AMETHYST CROSSING

INITIAL STUDY/
MITIGATED NEGATIVE DECLARATION

Prepared for:
City of Victorville

December 2021

taha
environmental planners

AMETHYST CROSSING

INITIAL STUDY/
MITIGATED NEGATIVE DECLARATION

Lead Agency:

CITY OF VICTORVILLE
Planning Department
14343 Civic Drive
PO Box 5001
Victorville, CA 92393

Prepared by:

TERRY A. HAYES ASSOCIATES INC.
3535 Hayden Avenue, Suite 350
Culver City, CA 90232

December 2021

TABLE OF CONTENTS

Page No.

TABLE OF CONTENTS (cont.)

Page No.

LIST OF TABLES

1.0 INTRODUCTION

This section provides an overview of the environmental review process for the proposed Amethyst Crossing project (proposed project) and identifies the discretionary actions and approvals needed to implement the proposed project.

1.1 PROJECT OVERVIEW

The proposed project involves the construction of a 98,000-square foot commercial shopping center on a 11.2-acre project site at the southeast corner of Bear Valley Road and Amethyst Road (Assessor's Parcel Numbers [APNs] 3072-211-13 through 3072-211-16) in the City of Victorville. The project site is currently undeveloped, and the proposed project would develop seven commercial structures for retail, restaurant, and office uses. Over 450 parking spaces in accordance with City standards would be provided in a surface parking lot. Roadway improvements are proposed on Amethyst Road and Bear Valley Road, and Pluto Road would be extended from Bear Valley Road to the southerly perimeter of the project site. The project site is in the General Commercial Transitional (C-2T) zoning district and has a General Plan land use designation of Commercial.

1.2 ENVIRONMENTAL COMPLIANCE REQUIREMENTS

Section 15063(a) of the California Environmental Quality Act (CEQA) Guidelines requires the lead agency to prepare an Initial Study to determine if the proposed project may have a significant effect on the environment. The purpose of this document is to inform the City of Victorville, public agencies and interested parties of the potential environmental effects resulting from the proposed project. For the proposed project to obtain an environmental clearance in the form of a Mitigated Negative Declaration (MND) in compliance with CEQA, any potential significant adverse effects must be mitigated to a less-than-significant level. This document alone does not determine whether the proposed project will be approved. Rather, it is a disclosure document aimed at equally informing all concerned parties and fostering informed discussion and decision-making regarding all aspects of the proposed project.

1.3 PROJECT INFORMATION

Project Title / Location: Amethyst Crossing
Southeast corner of Bear Valley Road and Amethyst Road
Victorville, CA 92393

Lead Agency Name / Address: City of Victorville
Planning Department
14343 Civic Drive
PO Box 5001
Victorville, CA 92393

Contact Person / Phone Number Alex Jauregui, Senior Planner
(760) 955-5135

Project Sponsor's Name / Address: Tom Lao
Highland Park Developments
5567 Reseda Boulevard, Suite #318
Tarzana, CA 91356

1.4 DISCRETIONARY ACTIONS AND APPROVALS

Discretionary actions include those local approvals or entitlements necessary to implement a project. The proposed project may require the following discretionary actions:

- Site Plan Review – required for all development in a Commercial zoning district.
- Tentative Parcel Map or Lot Line Adjustment/Lot Merger – Tentative Parcel Map would be required if the parcels on the project site were to be subdivided into four or fewer parcels. Lot line adjustment/lot merger would be required if the two parcels on the project site were to be combined into one parcel or if the parcels were to be reconfigured.

1.5 ORGANIZATION OF THIS INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

The content and format of this Initial Study/Mitigated Negative Declaration (IS/MND) is designed to meet the requirements of CEQA. This IS/MND is organized into the following four sections:

1.0 Introduction. This section provides an overview of the proposed project, describes the environmental compliance requirements, and identifies the discretionary actions and approvals needed for the proposed project.

2.0 Project Description. This section identifies the location of the project site, describes the project site and the surrounding area, describes the proposed project, and provides an estimated timeline for the construction and implementation of the proposed project.

3.0 Initial Study Checklist and Evaluation. This section contains the CEQA Guidelines Appendix G: Initial Study Checklist and identifies the level of impact under each environmental impact category. This section also includes a discussion of the environmental impacts and any mitigation measures associated with each category.

4.0 List of Preparers and Sources Consulted. This section provides a list of the consultant team members that participated, and a list of sources and references used in the preparation of this IS/MND.

2.0 PROJECT DESCRIPTION

This section identifies the location of the project site, describes the project site and the surrounding area, provides a detailed description of the proposed project, and provides an estimated timeline for the implementation for the construction and implementation of the proposed project.

