.43
Avail Cap(c_a), veh/h	123	0	409	123	0	392	204	1132	610	368	1549	821
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.6	0.0	29.0	40.0	0.0	33.1	40.1	28.0	28.0	34.3	16.1	16.1
Incr Delay (d2), s/veh	21.9	0.0	0.8	28.7	0.0	55.4	10.6	9.3	15.5	22.8	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	3.2	3.0	0.0	14.0	2.2	10.8	12.7	8.4	4.3	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.6	0.0	29.8	68.6	0.0	88.4	50.7	37.2	43.5	57.1	16.3	16.5
LnGrp LOS	E	A	C	E	A	F	D	D	D	E	B	B
Approach Vol, veh/h		251			504			1617			1328	
Approach Delay, s/veh		39.8			84.6			40.0			25.8	
Approach LOS		D			F			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.9	32.4	10.0	23.8	9.7	43.7	8.8	25.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	18.0	29.0	6.0	21.0	10.0	37.0	6.0	21.0
Max Q Clear Time (g_c+I1), s	16.8	26.2	6.7	9.7	6.3	13.6	5.7	23.0
Green Ext Time (p_c), s	0.1	2.2	0.0	0.7	0.1	7.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	41.0
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	142	137	41	132	148	326	1321	39	32	1052	106
Future Volume (veh/h)	94	142	137	41	132	148	326	1321	39	32	1052	106
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	102	154	149	45	143	161	354	1436	42	35	1143	115
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	130	409	335	73	349	286	400	2463	72	62	1383	139
Arrive On Green	0.07	0.22	0.22	0.04	0.19	0.19	0.22	0.48	0.48	0.03	0.29	0.29
Sat Flow, veh/h	1781	1870	1530	1781	1870	1531	1781	5098	149	1781	4713	474
Grp Volume(v), veh/h	102	154	149	45	143	161	354	959	519	35	825	433
Grp Sat Flow(s),veh/h/ln	1781	1870	1530	1781	1870	1531	1781	1702	1843	1781	1702	1783
Q Serve(g_s), s	4.1	5.1	6.1	1.8	4.9	6.9	13.9	14.6	14.6	1.4	16.3	16.3
Cycle Q Clear(g_c), s	4.1	5.1	6.1	1.8	4.9	6.9	13.9	14.6	14.6	1.4	16.3	16.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.08	1.00		0.27
Lane Grp Cap(c), veh/h	130	409	335	73	349	286	400	1645	891	62	999	523
V/C Ratio(X)	0.78	0.38	0.45	0.61	0.41	0.56	0.88	0.58	0.58	0.56	0.83	0.83
Avail Cap(c_a), veh/h	148	674	551	148	674	552	469	1699	920	148	1086	569
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.9	24.0	24.4	34.0	25.8	26.6	27.1	13.4	13.4	34.3	23.8	23.8
Incr Delay (d2), s/veh	21.0	0.6	0.9	8.0	0.8	1.7	16.2	0.5	0.9	7.7	5.0	9.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	2.1	2.1	0.9	2.0	2.4	7.1	4.6	5.1	0.7	6.2	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.8	24.6	25.3	42.0	26.6	28.4	43.2	13.9	14.3	42.0	28.8	32.9
LnGrp LOS	D	C	C	D	C	C	D	B	B	D	C	C
Approach Vol, veh/h		405			349			1832			1293	
Approach Delay, s/veh		32.2			29.4			19.7			30.5	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.5	38.8	7.0	19.8	20.2	25.2	9.3	17.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	36.0	6.0	26.0	19.0	23.0	6.0	26.0
Max Q Clear Time (g_c+I1), s	3.4	16.6	3.8	8.1	15.9	18.3	6.1	8.9
Green Ext Time (p_c), s	0.0	9.3	0.0	1.1	0.3	2.8	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	25.5
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	26	73	97	1379	1154	55
Future Vol, veh/h	26	73	97	1379	1154	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	75	100	1422	1190	57

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1988	624	1247	0	-	0
Stage 1	1219	-	-	-	-	-
Stage 2	769	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	95	367	297	-	-	-
Stage 1	177	-	-	-	-	-
Stage 2	379	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	63	367	297	-	-	-
Mov Cap-2 Maneuver	63	-	-	-	-	-
Stage 1	117	-	-	-	-	-
Stage 2	379	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	59	1.5	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	297	-	162	-	-
HCM Lane V/C Ratio	0.337	-	0.63	-	-
HCM Control Delay (s)	23.2	-	59	-	-
HCM Lane LOS	C	-	F	-	-
HCM 95th %tile Q(veh)	1.4	-	3.5	-	-

Intersection						
Int Delay, s/veh	0.8					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	87	1416	27	0	1150
Future Vol, veh/h	0	87	1416	27	0	1150
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	95	1539	29	0	1250

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	784	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	288	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	288	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.5	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	288	-
HCM Lane V/C Ratio	-	-	0.328	-
HCM Control Delay (s)	-	-	23.5	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	1.4	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	27	290	0	0	303	13	0	0	0	14	0	29
Future Vol, veh/h	27	290	0	0	303	13	0	0	0	14	0	29
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	29	315	0	0	329	14	0	0	0	15	0	32

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	343	0	0	315	0	0	725	716	315	709	709	336
Stage 1	-	-	-	-	-	-	373	373	-	336	336	-
Stage 2	-	-	-	-	-	-	352	343	-	373	373	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1216	-	-	1245	-	-	340	356	725	349	359	706
Stage 1	-	-	-	-	-	-	648	618	-	678	642	-
Stage 2	-	-	-	-	-	-	665	637	-	648	618	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1216	-	-	1245	-	-	318	346	725	341	349	706
Mov Cap-2 Maneuver	-	-	-	-	-	-	318	346	-	341	349	-
Stage 1	-	-	-	-	-	-	629	600	-	658	642	-
Stage 2	-	-	-	-	-	-	635	637	-	629	600	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0	0	12.5
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1216	-	-	1245	-	-	524
HCM Lane V/C Ratio	-	0.024	-	-	-	-	-	0.089
HCM Control Delay (s)	0	8	0	-	0	-	-	12.5
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0.1	-	-	0	-	-	0.3

APPENDIX H -

WITH IMPROVEMENTS PEAK HOUR ANALYSIS AND SIGNAL WARRANT WORKSHEETS

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	32	115	46	814	1193	13
Future Volume (veh/h)	32	115	46	814	1193	13
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	33	119	47	839	1230	13
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	43	156	96	3121	2213	23
Arrive On Green	0.12	0.12	0.05	0.61	0.42	0.42
Sat Flow, veh/h	351	1264	1781	5274	5378	55
Grp Volume(v), veh/h	153	0	47	839	804	439
Grp Sat Flow(s),veh/h/ln	1625	0	1781	1702	1702	1860
Q Serve(g_s), s	2.7	0.0	0.8	2.3	5.4	5.4
Cycle Q Clear(g_c), s	2.7	0.0	0.8	2.3	5.4	5.4
Prop In Lane	0.22	0.78	1.00			0.03
Lane Grp Cap(c), veh/h	201	0	96	3121	1446	790
V/C Ratio(X)	0.76	0.00	0.49	0.27	0.56	0.56
Avail Cap(c_a), veh/h	1292	0	295	4735	2142	1171
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.8	0.0	13.9	2.7	6.5	6.5
Incr Delay (d2), s/veh	5.8	0.0	3.8	0.0	0.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	0.3	0.0	0.5	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.6	0.0	17.7	2.8	6.9	7.2
LnGrp LOS	B	A	B	A	A	A
Approach Vol, veh/h	153			886	1243	
Approach Delay, s/veh	18.6			3.6	7.0	
Approach LOS	B			A	A	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		22.5		7.7	5.6	16.8
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		28.0		24.0	5.0	19.0
Max Q Clear Time (g_c+I1), s		4.3		4.7	2.8	7.4
Green Ext Time (p_c), s		5.2		0.4	0.0	5.5

Intersection Summary		
HCM 6th Ctrl Delay		6.4
HCM 6th LOS		A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	26	73	97	1156	914	55
Future Volume (veh/h)	26	73	97	1156	914	55
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	74	99	1180	933	56
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	43	117	172	3109	1803	108
Arrive On Green	0.10	0.10	0.10	0.61	0.37	0.37
Sat Flow, veh/h	433	1186	1781	5274	5095	295
Grp Volume(v), veh/h	102	0	99	1180	644	345
Grp Sat Flow(s),veh/h/ln	1635	0	1781	1702	1702	1817
Q Serve(g_s), s	1.6	0.0	1.5	3.2	4.0	4.1
Cycle Q Clear(g_c), s	1.6	0.0	1.5	3.2	4.0	4.1
Prop In Lane	0.26	0.73	1.00			0.16
Lane Grp Cap(c), veh/h	161	0	172	3109	1246	665
V/C Ratio(X)	0.63	0.00	0.58	0.38	0.52	0.52
Avail Cap(c_a), veh/h	1435	0	521	5228	1992	1063
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.9	0.0	11.8	2.7	6.8	6.8
Incr Delay (d2), s/veh	4.1	0.0	3.0	0.1	0.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.4	0.0	0.4	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	15.9	0.0	14.8	2.8	7.1	7.4
LnGrp LOS	B	A	B	A	A	A
Approach Vol, veh/h	102			1279	989	
Approach Delay, s/veh	15.9			3.7	7.2	
Approach LOS	B			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		20.7		6.7	6.6	14.0
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		28.0		24.0	8.0	16.0
Max Q Clear Time (g_c+I1), s		5.2		3.6	3.5	6.1
Green Ext Time (p_c), s		7.7		0.3	0.1	3.9

Intersection Summary			
HCM 6th Ctrl Delay			5.7
HCM 6th LOS			A

Notes

User approved volume balancing among the lanes for turning movement.

WARRANT 3 - PEAK HOUR

(Part A or Part B must be satisfied) SATISFIED ☑ YES ☐ NO

Part A

SATISFIED ☐ YES ☑ NO

(All parts 1, 2, and 3 below must be satisfied for the same

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for one-lane approach, or five vehicle-hours for a two-lane approach; <u>AND</u>	☐ YES ☑ NO
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; <u>AND</u>	☑ YES ☐ NO
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches	☑ YES ☐ NO

Part B

SATISFIED ☑ YES ☐ NO

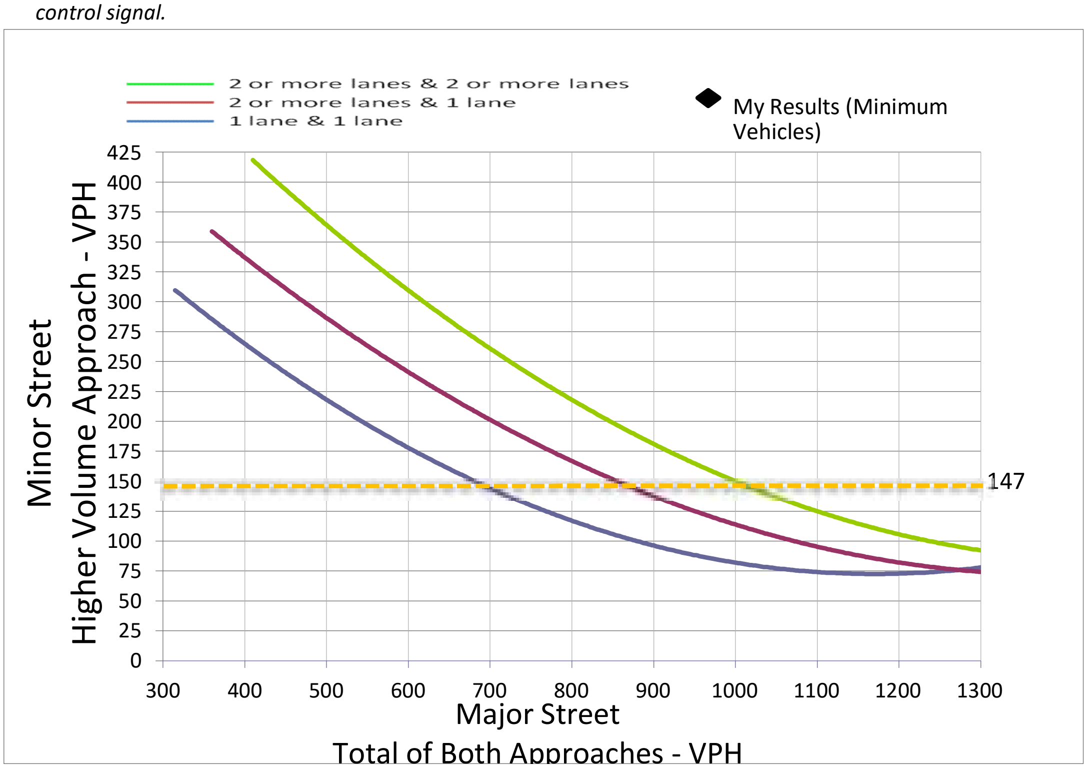
APPROACH LANES	One	Two or More	
Both Approaches - Major Street	☐	☑	2066
Higher Approach - Minor Street	☑	☐	147

ENTER CORRECT HOURS

ENTER PEAK HOUR VOL.