2.1 PROJECT LOCATION AND EXISTING SETTING

PROJECT LOCATION AND EXISTING SITE CONDITIONS

The project site Is located at the southeast corner of Bear Valley Road and Amethyst Road (APNs 3072-211-13 through 3072-211-16) in the City of Victorville. The 11.2-acre project site is bounded by Amethyst Road to the west, Bear Valley Road to the north, and undeveloped vacant lots to the east and south. Pluto Drive, a north/south street, terminates at Bear Valley Road just north of the project site. The approximate location of the project site is shown in **Figure 2-1**.

The project site is relatively flat and gently slopes northeast towards Bear Valley Road. It is undeveloped and consists of primarily native vegetation, including Creosote bush scrub and Joshua trees (*Yucca brevifolia*). Dominant shrubs include Creosote (*Larrea tridentata*), Bursage (*Ambrosia Dumosa*), California buckwheat (*Eriogonum fasciculatum*), and Mormon tea (*Ephedra nevadensis*). The project site has six Joshua trees, which were recently listed as a candidate species for listing as a threatened or endangered species under the California Endangered Species Act (CESA).

The project site is in the General Commercial Transitional (C-2T) zoning district and has a General Plan land use designation of Commercial.

SURROUNDING AREA

Commercial shopping centers and single-family residences are located directly across the project site to the north on Bear Valley Road and to the west on Amethyst Road. The commercial shopping center and residential properties on the north side of Bear Valley Road are in the General Commercial (C-2) and Planned Unit Development (PUD5-82) zoning districts, respectively. The General Plan land use designations for the commercial shopping center and residential properties are Commercial and Medium Density Residential, respectively. The commercial shopping center and residential properties on the west side of Amethyst Road are in the C-2T and Single-Family Residential Transitional (R-1TB1) zoning districts, respectively. These commercial and residential uses have General Plan land use designations of Commercial and Very Low Density Residential, respectively. The commercial shopping center at the northwest corner of Bear Valley Road and Amethyst Road is in the C-2T zoning district and has a General Plan land use designation of Commercial.

Undeveloped land adjoins the project site to the east and south. Similar to the project site, these properties consist of primarily native vegetation, are in the C-2T zoning district, and has a General Plan land use designation of Commercial.

An aerial photograph depicting the project site and the surrounding land uses is presented in **Figure 2-1**.

Source: TAHA, 2021.

taha environmental planners

TAHA 2021-090

Amethyst Crossing
Initial Study/Mitigated Negative Declaration

CITY OF VICTORVILLE

FIGURE 2-1

PROJECT LOCATION AND SURROUNDING USES

2.2 PROJECT DESCRIPTION

The proposed project would construct a 98,000-square foot commercial shopping center on the 11.2-acre project site that would include retail, restaurant, and office space. The proposed shopping center would have seven one-story commercial structures and a surface parking lot. The main tenant building would be approximately 48,100 square feet in size and would be divided into four tenant spaces. One tenant space would be approximately 43,000 square feet in size (Major A) and could potentially be developed with a grocery store. The second tenant space would be approximately 5,100 square feet in size and could be used for multiple retail tenancies. A loading area is proposed on the south side of the major tenant building and would be connected to the Major A tenant space. In addition to the main tenant building, six building pads are also proposed, of which four building pads would be configured to accommodate drive-up service windows. The four building pads with drive-up service windows would range from 2,400 to 4,500 square feet in size. The fifth building pad would be approximately 5,000 square feet in size. The sixth building pad (Major B) would be approximately 29,500 square feet in size and would house either single or multiple tenancies.

The proposed surface parking lot would have over 450 parking spaces. The end of each parking row would be landscaped, and 24-inch box trees would be evenly distributed throughout the parking area. Landscaping would also be provided along the perimeter of the project site facing Amethyst Road, Bear Valley Road, and Pluto Drive. Trash enclosures would be placed at various locations in the proposed surface parking lot. Vehicular entrances to the project site would be provided via driveways on Amethyst Road, Bear Valley Road, and Pluto Drive.

Several roadway improvements are proposed as part of the proposed project, some of which are required by the City of Victorville. The following roadway improvements would be provided by the proposed project:

- Amethyst Road
    - Widen east side of road. Amethyst Road is designated as a super arterial per the City's General Plan Circulation Element. Right-of-way would be dedicated to accommodate the half-width of the 124-foot right-of-way for a super arterial (62-feet) per the City's General Plan Circulation Map. This proposed improvement is required by Victorville Municipal Code (VMC) 9.32.020 and the City's General Plan Circulation Element.
    - Restripe lanes to provide a northbound left-turn lane into Sierra Road and a continuous two-way center-turn lane north of Sierra Road to accommodate southbound left turns into the proposed project driveways on Amethyst Road.
    - Construct curb, gutter, sidewalk, and pavement along the proposed project's frontage per City standards.
    - Stripe a five-foot bike lane in the northbound direction of Amethyst Road.
    - Construct a dedicated northbound left-turn lane into Sierra Road.
    - Stripe a two-way left-turn lane on Amethyst Road north of Sierra Road for southbound left turns into the project site at Driveway A of the proposed project.[1]

1Driveway A is the proposed project's southern driveway on Amethyst Road at Sierra Road. The driveway would directly align with Sierra Road. The driveway centerline is approximately 488 feet south of Bear Valley Road.

  - Construct a northbound right-turn lane into Driveway B of the proposed project, which would continue north and serve as a right-turn lane at Bear Valley Road.[2]
  - Stripe a two-way left-turn lane along Amethyst Road between Bear Valley Road and Sierra Road.
  - Add a second northbound and a second southbound left-turn lane onto Bear Valley Road.

- Bear Valley Road
  - Bear Valley Road is designated as a super arterial per the City's General Plan Circulation Element. Right-of-way would be dedicated to accommodate the half-width of the 124-foot right-of-way for a super arterial (62-feet) per the City's General Plan Circulation Map. This proposed improvement is required by VMC 9.32.020 and the City's General Plan Circulation Element.
  - Construct a raised curb median from Amethyst Road to Pluto Drive to limit vehicle movement into/out of the proposed driveways on Bear Valley Road to right-turn in/right-turn out.
  - Widen the south side of Bear Valley Road to provide an eastbound right-turn lane and a westbound left-turn lane into the proposed Pluto Drive extension. This proposed improvement would provide access to the proposed Pluto Drive extension.
  - Add a second eastbound and a second westbound left-turn lane onto Amethyst Road.
  - Construct curb, gutter, sidewalk, and pavement along the proposed project's frontage per City standards.
  - Stripe a five-foot bike lane in the eastbound direction of Bear Valley Road.
  - Construct a dedicated eastbound right-turn lane into Driveway C of the proposed project.[3]
  - Construct a dedicated eastbound right turn lane into Driveway D of the proposed project.[4]
- Pluto Drive Extension
  - Roadway would be extended along the project site's eastern frontage from Bear Valley Road to the southerly boundary of the project site where it would terminate as a stub for potential future extension by others.
  - A curb, gutter, and sidewalk would be installed on the west side of the proposed street extension, adjacent to the project site. Curb and gutter would be constructed on the east side of the proposed street extension. Curb, gutter, and sidewalk would be constructed per City standards.
  - 40-foot-wide pavement would be provided for two-way traffic.

On-site infrastructure improvements include the installation of on-site catch basins that would connect to storm drains under the proposed surface parking lot, underground detention basins under the proposed surface parking lot, bioretention basins in the landscaped areas at the

[2]Driveway B is the proposed project's northern driveway on Amethyst Road between Sierra Road and Amethyst Road. It would be located midpoint between Sierra Road and a private driveway to the Shops at Bear Valley. shopping center (about 100 feet north of Sierra Road and 100 feet south of the Shops at Bear Valley driveway). The driveway is about 320 feet south of Bear Valley Road.

[3]Driveway C is the proposed project's western driveway on Bear Valley Road. It would be about 220 feet east of Amethyst Road.

[4]Driveway D is the proposed project's eastern driveway on Bear Valley Road. It would be about 620 feet east of Amethyst Road.

easterly perimeter of the project site, and vegetative swales within the landscaped areas within the proposed surface parking lot.