The plotted point falls above the applicable curve in Figure 4C-3 (Urban Areas)	☐ YES ☐ NO
<u>OR</u> The plotted point falls above the applicable curve in Figure 4C-4 (Rural Areas)	☑ YES ☐ NO

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	32	115	46	970	1351	13
Future Volume (veh/h)	32	115	46	970	1351	13
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	33	119	47	1000	1393	13
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	43	157	95	3192	2328	22
Arrive On Green	0.12	0.12	0.05	0.63	0.45	0.45
Sat Flow, veh/h	351	1264	1781	5274	5385	49
Grp Volume(v), veh/h	153	0	47	1000	909	497
Grp Sat Flow(s),veh/h/ln	1625	0	1781	1702	1702	1862
Q Serve(g_s), s	2.9	0.0	0.8	2.9	6.4	6.4
Cycle Q Clear(g_c), s	2.9	0.0	0.8	2.9	6.4	6.4
Prop In Lane	0.22	0.78	1.00			0.03
Lane Grp Cap(c), veh/h	201	0	95	3192	1519	831
V/C Ratio(X)	0.76	0.00	0.49	0.31	0.60	0.60
Avail Cap(c_a), veh/h	1224	0	279	4485	2029	1110
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.5	0.0	14.7	2.8	6.7	6.7
Incr Delay (d2), s/veh	5.8	0.0	3.9	0.1	0.4	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.3	0.0	0.6	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.3	0.0	18.6	2.8	7.0	7.4
LnGrp LOS	B	A	B	A	A	A
Approach Vol, veh/h	153			1047	1406	
Approach Delay, s/veh	19.3			3.5	7.2	
Approach LOS	B			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		23.9		7.9	5.7	18.2
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		28.0		24.0	5.0	19.0
Max Q Clear Time (g_c+I1), s		4.9		4.9	2.8	8.4
Green Ext Time (p_c), s		6.4		0.4	0.0	5.8

Intersection Summary			
HCM 6th Ctrl Delay			6.4
HCM 6th LOS			A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	26	73	97	1379	1154	55
Future Volume (veh/h)	26	73	97	1379	1154	55
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	74	99	1407	1178	56
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	41	113	166	3272	2075	99
Arrive On Green	0.10	0.10	0.09	0.64	0.42	0.42
Sat Flow, veh/h	433	1186	1781	5274	5163	237
Grp Volume(v), veh/h	102	0	99	1407	803	431
Grp Sat Flow(s),veh/h/ln	1635	0	1781	1702	1702	1828
Q Serve(g_s), s	1.8	0.0	1.6	4.1	5.5	5.5
Cycle Q Clear(g_c), s	1.8	0.0	1.6	4.1	5.5	5.5
Prop In Lane	0.26	0.73	1.00			0.13
Lane Grp Cap(c), veh/h	156	0	166	3272	1414	759
V/C Ratio(X)	0.66	0.00	0.60	0.43	0.57	0.57
Avail Cap(c_a), veh/h	1296	0	353	4721	2023	1086
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.2	0.0	13.2	2.7	6.8	6.8
Incr Delay (d2), s/veh	4.6	0.0	3.4	0.1	0.4	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.5	0.0	0.6	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.9	0.0	16.6	2.8	7.1	7.4
LnGrp LOS	B	A	B	A	A	A
Approach Vol, veh/h	102			1506	1234	
Approach Delay, s/veh	17.9			3.7	7.2	
Approach LOS	B			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		23.4		6.9	6.8	16.6
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		28.0		24.0	6.0	18.0
Max Q Clear Time (g_c+I1), s		6.1		3.8	3.6	7.5
Green Ext Time (p_c), s		9.4		0.3	0.0	5.1

Intersection Summary		
HCM 6th Ctrl Delay		5.7
HCM 6th LOS		A

Notes

User approved volume balancing among the lanes for turning movement.

Scenario: Cumulative Year 2027 Conditions
Major Approach: Date Palm Drive
Minor Approach: Tachevah Drive

WARRANT 3 - PEAK HOUR

(Part A or Part B must be satisfied) SATISFIED ☑ YES ☐ NO

Part A

SATISFIED ☐ YES ☑ NO

(All parts 1, 2, and 3 below must be satisfied for the same

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for one-lane approach, or five vehicle-hours for a two-lane approach; <u>AND</u>	☐ YES ☑ NO
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; <u>AND</u>	☑ YES ☐ NO
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches	☑ YES ☐ NO

Part B

SATISFIED ☑ YES ☐ NO

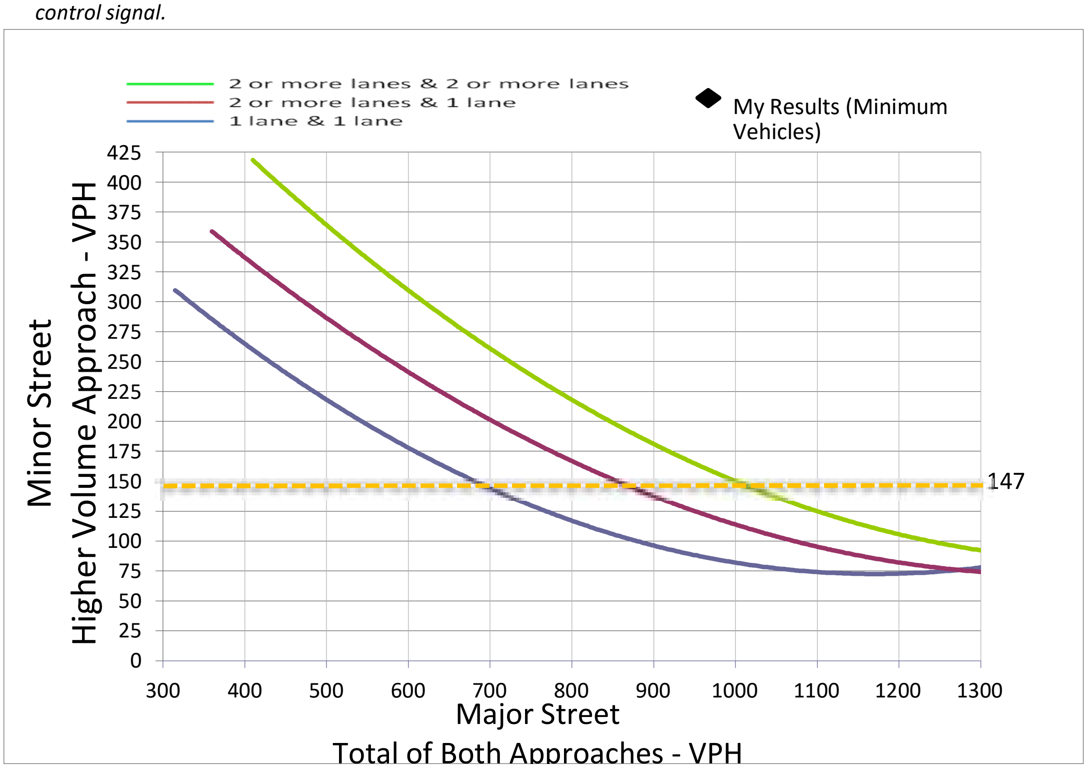
APPROACH LANES	One	Two or More	
Both Approaches - Major Street	☐	☑	2380
Higher Approach - Minor Street	☑	☐	147

← ENTER CORRECT HOURS

ENTER PEAK HOUR VOL.

The plotted point falls above the applicable curve in Figure 4C-3 (Urban Areas)	☐ YES ☐ NO
<u>OR</u> The plotted point falls above the applicable curve in Figure 4C-4 (Rural Areas)	☑ YES ☐ NO

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.



APPENDIX J -

INTERSECTION 2 SIGNAL WARRANT WORKSHEETS

Scenario: Project Completion Year 2027 Conditions
Major Approach: Date Palm Drive
Minor Approach: Rosemount Road

WARRANT 3 - PEAK HOUR

(Part A or Part B must be satisfied) SATISFIED ☑ YES ☐ NO

Part A

SATISFIED ☐ YES ☑ NO

(All parts 1, 2, and 3 below must be satisfied for the same

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for one-lane approach, or five vehicle-hours for a two-lane approach; AND	☐ YES ☑ NO
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	☑ YES ☐ NO
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches	☑ YES ☐ NO

SATISFIED ☑ YES ☐ NO

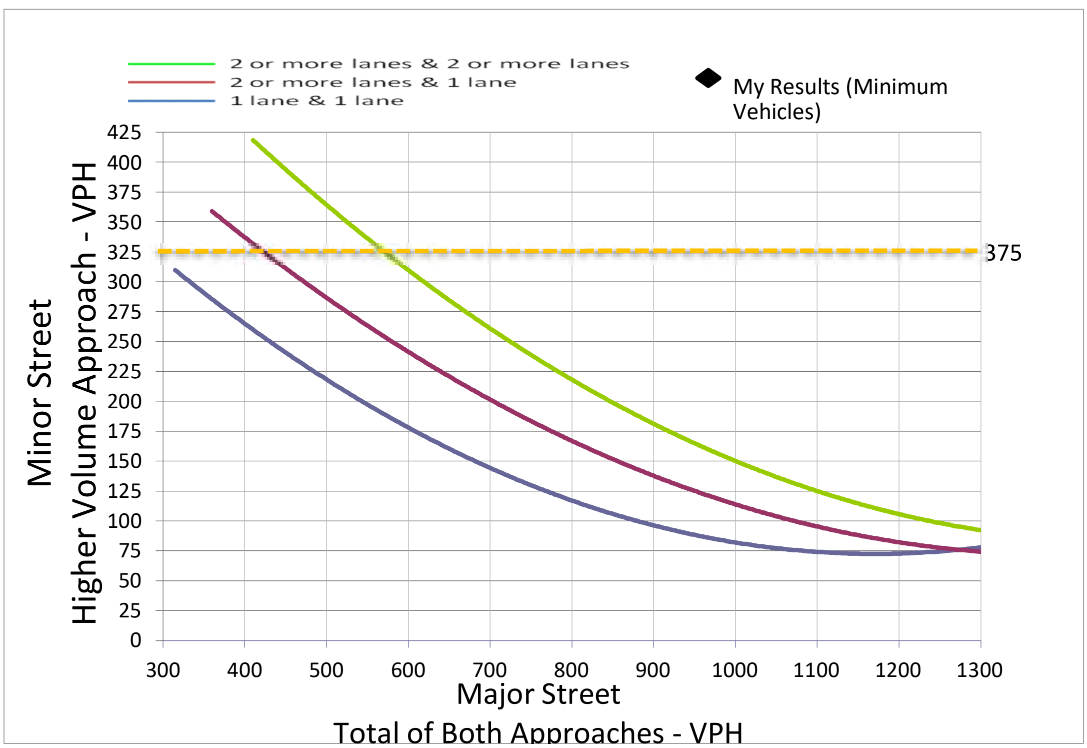
Part B

APPROACH LANES	One	Two or More	
Both Approaches - Major Street	☐	☑	2153
Higher Approach - Minor Street	☑	☐	375

← ENTER CORRECT HOURS

ENTER PEAK HOUR VOL.