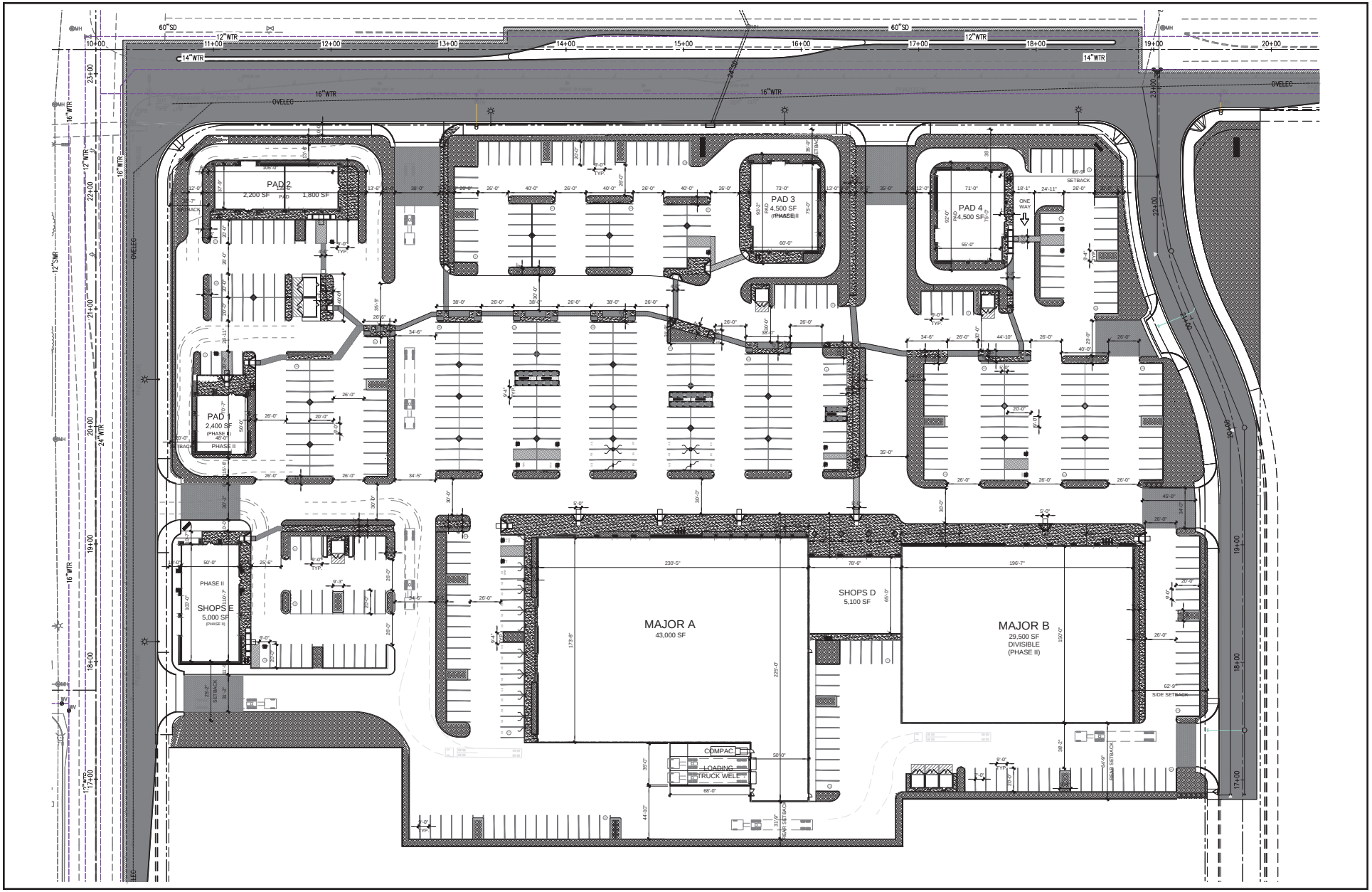
Off-site infrastructure improvements include of the installation of a 12-inch water line and 8-inch sewer line under the proposed Pluto Drive extension and connections to the existing water supply and wastewater infrastructure under Bear Valley Road, installation of a catch basin within the Bear Valley Road right-of-way, and placing the existing utility lines along the perimeter of the project site on Amethyst Road and Bear Valley Road underground.

Table 2-1 provides a summary of the proposed project, and **Figure 2-2** presents the site plan for the proposed project.

TABLE 2-1: PROJECT SUMMARY	
Project Site Area	11.2 acres
Main Tenant Building	
Major A	43,000 square feet
Retail Space	5,100 square feet
Pad Building 1	2,400 square feet
Pad Building 2	4,000 square feet
Pad Building 3	4,500 square feet
Pad Building 4	4,500 square feet
Pad Building 5	5,000 square feet
Pad Building 6 (Major B)	29,500 square feet
Parking Spaces Provided	over 450 spaces
SOURCE: LR/Architecture, 2021	

2.3 CONSTRUCTION ACTIVITIES AND SCHEDULE

Construction of the proposed project is anticipated to begin in March 2022 and would last for approximately 10 months, with tenant occupancy expected in early 2023. Site clearing is estimated to last for one month and would include the removal of existing on-site vegetation and debris. Building construction is anticipated to last for up to nine months. Paving, architectural finishing, and landscaping are anticipated to last for approximately two months each.



Source: LR/A Architecture, 2021.

taha environmental planners

TAHA 2021-090

Amethyst Crossing
Initial Study/Mitigated Negative Declaration

CITY OF VICTORVILLE

FIGURE 2-2

SITE PLAN

3.0 INITIAL STUDY CHECKLIST AND EVALUATION

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture/Forestry Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Energy
☐ Geology/Soils	☐ Greenhouse Gas Emissions	☐ Hazards & Hazardous Materials
☐ Hydrology/Water Quality	☐ Land Use/Planning	☐ Mineral Resources
☐ Noise	☐ Population/Housing	☐ Public Services
☐ Recreation	☐ Transportation	☐ Tribal Cultural Resources
☐ Utilities/Service Systems	☐ Wildfire	☐ Mandatory Findings of Significance