The plotted point falls above the applicable curve in Figure 4C-3 (Urban Areas)	☐ YES ☐ NO
OR The plotted point falls above the applicable curve in Figure 4C-4 (Rural Areas)	☑ YES ☐ NO



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Scenario: Cumulative Year 2027 Conditions
Major Approach: Date Palm Drive
Minor Approach: Rosemount Road

WARRANT 3 - PEAK HOUR

(Part A or Part B must be satisfied) SATISFIED ☑ YES ☐ NO

Part A

SATISFIED ☐ YES ☑ NO

(All parts 1, 2, and 3 below must be satisfied for the same

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for one-lane approach, or five vehicle-hours for a two-lane approach; AND	☐ YES ☑ NO
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	☑ YES ☐ NO
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches	☑ YES ☐ NO

SATISFIED ☑ YES ☐ NO

Part B

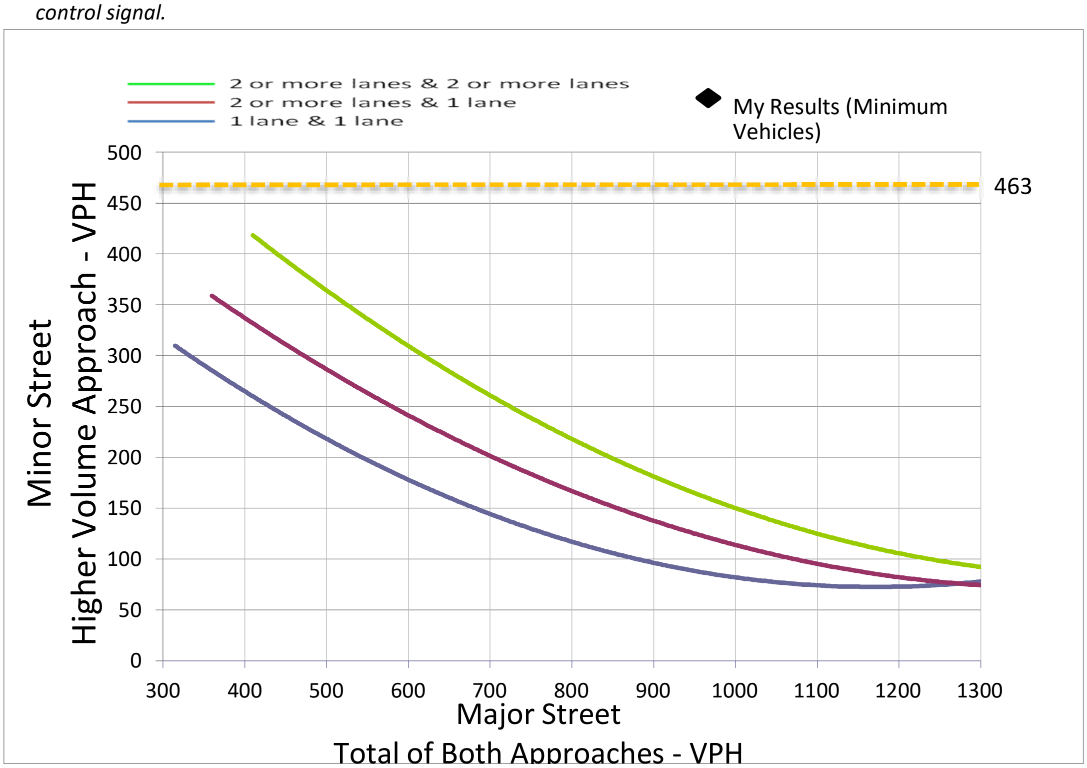
APPROACH LANES	One	Two or More	
Both Approaches - Major Street	☐	☑	2709
Higher Approach - Minor Street	☑	☐	463

← ENTER CORRECT HOURS

ENTER PEAK HOUR VOL.

The plotted point falls above the applicable curve in Figure 4C-3 (Urban Areas)	☐ YES ☐ NO
OR The plotted point falls above the applicable curve in Figure 4C-4 (Rural Areas)	☑ YES ☐ NO

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.



APPENDIX J -

SCENARIO 1 AM PEAK HOUR ANALYSIS AND SIGNAL

WARRANT WORKSHEETS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	225	106	67	158	48	46	499	48	95	981	53
Future Volume (veh/h)	59	225	106	67	158	48	46	499	48	95	981	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	66	250	118	74	176	53	51	554	53	106	1090	59
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	444	400	189	331	461	139	95	1404	133	150	1619	88
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.05	0.30	0.30	0.08	0.33	0.33
Sat Flow, veh/h	1150	1195	564	1013	1379	415	1781	4742	449	1781	4950	268
Grp Volume(v), veh/h	66	0	368	74	0	229	51	396	211	106	749	400
Grp Sat Flow(s),veh/h/ln	1150	0	1759	1013	0	1794	1781	1702	1787	1781	1702	1814
Q Serve(g_s), s	2.0	0.0	7.4	2.8	0.0	4.1	1.2	3.9	4.0	2.4	8.0	8.0
Cycle Q Clear(g_c), s	6.1	0.0	7.4	10.2	0.0	4.1	1.2	3.9	4.0	2.4	8.0	8.0
Prop In Lane	1.00		0.32	1.00		0.23	1.00		0.25	1.00		0.15
Lane Grp Cap(c), veh/h	444	0	588	331	0	600	95	1008	529	150	1114	593
V/C Ratio(X)	0.15	0.00	0.63	0.22	0.00	0.38	0.54	0.39	0.40	0.71	0.67	0.67
Avail Cap(c_a), veh/h	769	0	1086	618	0	1108	212	1132	594	338	1375	732
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.0	0.0	11.8	16.1	0.0	10.7	19.4	11.8	11.8	18.8	12.2	12.2
Incr Delay (d2), s/veh	0.2	0.0	1.1	0.3	0.0	0.4	4.6	0.2	0.5	5.9	0.9	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	2.6	0.6	0.0	1.4	0.5	1.1	1.2	1.1	2.2	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.2	0.0	12.9	16.4	0.0	11.1	24.1	12.1	12.3	24.7	13.2	14.0
LnGrp LOS	B	A	B	B	A	B	C	B	B	C	B	B
Approach Vol, veh/h		434			303			658			1255	
Approach Delay, s/veh		12.9			12.4			13.1			14.4	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.6	16.5		18.1	6.2	17.8		18.1				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	8.0	14.0		26.0	5.0	17.0		26.0				
Max Q Clear Time (g_c+I1), s	4.4	6.0		9.4	3.2	10.0		12.2				
Green Ext Time (p_c), s	0.1	2.2		2.5	0.0	3.8		1.4				
Intersection Summary												
HCM 6th Ctrl Delay			13.6									
HCM 6th LOS			B									

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	63	233	582	44	186	1010
Future Volume (veh/h)	63	233	582	44	186	1010
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	68	253	633	48	202	1098
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	398	354	1281	96	259	2717
Arrive On Green	0.22	0.22	0.26	0.26	0.15	0.53
Sat Flow, veh/h	1781	1585	5012	365	1781	5274
Grp Volume(v), veh/h	68	253	444	237	202	1098
Grp Sat Flow(s),veh/h/ln	1781	1585	1702	1805	1781	1702
Q Serve(g_s), s	1.0	4.8	3.6	3.6	3.6	4.2
Cycle Q Clear(g_c), s	1.0	4.8	3.6	3.6	3.6	4.2
Prop In Lane	1.00	1.00		0.20	1.00	
Lane Grp Cap(c), veh/h	398	354	900	477	259	2717
V/C Ratio(X)	0.17	0.71	0.49	0.50	0.78	0.40
Avail Cap(c_a), veh/h	1144	1018	1561	828	381	4059
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.3	11.7	10.2	10.2	13.5	4.6
Incr Delay (d2), s/veh	0.2	2.7	0.4	0.8	6.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.5	1.0	1.1	1.6	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.5	14.4	10.6	11.0	19.6	4.7
LnGrp LOS	B	B	B	B	B	A
Approach Vol, veh/h	321		681			1300
Approach Delay, s/veh	13.6		10.7			7.0
Approach LOS	B		B			A

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	8.8	12.7				21.4		11.3
Change Period (Y+Rc), s	4.0	4.0				4.0		4.0
Max Green Setting (Gmax), s	7.0	15.0				26.0		21.0
Max Q Clear Time (g_c+I1), s	5.6	5.6				6.2		6.8
Green Ext Time (p_c), s	0.1	3.0				7.9		0.9

Intersection Summary	
HCM 6th Ctrl Delay	9.0
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	268	115	64	143	167	171	603	30	233	1056	70
Future Volume (veh/h)	105	268	115	64	143	167	171	603	30	233	1056	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	117	298	128	71	159	186	190	670	33	259	1173	78
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	149	402	335	103	354	299	235	1428	70	308	1600	106
Arrive On Green	0.08	0.21	0.21	0.06	0.19	0.19	0.13	0.29	0.29	0.17	0.33	0.33
Sat Flow, veh/h	1781	1870	1561	1781	1870	1583	1781	4984	244	1781	4889	325
Grp Volume(v), veh/h	117	298	128	71	159	186	190	457	246	259	817	434
Grp Sat Flow(s),veh/h/ln	1781	1870	1561	1781	1870	1583	1781	1702	1825	1781	1702	1810
Q Serve(g_s), s	3.8	8.9	4.2	2.3	4.5	6.4	6.2	6.6	6.7	8.4	12.7	12.7
Cycle Q Clear(g_c), s	3.8	8.9	4.2	2.3	4.5	6.4	6.2	6.6	6.7	8.4	12.7	12.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.13	1.00		0.18
Lane Grp Cap(c), veh/h	149	402	335	103	354	299	235	975	523	308	1114	592
V/C Ratio(X)	0.78	0.74	0.38	0.69	0.45	0.62	0.81	0.47	0.47	0.84	0.73	0.73
Avail Cap(c_a), veh/h	149	814	679	149	814	689	268	1254	672	328	1368	727
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	21.9	20.0	27.6	21.5	22.2	25.2	17.6	17.6	23.9	17.8	17.8
Incr Delay (d2), s/veh	23.4	2.7	0.7	7.9	0.9	2.1	14.9	0.4	0.7	16.9	1.6	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	3.6	1.4	1.1	1.8	2.3	3.3	2.2	2.5	4.4	4.1	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.3	24.6	20.8	35.5	22.4	24.4	40.1	17.9	18.2	40.8	19.4	20.8
LnGrp LOS	D	C	C	D	C	C	D	B	B	D	B	C
Approach Vol, veh/h		543			416			893			1510	
Approach Delay, s/veh		29.2			25.5			22.7			23.5	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.3	21.1	7.5	16.8	11.9	23.5	9.0	15.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	11.0	22.0	5.0	26.0	9.0	24.0	5.0	26.0
Max Q Clear Time (g_c+I1), s	10.4	8.7	4.3	10.9	8.2	14.7	5.8	8.4
Green Ext Time (p_c), s	0.0	3.4	0.0	1.7	0.0	4.8	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay	24.4
HCM 6th LOS	C

Intersection						
Int Delay, s/veh	2.8					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	32	114	47	816	1189	13
Future Vol, veh/h	32	114	47	816	1189	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	116	48	833	1213	13

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1649	613	1226	0	-	0
Stage 1	1220	-	-	-	-	-
Stage 2	429	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	144	373	304	-	-	-
Stage 1	177	-	-	-	-	-
Stage 2	571	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	121	373	304	-	-	-
Mov Cap-2 Maneuver	121	-	-	-	-	-
Stage 1	149	-	-	-	-	-
Stage 2	571	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	36.9	1	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	304	-	256	-	-
HCM Lane V/C Ratio	0.158	-	0.582	-	-
HCM Control Delay (s)	19	-	36.9	-	-
HCM Lane LOS	C	-	E	-	-
HCM 95th %tile Q(veh)	0.6	-	3.3	-	-

Intersection						
Int Delay, s/veh	0.3					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	50	595	18	0	1129
Future Vol, veh/h	0	50	595	18	0	1129
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	56	661	20	0	1254

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	341	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	559	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	559	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	559	-
HCM Lane V/C Ratio	-	-	0.099	-
HCM Control Delay (s)	-	-	12.1	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.3	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	357	0	0	263	9	0	0	0	8	0	17
Future Vol, veh/h	18	357	0	0	263	9	0	0	0	8	0	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	388	0	0	286	10	0	0	0	9	0	18

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	296	0	0	388	0	0	728	724	388	719	719	291
Stage 1	-	-	-	-	-	-	428	428	-	291	291	-
Stage 2	-	-	-	-	-	-	300	296	-	428	428	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1265	-	-	1170	-	-	339	352	660	344	354	748
Stage 1	-	-	-	-	-	-	605	585	-	717	672	-
Stage 2	-	-	-	-	-	-	709	668	-	605	585	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1265	-	-	1170	-	-	325	345	660	339	347	748
Mov Cap-2 Maneuver	-	-	-	-	-	-	325	345	-	339	347	-
Stage 1	-	-	-	-	-	-	593	573	-	703	672	-
Stage 2	-	-	-	-	-	-	691	668	-	593	573	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0	0	12
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1265	-	-	1170	-	-	540
HCM Lane V/C Ratio	-	0.015	-	-	-	-	-	0.05
HCM Control Delay (s)	0	7.9	0	-	0	-	-	12
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.2

WARRANT 3 - PEAK HOUR

(Part A or Part B must be satisfied)

SATISFIED ☑ YES ☐ NO

Part A

SATISFIED ☐ YES ☑ NO

(All parts 1, 2, and 3 below must be satisfied for the same

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for one-lane approach, or five vehicle-hours for a two-lane approach; <u>AND</u>	☐ YES ☑ NO
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; <u>AND</u>	☑ YES ☐ NO
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches	☑ YES ☐ NO

Part B

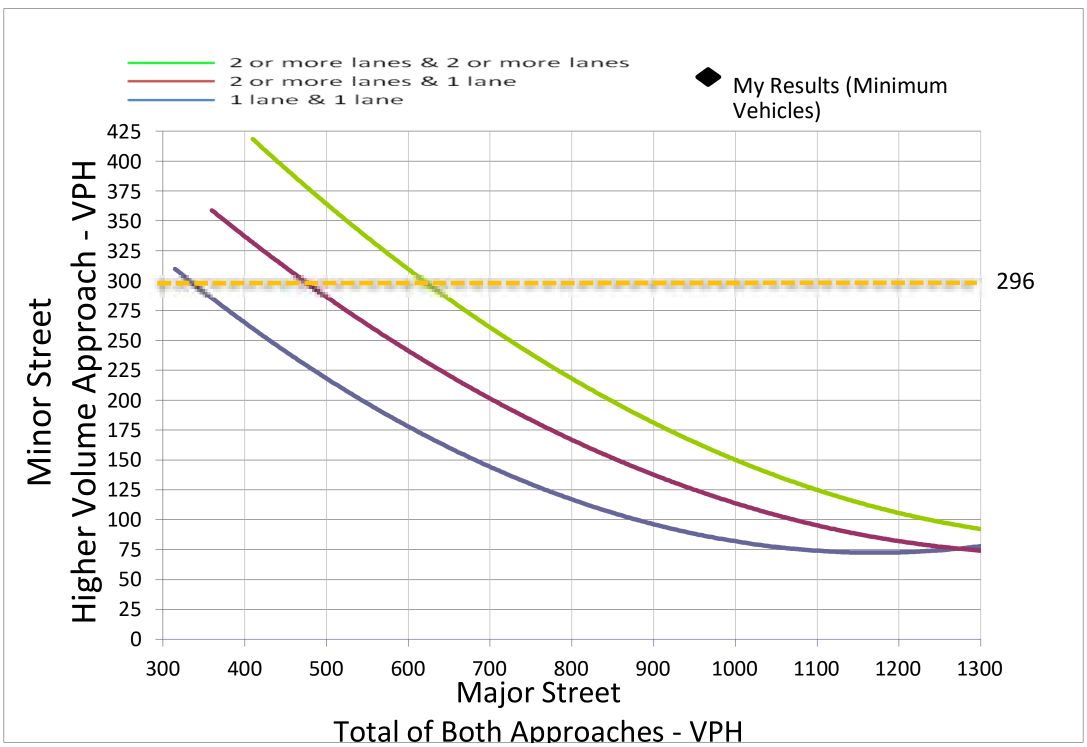
SATISFIED ☑ YES ☐ NO

APPROACH LANES	One	Two or More	
Both Approaches - Major Street	☐	☑	1822
Higher Approach - Minor Street	☑	☐	296

← ENTER CORRECT HOURS

ENTER PEAK HOUR VOL.

The plotted point falls above the applicable curve in Figure 4C-3 (Urban Areas)	☐ YES	☐ NO
<u>OR</u> The plotted point falls above the applicable curve in Figure 4C-4 (Rural Areas)	☑ YES	☐ NO



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	225	106	67	158	83	46	634	48	112	1139	74
Future Volume (veh/h)	91	225	106	67	158	83	46	634	48	112	1139	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	101	250	118	74	176	92	51	704	53	124	1266	82
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	399	399	188	321	384	201	94	1487	111	160	1684	109
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.05	0.31	0.31	0.09	0.34	0.34
Sat Flow, veh/h	1110	1195	564	1013	1150	601	1781	4841	362	1781	4888	317
Grp Volume(v), veh/h	101	0	368	74	0	268	51	494	263	124	882	466
Grp Sat Flow(s),veh/h/ln	1110	0	1759	1013	0	1751	1781	1702	1800	1781	1702	1801
Q Serve(g_s), s	3.5	0.0	7.9	3.0	0.0	5.4	1.2	5.2	5.3	3.0	10.2	10.2
Cycle Q Clear(g_c), s	8.9	0.0	7.9	10.8	0.0	5.4	1.2	5.2	5.3	3.0	10.2	10.2
Prop In Lane	1.00		0.32	1.00		0.34	1.00		0.20	1.00		0.18
Lane Grp Cap(c), veh/h	399	0	588	321	0	585	94	1045	553	160	1173	620
V/C Ratio(X)	0.25	0.00	0.63	0.23	0.00	0.46	0.55	0.47	0.48	0.77	0.75	0.75
Avail Cap(c_a), veh/h	674	0	1024	573	0	1020	199	1067	564	319	1296	686
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.2	0.0	12.5	17.1	0.0	11.7	20.6	12.5	12.6	19.9	12.9	12.9
Incr Delay (d2), s/veh	0.3	0.0	1.1	0.4	0.0	0.6	4.9	0.3	0.6	7.7	2.3	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	2.8	0.7	0.0	1.9	0.6	1.5	1.6	1.4	3.1	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.5	0.0	13.6	17.4	0.0	12.2	25.5	12.9	13.2	27.6	15.2	17.2
LnGrp LOS	B	A	B	B	A	B	C	B	B	C	B	B
Approach Vol, veh/h		469			342			808			1472	
Approach Delay, s/veh		14.0			13.4			13.8			16.9	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.0	17.7		18.9	6.3	19.4		18.9
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	8.0	14.0		26.0	5.0	17.0		26.0
Max Q Clear Time (g_c+I1), s	5.0	7.3		10.9	3.2	12.2		12.8
Green Ext Time (p_c), s	0.1	2.4		2.5	0.0	3.1		1.7

Intersection Summary	
HCM 6th Ctrl Delay	15.2
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	56	70	87	79	242	98	700	48	193	1129	79
Future Volume (veh/h)	56	56	70	87	79	242	98	700	48	193	1129	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	61	61	76	95	86	263	107	761	52	210	1227	86
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	99	170	212	164	106	324	137	1195	81	258	1524	107
Arrive On Green	0.06	0.22	0.22	0.09	0.26	0.26	0.08	0.24	0.24	0.14	0.31	0.31
Sat Flow, veh/h	1781	757	943	1781	406	1241	1781	4882	332	1781	4872	341
Grp Volume(v), veh/h	61	0	137	95	0	349	107	530	283	210	857	456
Grp Sat Flow(s),veh/h/ln	1781	0	1701	1781	0	1647	1781	1702	1811	1781	1702	1809
Q Serve(g_s), s	1.8	0.0	3.7	2.8	0.0	10.8	3.2	7.6	7.6	6.2	12.6	12.6
Cycle Q Clear(g_c), s	1.8	0.0	3.7	2.8	0.0	10.8	3.2	7.6	7.6	6.2	12.6	12.6
Prop In Lane	1.00		0.55	1.00		0.75	1.00		0.18	1.00		0.19
Lane Grp Cap(c), veh/h	99	0	382	164	0	430	137	833	443	258	1065	566
V/C Ratio(X)	0.62	0.00	0.36	0.58	0.00	0.81	0.78	0.64	0.64	0.81	0.81	0.81
Avail Cap(c_a), veh/h	164	0	656	164	0	636	164	939	499	262	1126	598
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.1	0.0	17.8	23.7	0.0	18.9	24.7	18.4	18.4	22.6	17.2	17.2
Incr Delay (d2), s/veh	6.2	0.0	0.6	5.1	0.0	5.0	18.2	1.2	2.3	17.5	4.2	7.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	1.4	1.3	0.0	4.3	2.0	2.8	3.1	3.6	4.9	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.3	0.0	18.4	28.8	0.0	23.9	42.9	19.6	20.7	40.0	21.3	24.7
LnGrp LOS	C	A	B	C	A	C	D	B	C	D	C	C
Approach Vol, veh/h		198			444			920			1523	
Approach Delay, s/veh		22.4			24.9			22.6			24.9	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.9	17.3	9.0	16.2	8.2	21.0	7.0	18.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	8.0	15.0	5.0	21.0	5.0	18.0	5.0	21.0
Max Q Clear Time (g_c+I1), s	8.2	9.6	4.8	5.7	5.2	14.6	3.8	12.8
Green Ext Time (p_c), s	0.0	2.4	0.0	0.6	0.0	2.4	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	24.1
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	268	131	80	143	167	182	759	41	233	1214	70
Future Volume (veh/h)	105	268	131	80	143	167	182	759	41	233	1214	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	114	291	142	87	155	182	198	825	45	253	1320	76
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	133	440	361	111	418	343	240	1479	80	293	1621	93
Arrive On Green	0.07	0.24	0.24	0.06	0.22	0.22	0.13	0.30	0.30	0.16	0.33	0.33
Sat Flow, veh/h	1781	1870	1532	1781	1870	1536	1781	4955	269	1781	4938	284
Grp Volume(v), veh/h	114	291	142	87	155	182	198	566	304	253	910	486
Grp Sat Flow(s),veh/h/ln	1781	1870	1532	1781	1870	1536	1781	1702	1821	1781	1702	1818
Q Serve(g_s), s	4.2	9.4	5.2	3.2	4.7	7.0	7.2	9.4	9.4	9.3	16.4	16.4
Cycle Q Clear(g_c), s	4.2	9.4	5.2	3.2	4.7	7.0	7.2	9.4	9.4	9.3	16.4	16.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.15	1.00		0.16
Lane Grp Cap(c), veh/h	133	440	361	111	418	343	240	1016	543	293	1118	597
V/C Ratio(X)	0.86	0.66	0.39	0.78	0.37	0.53	0.83	0.56	0.56	0.86	0.81	0.81
Avail Cap(c_a), veh/h	133	727	595	133	727	597	240	1119	599	293	1221	652
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.6	23.2	21.6	30.9	22.0	22.9	28.2	19.8	19.8	27.2	20.6	20.6
Incr Delay (d2), s/veh	39.0	1.7	0.7	21.6	0.5	1.3	20.6	0.5	1.0	22.5	4.0	7.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	3.9	1.7	1.9	1.9	2.4	4.2	3.3	3.6	5.2	5.9	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.6	24.9	22.2	52.5	22.6	24.2	48.8	20.3	20.7	49.7	24.6	27.9
LnGrp LOS	E	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		547			424			1068			1649	
Approach Delay, s/veh		33.5			29.4			25.7			29.4	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	24.0	8.2	19.8	13.0	26.0	9.0	18.9				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	11.0	22.0	5.0	26.0	9.0	24.0	5.0	26.0				
Max Q Clear Time (g_c+I1), s	11.3	11.4	5.2	11.4	9.2	18.4	6.2	9.0				
Green Ext Time (p_c), s	0.0	3.8	0.0	1.7	0.0	3.6	0.0	1.2				