DETERMINATION: (To be completed by the Lead Agency):

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

a/.	12/21/2021
Signature	Date
ALEX JAUREGUI	CITY OF VICTORVILLE
Printed Name	For

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
3.1 AESTHETICS. Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☑
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☑
c) Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☑	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☑	☐

a) **No Impact**. A scenic vista is defined as a public viewpoint that provide expansive views of a highly valued landscape for the benefit of the general public. Public views are those that are experienced from a publicly accessible vantage point, such as a roadway or public park. The project site is relatively flat and undeveloped. It is located in an area with a mix of commercial and residential uses, as well as other undeveloped land. Although distant background views of the mountains are available to the east and south, these views are partially obstructed by intervening structures, utility poles, and utility lines. No scenic vistas are available on the project site or within the surrounding area, and the project site is not within the viewshed of a scenic vista. Therefore, no impact on scenic vistas would occur.

b) **No Impact**. A significant impact would occur if the proposed project would substantially damage scenic resources within a state scenic highway. The project site is not located on or within the vicinity of a scenic highway. The nearest state-designated scenic highway is State Route 2, approximately 17 miles southwest of the project site.[5] The nearest eligible state scenic highway is State Route 138, approximately 12.3 miles southwest of the project site. The project site is not within the viewshed of these state-designated and eligible scenic highways. Additionally, the project site does not contain any rock outcroppings or historic buildings. Although the project site contains six Joshua trees (*Yucca brevifolia*), an archetypal plant of the Mojave Desert that is a candidate species for listing as a threatened or endangered species under the CESA and is protected by Chapter 13.33 of the VMC, the project site is not located within a state-designated scenic highway. Therefore, no impact on scenic resources within a state-designated scenic highway would occur. See Response to Checklist Question 3.4a for a discussion of how the proposed project would affect Joshua trees.

[5]California Department of Transportation, *California State Scenic Highway System Map*, https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa, accessed September 2021.

c) **Less-Than-Significant Impact**. With implementation of the proposed project, the visual character of the project site would change from a vacant, undeveloped land with native vegetation to a commercial shopping center. Existing commercial shopping centers and single-family residential uses are situated across the street from the project site on the north side of Bear Valley Road and the west side of Amethyst Road. Vacant, undeveloped lots are situated to the east and south of the project site. The proposed commercial uses would be comparable in height and appearance to the existing commercial shopping centers to the north and west of the project site. While the proposed project would alter the visual character of the project site, the proposed project would be compatible with the surrounding commercial development and would not degrade the visual character and quality of the surrounding area.

The project site is in the C-2T zoning district and has a General Plan land use designation of Commercial. The proposed project would be designed to comply with the applicable regulations of the City's Zoning Code, including the City's design guidelines for commercial development, and would be consistent with the General Plan land use designation. As the proposed project would not degrade the visual character or quality of the project site and its surrounding area and would not conflict the City's Zoning Code and design guidelines for commercial development, a less-than-significant impact is anticipated.

d) **Less-Than-Significant Impact**. The project site does not have any existing sources of light. However, existing nighttime lighting sources are present in the surrounding area and provide ambient nighttime lighting. Existing nighttime lighting sources in the surrounding area include streetlights, vehicle headlights, surface parking lot lights, and interior and exterior building illumination from the surrounding commercial and single-family residential uses. The proposed project would provide lighting within the proposed surface parking lot and on the proposed structures. Although the proposed project would introduce new lighting to the project site, lighting levels would be consistent with existing nighttime lighting levels of the surrounding area and would comply with the City's lighting regulations.

The proposed project does not include features that would be a major source of glare during the day and night. The proposed structures would be constructed with primarily non-reflective materials, such as stucco on the exterior facades. The use of glass would be limited to windows and is not expected to generate substantial amount of glare that would affect the surrounding area. Headlights from vehicles entering and exiting the project site would not directly shine onto nearby residences.

The proposed project would comply with the City's design guidelines for commercial development, which requires that lighting be shielded away from adjacent properties and that uplighting of building elements and trees use the lowest wattage possible to minimize impacts to the night sky. As proposed lighting on the project site would be consistent with the lighting levels of the surrounding area, would not cause light to spill over onto the surrounding residential properties, and would not create new sources of substantial glare, a less-than-significant impact on lighting and glare would occur.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
3.2 AGRICULTURE AND FORESTRY RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☑
b) Conflict with existing zoning for agricultural use, or a Williamson Act Contract?	☐	☐	☐	☑
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☑
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☑
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☑

a-b) **No Impact**. The California Department of Conservation manages the Farmland Mapping and Monitoring Program, which identifies and maps agricultural resources. The California Department of Conservation designates the project site as Grazing Land and is not located on land designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.[6] Additionally, the project site is not located within a zone designated for agricultural use or an area that is designated as Williamson Act contract lands. No agricultural uses or related operations are present within the project site or in the surrounding area. Therefore, no impact would occur.

c-d) **No Impact**. The project site is not zoned as forest land. No forest land or forest resources are located on the project site or in the surrounding area. Therefore, no impact would occur.

e) **No Impact**. As discussed in Responses to Checklist Questions 3.2a through 3.2d, no agricultural or forestry operations occur on the project site or its vicinity. The proposed project would not introduce any changes that would result in the conversion of farmland or forest land to non-agricultural or forest use, respectively. Therefore, no impact would occur.