Intersection Summary			
HCM 6th Ctrl Delay			29.0
HCM 6th LOS			C

Intersection						
Int Delay, s/veh	4					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	32	114	47	972	1347	13
Future Vol, veh/h	32	114	47	972	1347	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	118	48	1002	1389	13

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1893	701	1402	0	-	0
Stage 1	1396	-	-	-	-	-
Stage 2	497	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	107	327	249	-	-	-
Stage 1	138	-	-	-	-	-
Stage 2	527	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	86	327	249	-	-	-
Mov Cap-2 Maneuver	86	-	-	-	-	-
Stage 1	111	-	-	-	-	-
Stage 2	527	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	61	1.1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	249	-	203	-	-
HCM Lane V/C Ratio	0.195	-	0.741	-	-
HCM Control Delay (s)	22.9	-	61	-	-
HCM Lane LOS	C	-	F	-	-
HCM 95th %tile Q(veh)	0.7	-	4.9	-	-

Intersection						
Int Delay, s/veh	0.3					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	50	810	18	0	1308
Future Vol, veh/h	0	50	810	18	0	1308
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	54	880	20	0	1422

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	450	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	476	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	476	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	476	-
HCM Lane V/C Ratio	-	-	0.114	-
HCM Control Delay (s)	-	-	13.5	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.4	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	374	0	0	298	9	0	0	0	8	0	17
Future Vol, veh/h	18	374	0	0	298	9	0	0	0	8	0	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	407	0	0	324	10	0	0	0	9	0	18

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	334	0	0	407	0	0	785	781	407	776	776	329
Stage 1	-	-	-	-	-	-	447	447	-	329	329	-
Stage 2	-	-	-	-	-	-	338	334	-	447	447	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1225	-	-	1152	-	-	310	326	644	315	328	712
Stage 1	-	-	-	-	-	-	591	573	-	684	646	-
Stage 2	-	-	-	-	-	-	676	643	-	591	573	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1225	-	-	1152	-	-	297	319	644	310	321	712
Mov Cap-2 Maneuver	-	-	-	-	-	-	297	319	-	310	321	-
Stage 1	-	-	-	-	-	-	579	561	-	670	646	-
Stage 2	-	-	-	-	-	-	658	643	-	579	561	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0	0	12.6
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1225	-	-	1152	-	-	503
HCM Lane V/C Ratio	-	0.016	-	-	-	-	-	0.054
HCM Control Delay (s)	0	8	0	-	0	-	-	12.6
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.2

Scenario: Cumulative Year 2027 Conditions (Scenario 1)
Major Approach: Date Palm Drive
Minor Approach: Rosemount Road

WARRANT 3 - PEAK HOUR

(Part A or Part B must be satisfied) SATISFIED ☑ YES ☐ NO

Part A SATISFIED ☐ YES ☑ NO

(All parts 1, 2, and 3 below must be satisfied for the same

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for one-lane approach, or five vehicle-hours for a two-lane approach; AND	☐ YES ☑ NO
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	☑ YES ☐ NO
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches	☑ YES ☐ NO

SATISFIED ☑ YES ☐ NO

Part B

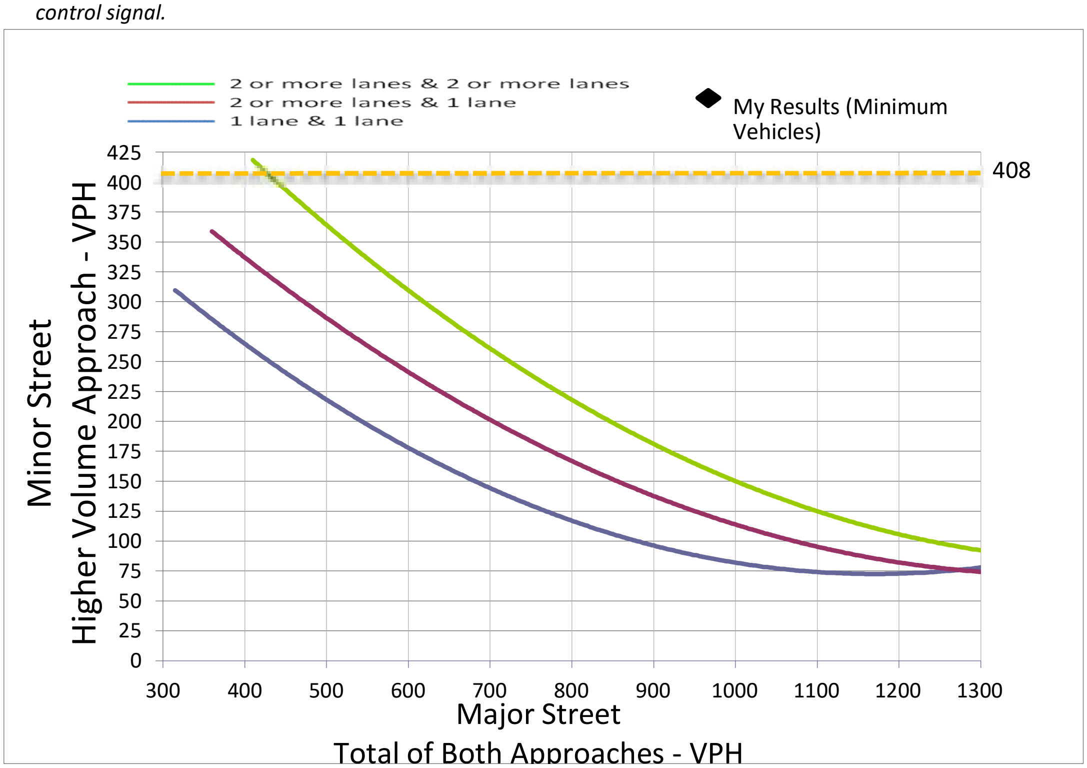
APPROACH LANES	One	Two or More	
Both Approaches - Major Street	☐	☑	2274
Higher Approach - Minor Street	☑	☐	408

← ENTER CORRECT HOURS

ENTER PEAK HOUR VOL.

The plotted point falls above the applicable curve in Figure 4C-3 (Urban Areas)	☐ YES ☐ NO
OR The plotted point falls above the applicable curve in Figure 4C-4 (Rural Areas)	☑ YES ☐ NO

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.



APPENDIX K -

HORIZON YEAR 2045 PLUS PROJECTS QUEUE

ANALYSIS

Wren Project

Land Use[1]	Units[2]	ITE LUCode	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Multifamily Housing (Low-Rise)	DU	220	0.10	0.30	0.40	0.32	0.19	0.51	6.74

[1]Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Eleventh Edition (2021).

[2]DU = Dwelling Unit

Land Use[1]	Intensity	Units[2]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Multifamily Housing (Low-Rise)	204	DU	20	61	81	65	39	104	1,375
		Total	***20***	***61***	***81***	***65***	***39***	***104***	***1,375***

[1]Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Eleventh Edition (2021).

[2] DU = Dwelling Unit

Vallarta Shopping Center

Land Use[1]	Units[2]	ITE LUCode	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Shopping Plaza (40k-150k)[3]	TSF	821	2.19	1.34	3.53	4.13	4.48	8.61	88.08
Fast Food Restaurant w/ Drive-through Window	TSF	934	22.75	21.86	44.61	17.18	15.85	33.03	467.48

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Eleventh Edition (2021).

[2] TSF = Thousand Square Feet

[3] Peak hour and daily trip rates for LU 822 Strip Retail Plaza are based on fitted curve equations for total 127,000 sf of retail proposed for entire project.

Land Use[1]	Intensity	Units[2]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Shopping Plaza (40k-150k)	127.000	TSF	278	170	448	525	569	1,094	11,186
Internal Capture (8% - AM In, 13% - AM Out, 9% - PM In, 6% - PM Out, 7% - Daily)[3]			22	22	44	47	34	81	783
Pass-by Reduction (40% - PM Peak Hour & Daily)[4]			0	0	0	191	214	405	4,161
Subtotal			*256*	*148*	*404*	*287*	*321*	*608*	*6,242*
Fast Food Restaurant w/ Drive-through Window	7.000	TSF	159	153	312	120	111	231	3,272
Internal Capture (14% - AM In, 14% - AM Out, 29% - PM In, 41% - PM Out, 35% - Daily)[3]			22	21	43	35	46	81	1,145
Pass-by Reduction (50% - AM Peak Hour, 55% - PM Peak Hour & Daily)[4]			69	66	135	47	36	83	1,170
Subtotal			*68*	*66*	*134*	*38*	*29*	*67*	*957*
Total			***324***	***214***	***538***	***325***	***350***	***675***	***7,199***

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Eleventh Edition (2021).

[2] TSF = Thousand Square Feet

[3] Internal Capture percentage is based on NCHRP Report 684, as recommended in the ITE Trip Generation Handbook, 3rd Edition.

[4] Pass-by reduction percentage is based on the ITE methodology per 2021 Pass-By Tables for ITE Trip Generation Appendices.