[6]California Department of Conservation, *California Important Farmland Finder*, https://maps.conservation.ca.gov/DLRP/CIFF/, accessed September 2021.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
3.3 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?	☐	☐	☑	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard?	☐	☐	☑	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☑	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☑	☐

A Greenhouse Gas (GHG) Emissions Impact Study—which is included in Appendix A—was prepared for the proposed project in September 2021. The following air quality analysis is based on emissions modeling prepared for the GHG Emissions Impact Study using the preferred regulatory model and methodology. Air pollutant emissions that would result from construction and operation of the proposed project are addressed separately for each impact criterion. In accordance with the CEQA Guidelines that allow lead agencies to rely on significance thresholds established by local regulatory agencies, the air quality impact assessment was prepared following guidance and methodologies promulgated by the Mojave Desert Air Quality Management District (MDAQMD), which is charged with regional air quality jurisdiction for the majority of the Mojave Desert Air Basin (MDAB) in which the project site is located. The primary guidance is contained in the MDAQMD *California Environmental Quality Act (CEQA) and Federal Conformity Guidelines*, which was published in 2016.[7] The MDAQMD guidelines were developed to assist in the preparation of environmental analysis and review documents for all CEQA projects within its jurisdiction.

The proposed project is located within the San Bernardino County portion of the West Mojave Desert federal designation area. Under the Federal Clean Air Act the West Mojave Desert is designated as attainment or maintenance of the National Ambient Air Quality Standards (NAAQS) for nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), and fine particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) and is designated as nonattainment of the NAAQS for eight-hour-average ozone (O_3) and 24-hour-average respirable particulate matter less than 10 microns in diameter (PM_{10}). The MDAQMD adopted federal attainment plans for O_3 in 2008 and 2016 and for PM_{10} in 1995 to demonstrate the timeline for reducing ambient concentrations below the applicable NAAQS. In accordance with the State CEQA Guidelines, the MDAQMD promulgated its guidance for CEQA projects to ensure that they will not: (1) cause or contribute to any new violation of any air quality standard; (2) increase the frequency or severity of any existing violation of any air quality standard; or (3) delay timely attainment of any air quality standard or any required interim emission reductions or other milestones of the federal attainment plans for O_3 and PM_{10}.

[7]MDAQMD, *California Environmental Quality Act (CEQA) and Federal Conformity Guidelines*, August 2016.

Under the California Clean Air Act, the San Bernardino County portion of the West Mojave Desert is designated as attainment or maintenance of the California Ambient Air Quality Standards (CAAQS) for NO_2, CO, and SO_2 and is designated nonattainment of the CAAQS for O_3, PM_{10}, and $PM_{2.5}$. Based on the federal and state attainment designations, pollutants of potential concern that would be emitted by construction and operation of the proposed project include O_3 atmospheric precursors such as volatile organic compounds (VOC) and oxides of nitrogen (NO_X), as well as particulate matter. The MDAQMD has established quantitative screening thresholds of significance for mass daily and annual emissions of air pollutants generated by CEQA projects. **Table 3-1** presents the MDAQMD mass emissions screening thresholds that are used to evaluate whether projects could result in significant air quality impacts. According to the MDAQMD, relying on an emissions comparison to the daily and annual thresholds is generally sufficient to demonstrate that significant air quality impacts would not occur with implementation of a project. In the event that any project that generates total emissions (direct and indirect) in excess of the thresholds given in **Table 3-1**, further assessment of potential air quality violations, attainment and maintenance plan consistency, and exposures of sensitive receptors to pollutant concentrations would be required.