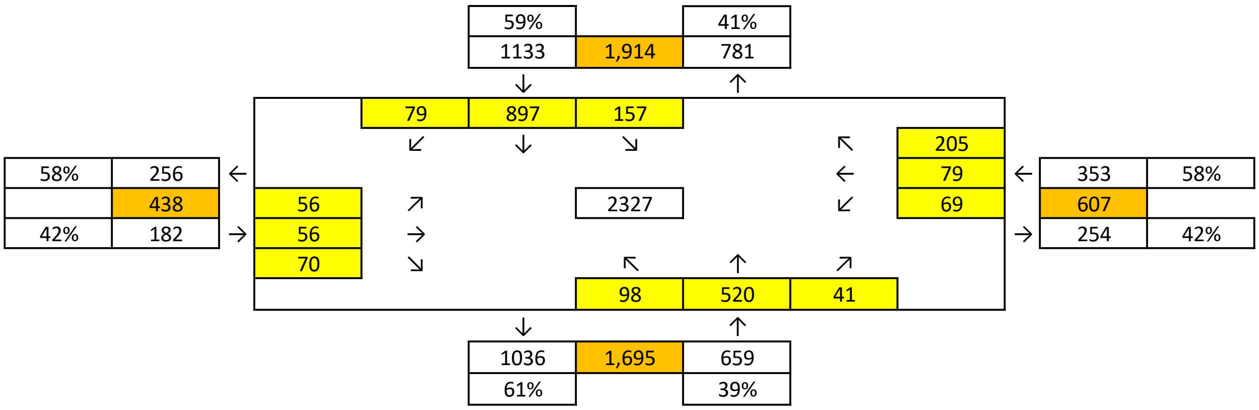
RIVCOM 4.01 - 2018 AM peak period volumes (Wren Resi + Date Palm + Vallarata)

RIVCOM 4.01 - 2045 AM peak period volumes (Wren Resi + Date Palm + Vallarata)

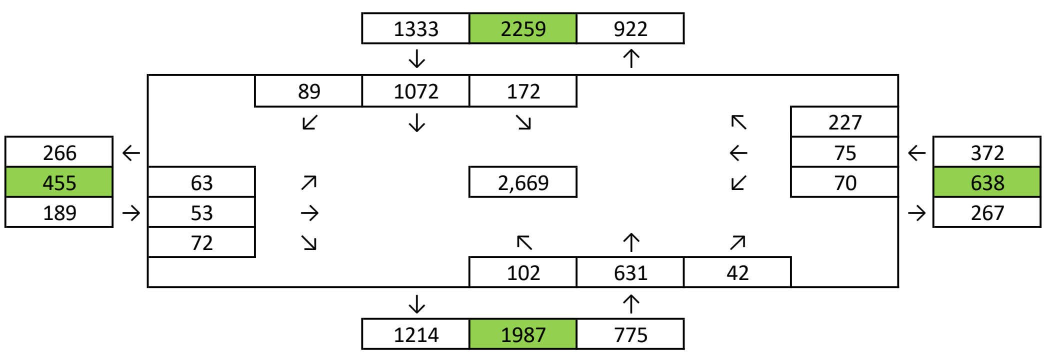
AM Peak Hour Growth

Intersection	Approach	RIVCOM 2018	RIVCOM 2045	RIVCOM 2018 to RIVCOM 2045 Annual Growth Rate	Adjusted 2023 + 3 Projects	Adjusted 2045 Plus Project
2	E	153	163	0.24%	607	638
	S	4383	5355	0.82%	1695	1987
	W	352	350	0.19%	438	455
	N	4212	5188	0.86%	1914	2259

Scenario: Adjusted 2023 Plus 3 Projects
N/S Street: Date Palm Drive
E/W Street: Rosemount Road
Intersection #: 2



Scenario: 2045 Plus Project
N/S Street: Date Palm Drive
E/W Street: Rosemount Road



Legend
Existing Turning Movements
Existing Peak Hour Counts per intersection leg
Forecasted Peak Hour per intersection leg

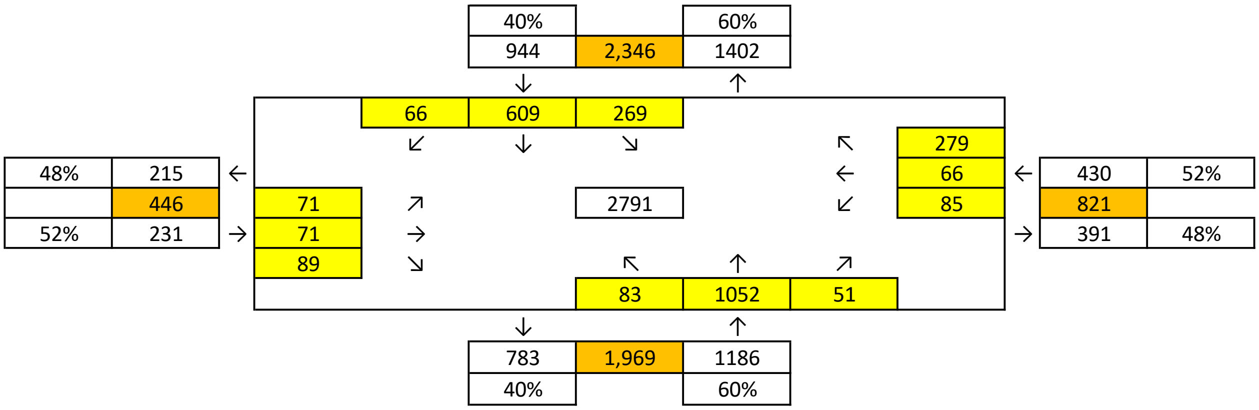
RIVCOM 4.01 - 2018 PM peak period volumes (Wren Resi + Date Palm + Vallarata)

RIVCOM 4.01 - 2045 PM peak period volumes (Wren Resi + Date Palm + Vallarata)

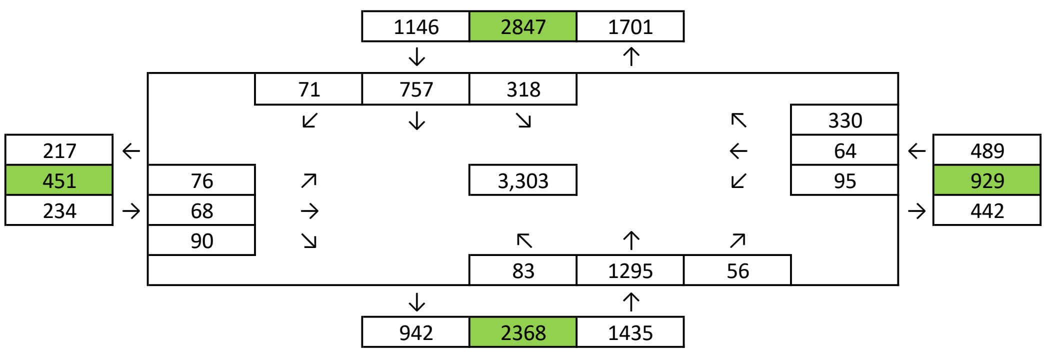
PM Peak Hour Growth

Intersection	Approach	RIVCOM 2018	RIVCOM 2045	RIVCOM 2018 to RIVCOM 2045 Annual Growth Rate	Adjusted 2023 + 3 Projects	Adjusted 2045 Plus Project
2	E	206	241	0.63%	821	929
	S	5499	6931	0.96%	1969	2368
	W	465	472	0.06%	446	451
	N	5281	6730	1.02%	2346	2847

Scenario: Adjusted 2023 Plus 3 Projects
N/S Street: Date Palm Drive
E/W Street: Rosemount Road
Intersection #: 2



Scenario: 2045 Plus Project
N/S Street: Date Palm Drive
E/W Street: Rosemount Road



Legend
Existing Turning Movements
Existing Peak Hour Counts per intersection leg
Forecasted Peak Hour per intersection leg

Intersection: 2: Date Palm Drive & Rosemount Road

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	T	R	L	T	T
Maximum Queue (ft)	84	108	87	181	120	147	129	135	68	201	229	247
Average Queue (ft)	35	41	40	80	59	79	74	69	21	100	122	137
95th Queue (ft)	68	85	74	149	101	125	119	114	53	171	202	224
Link Distance (ft)		425		430		560	560	560			1210	1210
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	100		140		180				100	280		
Storage Blk Time (%)	0	1		1		0		1	0	0		
Queuing Penalty (veh)	0	0		1		0		0	0	0		

Intersection: 2: Date Palm Drive & Rosemount Road

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	249	180
Average Queue (ft)	147	59
95th Queue (ft)	237	136
Link Distance (ft)	1210	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		140
Storage Blk Time (%)	14	0
Queuing Penalty (veh)	13	0

Intersection: 2: Date Palm Drive & Rosemount Road

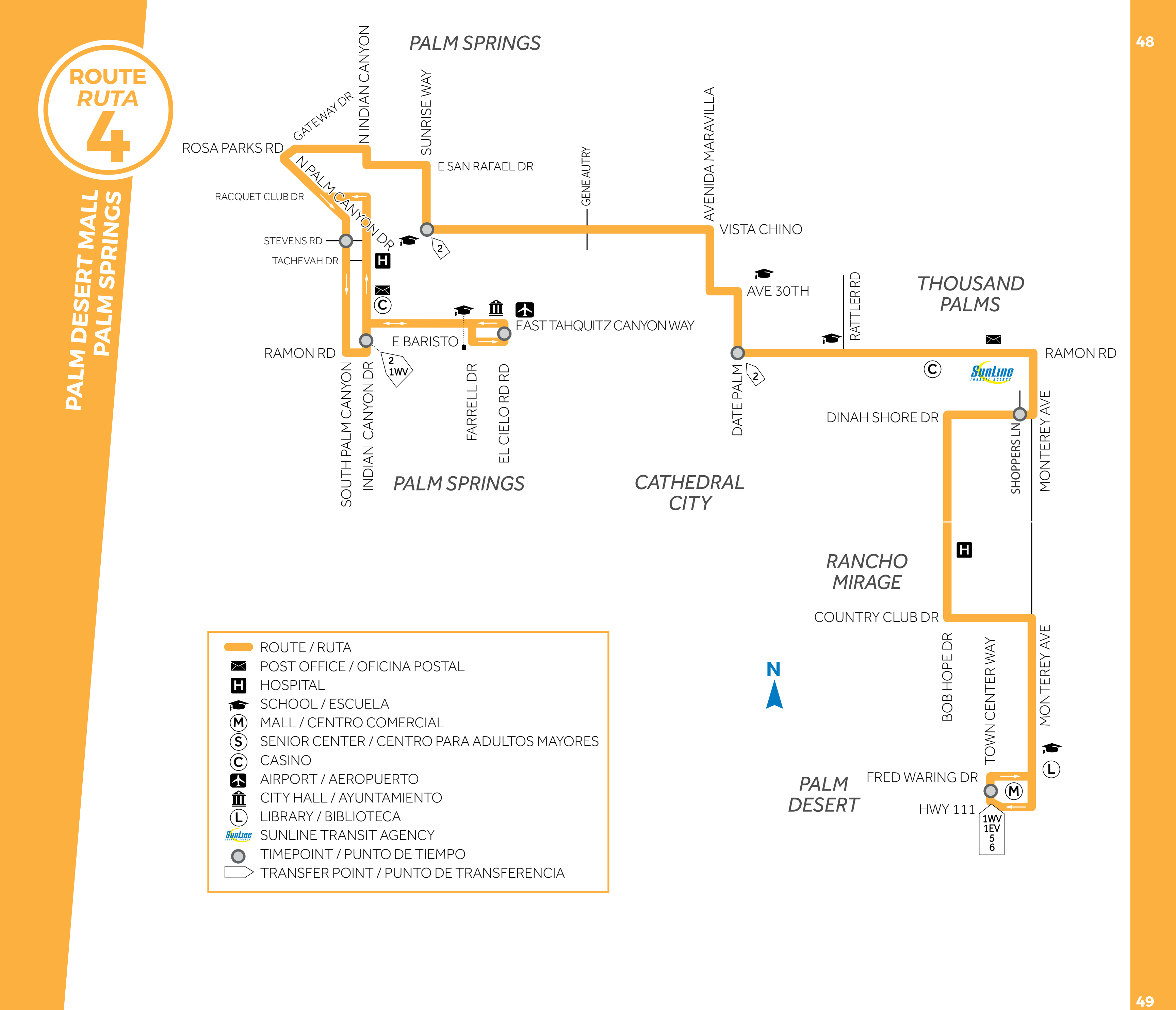
Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	T	R	L	T	T
Maximum Queue (ft)	122	193	190	331	236	327	327	285	177	307	189	180
Average Queue (ft)	53	69	70	148	81	220	192	153	33	177	68	84
95th Queue (ft)	98	138	147	267	185	314	280	235	103	281	160	162
Link Distance (ft)		425		430		560	560	560			1210	1210
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	100		140		180				100	280		
Storage Blk Time (%)	1	4	0	11	0	16		15		2		
Queuing Penalty (veh)	1	3	2	10	0	14		8		4		