TABLE 3-1: MDAQMD SIGNIFICANT EMISSIONS THRESHOLDS

Pollutant	Daily Threshold (lbs./day)	Annual Threshold (tons/year)
Volatile Organic Compounds (VOC)	137	25
Nitrogen Oxides (NO_X)	137	25
Carbon Monoxide (CO)	548	100
Sulfur Oxides (SO_X)	137	25
Particulate Matter (PM_{10})	82	15
Fine Particulate Matter ($PM_{2.5}$)	65	12

SOURCE: MDAQMD, 2016.

a) **Less-Than-Significant Impact**. The MDAQMD published its significant emissions thresholds as a screening tool to aid in determining whether further evaluation of a project's potential impacts to air quality is necessary. The analysis of proposed project air quality impacts was prepared in accordance with the guidance provided by the MDAQMD. Through coordination with the proposed project design team, a 10-month construction schedule was developed with phase durations and inventories of personnel, off-road equipment, and vehicles needed to complete each activity. The California Emissions Estimator Model (CalEEMod Version 2020.4.0) was used to prepare estimates of air pollutant emissions that would be generated during construction and future operation of the proposed project. Future operation of the proposed project would predominately produce emissions through remote vehicle trips accessing land uses comprising the proposed project, as well as ancillary emissions associated with natural gas combustion, consumer products use, and landscaping. Detailed emissions modeling files are provided in Appendix A.

Construction

Construction of the proposed project has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated by construction workers and hauling and delivery trucks traveling to and from

the project site. Fugitive dust emissions would primarily result from equipment involved in site clearing and leveling activities. NO_X emissions would predominantly result from off-road construction equipment exhaust and on-road vehicle exhaust associated with vendor deliveries and haul truck trips. The assessment of construction air quality impacts considers all of these emissions sources. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation and, for dust, the prevailing weather conditions. The analysis of proposed project construction emissions sought to identify the maximum daily emissions that would occur during construction, as well as the total amount of pollutants that would be generated during the timeframe.

Construction of the proposed project is anticipated to begin in early 2022 and last for approximately 10 months. Construction of the proposed project would involve site clearing and leveling (approximately one month) followed by building construction (approximately nine months), during which time paving and landscaping and finishing of building structures would occur (both lasting two months). All construction activities would be subject to the provisions of the MDAQMD Rule Book, which includes regulations pertaining to fugitive dust control (Rule 403). Rule 403 control requirements include measures to prevent the generation of visible dust plumes including, but not limited to:

- Using periodic watering for short-term stabilization of disturbed surface area to minimize visible fugitive dust emissions (i.e., employing a water truck to spread water during visible dusting episodes);
- Using chemical stabilization or coverings with a stabilizing layer of gravel to eliminate visible dust/sand from sand/fines deposits for construction activities that would expose sand or fines deposits, or would expose such soil through earth moving activities;
- Installing perimeter fencing that are wind fencing or equivalent and have a minimum height of four feet;
- Stabilizing roads and parking areas with chemical, gravel, or asphaltic pavement sufficient to eliminate visible fugitive dust from vehicular travel and wind erosion.
- Taking actions sufficient to prevent project-related trackout onto paved surfaces;
- Covering loaded haul vehicles while operating on publicly maintained paved surfaces;
- Stabilizing graded site surfaces upon completion of grading when subsequent development is delayed or expected to be delayed more than 30 days;
- Cleanup of project-related trackout or spills on publicly maintained paved surfaces within 24 hours;
- Stabilizing earthen surfaces by natural or irrigated vegetation, compaction, chemical or other means sufficient to prohibit visible fugitive dust from wind erosion;
- Reducing non-essential earth-moving activity during high wind conditions;
- Covering or otherwise containing bulk material carried on haul trucks operating on paved roads; and,
- Removing bulk material tracked onto paved road surfaces.

Based on the documented efficacy of fugitive dust control measures, compliance with Rule 403 would reduce fugitive $PM_{2.5}$ and PM_{10} emissions associated with ground area disturbance and material stockpiling during construction by approximately 61 percent. Implementation of Mitigation Measures **AQ-1** and **AQ-2** would ensure that Rule 403 control requirements are implemented during construction.

Table 3-2 shows the maximum daily emissions that would be generated during each phase of proposed project construction with and without implementation of Rule 403. The table also presents the combined emissions that would occur from overlapping activities. As shown, maximum daily emissions of all air pollutants would remain substantially below all applicable MDAQMD thresholds identified in **Table 3-1**, above.