Intersection: 2: Date Palm Drive & Rosemount Road

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	208	113
Average Queue (ft)	98	27
95th Queue (ft)	179	75
Link Distance (ft)	1210	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		140
Storage Blk Time (%)	6	0
Queuing Penalty (veh)	4	0

APPENDIX L -

TRANSIT ROUTE INFORMATION


ROUTE
RUTA
4
PALM DESERT MALL
PALM SPRINGS
PALM SPRINGS
ROSA PARKS RD
GATEWAY DR
N INDIAN CANYON
SUNRISE WAY
E SAN RAFAEL DR
GENE AUTRY
AVENIDA MARAVILLA
VISTA CHINO
RACQUET CLUB DR
N PALM CANYON DR
STEVENS RD
TACHEVAH DR
2
AVE 30TH
RATTLER RD
THOUSAND PALMS
EAST TAHQUITZ CANYON WAY
E BARISTO
RAMON RD
2
1WV
RAMON RD
DATE PALM
2
SOUTH PALM CANYON
INDIAN CANYON DR
FARRELL DR
EL CIELO RD RD
DINAH SHORE DR
SHOPPERS LN
MONTEREY AVE
PALM SPRINGS
CATHEDRAL CITY
RANCHO MIRAGE
COUNTRY CLUB DR
ROUTE / RUTA
POST OFFICE / OFICINA POSTAL
HOSPITAL
SCHOOL / ESCUELA
MALL / CENTRO COMERCIAL
SENIOR CENTER / CENTRO PARA ADULTOS MAYORES
CASINO
AIRPORT / AEROPUERTO
CITY HALL / AYUNTAMIENTO
LIBRARY / BIBLIOTECA
SUNLINE TRANSIT AGENCY
TIMEPOINT / PUNTO DE TIEMPO
TRANSFER POINT / PUNTO DE TRANSFERENCIA
N
BOB HOPE DR
TOWN CENTER WAY
MONTEREY AVE
PALM DESERT
FRED WARING DR
HWY 111
1WV
1EV
5
6

EASTBOUND | *HACIA EL ESTE*

El Cielo @ Kirk Douglas	Vista Chino @ Sunrise Way	Ramon @ Date Palm	Dinah Shore @ Shoppers Ln	Town Center Way @ Hahn
6:10a	6:42a	7:05a	7:20a	7:41a
7:10a	7:42a	8:05a	8:20a	8:41a
8:10a	8:42a	9:05a	9:20a	9:41a
9:10a	9:42a	10:05a	10:20a	10:41a
10:10a	10:43a	11:05a	11:20a	11:43a
11:10a	11:43a	12:05p	12:20p	12:43p
12:10p	12:43p	1:05p	1:20p	1:43p
1:10p	1:43p	2:05p	2:20p	2:43p
2:10p	2:43p	3:05p	3:20p	3:43p
3:10p	3:43p	4:05p	4:20p	4:43p
4:10p	4:43p	5:05p	5:20p	5:43p
5:10p	5:43p	6:07p	6:20p	6:40p
6:10p	6:43p	7:07p	7:20p	7:40p
7:10p	7:43p	8:07p	8:20p	8:40p
8:10p	8:42p	9:03p	9:20p	9:38p

WESTBOUND | *HACIA EL OESTE*

Town Center Way @ Hahn	Dinah Shore @ Shoppers Ln	Date Palm @ Ramon	Sunrise Way @ Vista Chino	Palm Cyn @ Stevens	Indian Canyon @ Ramon	El Cielo @ Kirk Douglas
6:10a	6:30a	6:46a	7:10a	7:25a	7:36a	7:47a
7:10a	7:30a	7:46a	8:10a	8:25a	8:36a	8:47a
8:10a	8:30a	8:46a	9:10a	9:25a	9:36a	9:47a
9:10a	9:30a	9:46a	10:10a	10:25a	10:36a	10:47a
10:10a	10:32a	10:49a	11:13a	11:28a	11:41a	11:53a
11:10a	11:32a	11:49a	12:13p	12:28p	12:41p	12:53p
12:10p	12:32p	12:49p	1:13p	1:28p	1:41p	1:53p
1:10p	1:32p	1:49p	2:13p	2:28p	2:41p	2:53p
2:10p	2:32p	2:49p	3:13p	3:28p	3:41p	3:53p
3:10p	3:32p	3:49p	4:13p	4:28p	4:41p	4:53p
4:10p	4:32p	4:49p	5:13p	5:28p	5:41p	5:53p
5:10p	5:31p	5:48p	6:12p	6:26p	6:40p	6:52p
6:10p	6:31p	6:48p	7:12p	7:26p	7:40p	7:52p
7:10p	7:31p	7:48p	8:12p	8:26p	8:40p	8:52p
8:10p	8:31p	8:47p	9:12p	9:26p	9:39p	9:50p

For the VillageFest Thursday night detour, please see the map on page 36-37.

Para ver el desvío del jueves del VillageFest, por favor vea el mapa en las páginas 36 y 37.

Date Palm Drive Mixed Use Vehicle Miles Traveled Screening Assessment

Prepared for:
The Altum Group
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Palm Desert, CA 92260

Prepared by:

INTEGRATED ENGINEERING GROUP
TRANSPORTATION PLANNING AND ENGINEERING

23905 Clinton Keith 114-280
Wildomar, CA 92595

June 2024

1.0 PROJECT INTRODUCTION

The purpose of this report is to evaluate the project's Vehicle Miles Traveled (VMT) analysis requirements and compliance with Senate Bill 743 (SB 743) and the California Environmental Quality Act (CEQA).

1.1 PROJECT DESCRIPTION

The project will be developed on a vacant site located on the southeast corner of Date Palm Drive and Rosemount Road in Cathedral City. The project is proposing the construction of the following two land use scenarios, each in two phases:

Scenario 1

- Phase 1:
  - 115,054 sf of mini warehouse (self-storage facility including office space)
- Phase 2:
  - 11,159 sf of strip retail plaza
  - 7,030 sf of fast-food restaurant with drive-through window

Scenario 2

- Phase 1:
  - 115,054 sf of mini warehouse (self-storage facility including office space)
- Phase 2:
  - 54,725 sf of shopping plaza (including 50,000 sf of supermarket and 4,725 sf of retail)

Additionally, Rosemount Road does not currently extend to Date Palm Drive. It is anticipated that the appropriate dedications and easements will be in place prior to project opening. Therefore, this report will address the following access scenarios:

- Alternative 1: Rosemount Road extension in place prior to opening year. Access to the project site will be provided via two driveways along Date Palm Drive and one driveway along Rosemount Road.
- Alternative 2: Rosemount Road extension not constructed prior to opening year. Access would be limited to two driveways along Date Palm Drive.

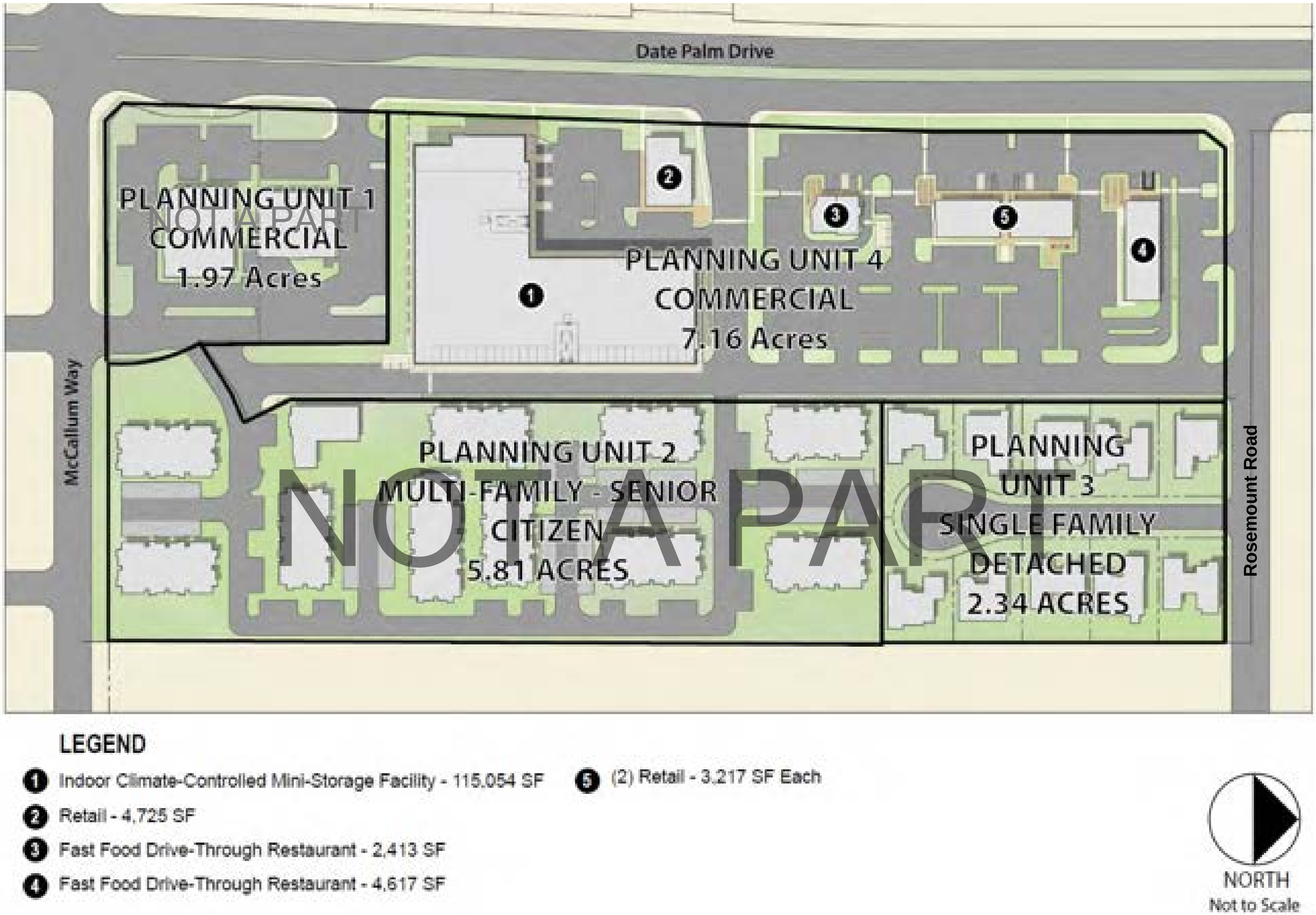
Figures 1-1 and **1-2** show Scenario 1 and 2 site plans, respectively.

1.2 SENATE BILL 743

On September 27, 2013, SB 743 was signed into State law and started a process intended to fundamentally change transportation impact analysis as part of the CEQA compliance. The California Natural Resource Agency updated the CEQA transportation analysis guidelines in 2018. In this update automobile delay and LOS metrics are no longer to be used in determining transportation impacts. Instead VMT metrics will serve as the basis in determining impacts. Furthermore, the guidelines stated that after July 1, 2020, transportation analysis under CEQA must use VMT to determine impacts for land use projects.

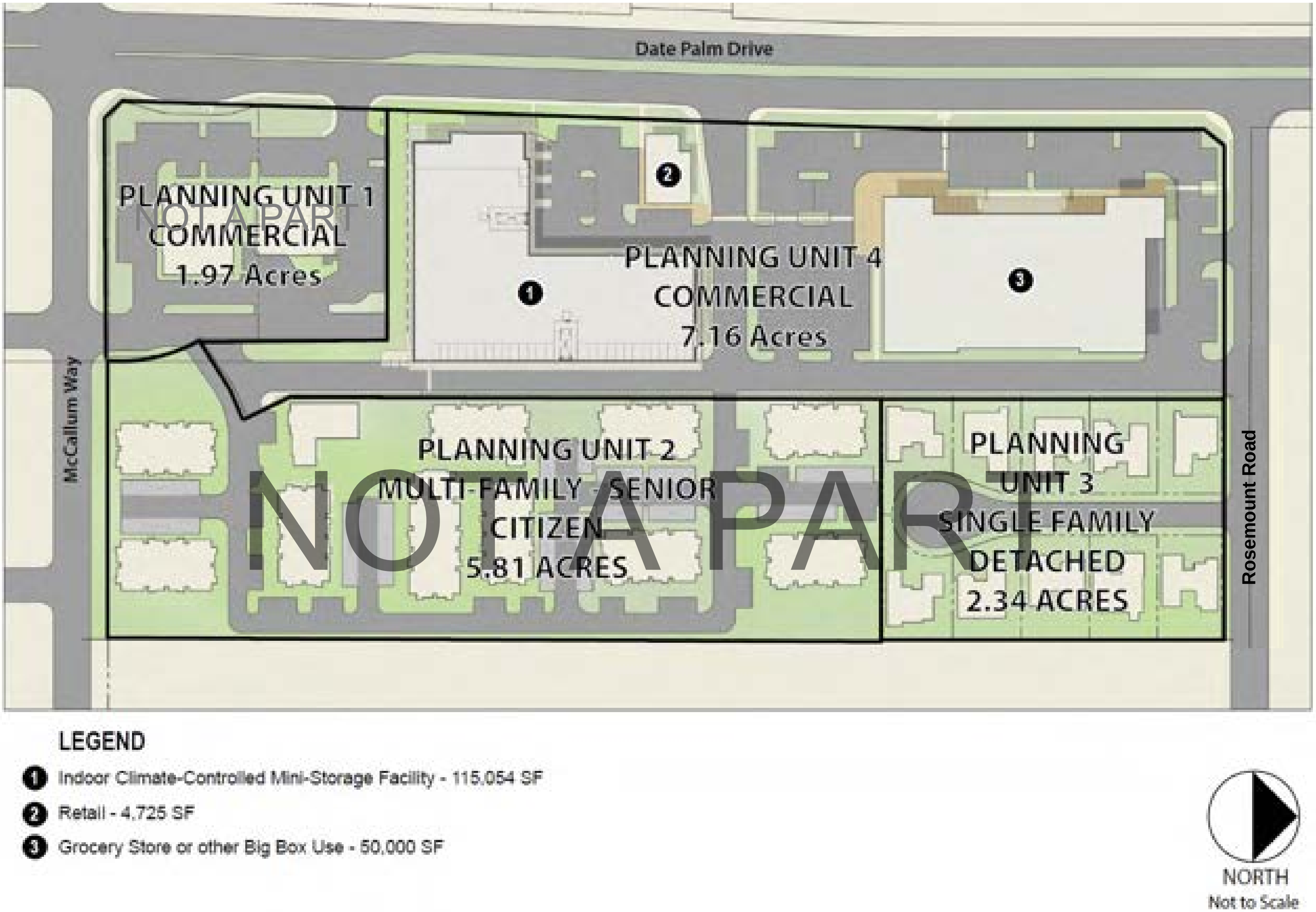
1.3 GUIDANCE DOCUMENTS

The project is within Cathedral City and the County of Riverside. The City has not adopted guidance on evaluating VMT for transportation impacts under CEQA. Therefore, the County of Riverside Transportation Analysis Guidelines for Level of Service (LOS) and Vehicle Miles Traveled (VMT), December 2020, hereafter referred to as Guidelines, will be used for this analysis.



INTEGRATED ENGINEERING GROUP
TRANSPORTATION PLANNING AND ENGINEERING

Date Palm Drive Mixed Use
Project Site Plan (Scenario 1)
Figure 1-1



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TRANSPORTATION PLANNING AND ENGINEERING

Date Palm Drive Mixed Use
Project Site Plan (Scenario 2)
Figure 1-2

2.0 ANALYSIS METHODOLGY

The Guidelines outline 5 major-steps[1] for CEQA assessment and VMT analysis:

- Evaluation of land use type
- Screening criteria under which projects are not required to submit a detailed VMT analysis
- Significance thresholds
- VMT analysis methodologies
- Mitigation measures for significant and unavoidable impacts

2.1 SCREENING CRITERIA

The Guidelines recognize that certain projects based on type, location, size and other contexts could lead to a *presumption of less than significance* (i.e. the project's VMT would not cause a transportation impact under CEQA) and would not need additional VMT analysis. The Guidelines provide the following screening criteria[2]:

1. Small Projects –
    a. Single Family Housing projects less than or equal to 110 Dwelling Units; or
    b. Multi Family (low rise) Housing projects less than or equal to 147 Dwelling Units; or
    c. Multi Family (mid-rise) Housing projects less than or equal to 194 Dwelling Units; or
    d. General Office Building with area less than or equal to 165,000 SF; or
    e. Retail buildings with area less than or equal to 60,000 SF; or
    f. Warehouse (unrefrigerated) buildings with area less than or equal to 208,000 SF; or
    g. General Light Industrial buildings with area less than or equal to 179,000 SF Project GHG emissions less than 3,000 Metric Tons of Carbon Dioxide Equivalent (MTCO2e) as determined by a methodology acceptable to the Transportation Department; or
    h. Unless specified above, project trip generation is less than 110 trips per day per the ITE Manual or other acceptable source determined by Riverside County.
2. Projects near high quality transit – The project is located within half mile of an existing major transit stop and maintains a service interval frequency of 15 minutes or less during the morning and afternoon peak commute periods.
3. Local-serving retail – No single store on-site exceeds 50,000 SF and project is local-serving as determined by the Transportation Department
4. Affordable Housing – A high percentage of affordable housing is provided as determined by the Riverside County Planning and Transportation Departments.
5. Local Essential Services –
    a. Project is local-serving as determined by the Transportation Department; and
    b. Local-serving and Day care center; or
    c. Police or Fire facility; or
    d. Medical/Dental office building under 50,000 square feet; or
    e. Government offices (in-person services such as post office, library, and utilities); or
    f. Local or Community Parks
6. Map-based Screening – Area of development is under threshold as shown on screening map as allowed by the Transportation Department
7. Redevelopment projects – Project replaces an existing VMT-generating land use and does not result in a net overall increase in VMT.

[1] Guidelines, Pages 18-24

[2] Guidelines, Figure 3, pages 19-21

2.2 VMT THRESHOLDS

A land use project should determine the appropriate VMT measure and threshold of significance to apply. The thresholds[3] as defined by the Guidelines are as follows:

- Residential Projects: Existing county-wide average 15.2 VMT per capita
- Office: Existing county-wide average 14.2 VMT per employee
- Retail: No net increase in total regional VMT
- Other Employment: Existing county-wide average 14.2 VMT per employee
- Other Customer: No net increase in total regional VMT
- Mixed-Use Projects: Respective VMT threshold for its multiple distinct land uses

2.3 VMT ASSESSMENT

Projects that do not meet any of the screening criteria identified would need to assess its project VMT using one of the following methods per the Guidelines:

- Riverside County Sketch Planning Tool; or
- RIVTAM/RIVCOM or other approved travel demand forecasting model.

3.0 PROJECT ANALYSIS

The Project proposes the construction of the following two land use scenarios, each in two phases:

<u>**Scenario 1**</u>

- Phase 1:
  - 115,054 sf of mini warehouse (self-storage facility including office space)
- Phase 2:
  - 11,159 sf of strip retail plaza
  - 7,030 sf of fast-food restaurant with drive-through window

<u>**Scenario 2**</u>

- Phase 1:
  - 115,054 sf of mini warehouse (self-storage facility including office space)
  - Phase 2:54,725 sf of shopping plaza (including 50,000 sf of supermarket and 4,725 sf of retail)

3.1 SCREENING CRITERIA ASSESSMENT

1. *Small Project*

   Project Phase 1 proposes 115,054 SF of mini warehouse. This land use component is a warehouse building with area less than or equal to 208,000 SF. Therefore, the **mini warehouse component of the Project would be presumed to cause a less than significant impact based on this criterion**.

2. *Projects Near High Quality Transit*

[3] Guidelines, Figure 6, page 22

The Project is not located within half mile of an existing major transit stop and it's the nearest transit stop does not maintain a service interval frequency of 15 minutes or less during the morning and afternoon peak commute periods. Therefore, the Project **does not qualify for this criterion.**

3. *Local-serving Retail*
   Scenario 1 Phase 2 proposes 11,159 SF of strip retail plaza and 7,030 SF of fast-food restaurant with drive-through. Additionally, Scenario 2 Phase 2 proposes 50,000 SF of supermarket and 4,725 SF of retail. Each of these single retail uses in Scenarios 1 and 2 do not exceed 50,000 SF and are local-serving. Therefore, **the retail plaza, fast-food restaurant, and supermarket components of the Project would be presumed to cause a less than significant impact based on this criterion.**
4. *Affordable Housing*
   Scenarios 1 & 2 are not affordable housing projects and therefore **do not qualify for this criterion**.

5. *Local Essential Service*
   The Project proposes mini warehouse, strip retail, shopping plaza, and fast-food restaurant land uses. Scenarios 1 and 2 do not include local essential service land use components and therefore, **do not qualify for this criterion.**

6. *Map-Based Screening*
   The Project proposes mini warehouse, strip retail, shopping plaza, and fast-food restaurant land uses. Scenarios 1 and 2 do not include residential and office land use components and therefore, **do not qualify for this criterion.**

7. *Redevelopment Project*
   The Project is proposed on a vacant lot and does not replace an existing VMT-generating land use. Therefore, the Project **does not qualify for this criterion**.

3.2 CONCLUSION

As concluded in Section 3.1 of this report, the proposed project screens out from VMT analysis since the mini warehouse component satisfies the Small Project screening criterion, and the strip retail plaza, shopping plaza, and fast-food restaurant components meet the Local-serving retail screening criterion. Therefore, Scenario 1 and 2 land use components are presumed to cause less than significant VMT impacts. It is our recommendation that the project be approved with no additional project-level VMT analysis.