TABLE 3-2: ESTIMATED MAXIMUM DAILY CONSTRUCTION EMISSIONS

Activity & Source Location	Pounds Per Day							
	VOC	NO_X	CO	SO_X	PM_{10} (without Rule 403)	PM_{10} (with Rule 403)	$PM_{2.5}$ (without Rule 403)	$PM_{2.5}$ (with Rule 403)
SITE PREPARATION								
On-Site Emissions	2.2	22.6	13.9	<0.1	14.2	6.2	7.8	3.6
Off-Site Emissions	0.3	4.7	2.2	<0.1	7.3	4.8	0.9	0.7
Total	**2.4**	**27.3**	**16.1**	**<0.1**	**21.5**	**11.0**	**8.7**	**4.3**
CONSTRUCTION								
On-Site Emissions	1.3	13.9	15.8	<0.1	0.6	0.6	0.6	0.6
Off-Site Emissions	0.7	4.2	5.6	<0.1	27.3	17.5	3.1	2.1
Total	**2.0**	**18.1**	**21.3**	**<0.1**	**27.9**	**18.1**	**3.7**	**2.7**
PAVING								
On-Site Emissions	1.6	11.1	14.6	<0.1	0.6	0.6	0.5	0.5
Off-Site Emissions	0.1	0.5	1.2	<0.1	6.7	4.3	0.7	0.5
Total	**1.7**	**11.6**	**15.8**	**<0.1**	**7.3**	**4.8**	**1.2**	**1.0**
ARCHITECTURAL COATING								
On-Site Emissions	56.4	2.8	3.6	<0.1	0.2	0.2	0.2	0.2
Off-Site Emissions	0.1	0.3	1.1	<0.1	6.7	4.2	0.7	0.5
Total	**56.5**	**3.1**	**4.7**	**<0.1**	**6.9**	**4.4**	**0.9**	**0.6**
BUILDING CONSTRUCTION + PAVING + ARCHITECTURAL COATING OVERLAP								
On-Site Emissions	59.3	27.9	34.0	<0.1	1.4	1.4	1.3	1.3
Off-Site Emissions	1.0	4.9	7.9	<0.1	40.7	26.0	4.5	3.1
Total	**60.3**	**32.8**	**41.9**	**<0.1**	**42.1**	**27.4**	**5.8**	**4.4**
DAILY EMISSIONS ANALYSIS								
Maximum Daily Emissions	**60.3**	**32.8**	**41.9**	**0.1**	**42.1**	**27.4**	**8.7**	**4.4**
MDAQM Daily Threshold	137	137	548	137	82	82	65	65
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Note: Emissions modeling files can be found in **Appendix A**.
Total may not add up due to rounding.
SOURCE: TAHA, 2021.

Table 3-3 presents the annual emissions analysis based on the total amount of air pollutants that would be generated during the entire construction period. Total emissions of all modeled pollutants would remain substantially below the corresponding annual MDAQMD thresholds. In accordance with the guidance promulgated by MDAQMD, the results of the screening analysis demonstrate that construction of the proposed project would not have any potential to exacerbate the frequency or severity of air quality violations. This impact would be less than significant.

TABLE 3-3: ESTIMATED ANNUAL CONSTRUCTION EMISSIONS

	Tons Per Year							
Phase	**VOC**	**NO_X**	**CO**	**SO_X**	**PM_{10} (without Rule 403)**	**PM_{10} (with Rule 403)**	**$PM_{2.5}$ (without Rule 403)**	**$PM_{2.5}$ (with Rule 403)**
Site Preparation	<0.1	0.2	0.2	<0.1	0.1	0.1	<0.1	<0.1
Building Construction	0.2	1.8	2.1	<0.1	2.7	1.6	0.4	0.3
Paving	<0.1	0.3	0.4	<0.1	0.2	0.1	<0.1	<0.1
Architectural Coating	1.3	0.1	0.1	<0.1	0.2	<0.1	<0.1	<0.1
Total	**1.5**	**2.4**	**2.7**	<0.1	**3.2**	**1.9**	**0.5**	**0.3**
MDAQMD Annual Threshold	25	25	100	25	15	15	12	12
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Note: Emissions modeling files can be found in **Appendix A**.
Total may not add up due to rounding.
SOURCE: TAHA, 2021.

Operation

The proposed project would generate regional operational emissions from vehicle trips and area sources such as consumer products use, landscaping, and natural gas combustion. Based on the traffic analysis prepared for the proposed project, the proposed land uses would generate 9,474 daily vehicle trips, with 1,970 daily pass-by trips and 7,504 daily primary trips. The trip generation estimates were included in the CalEEMod analysis for operational emissions. Default natural gas combustion rates for commercial projects within the Mojave Desert portion of San Bernardino County were used in the operational analysis. **Table 3-4** presents the CalEEMod estimated emissions for operation of the proposed project and compares them to the applicable MDAQMD daily and annual screening thresholds. Future occupation of the proposed project would not result in daily or annual emissions that exceed MDAQMD thresholds for any applicable pollutant. Therefore, air quality impacts during proposed project operations would be less than significant.

TABLE 3-4: ESTIMATED OPERATIONAL EMISSIONS

Operational Source Activity	Daily Emissions (Pounds Per Day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
PROPOSED PROJECT EMISSIONS						
Area Sources	2.9	<0.1	<0.1	<0.1	<0.1	<0.1
Energy Sources	0.1	0.9	0.7	<0.1	<0.1	<0.1
Mobile Sources	23.1	20.1	195.0	0.4	42.7	11.5
DAILY EMISSIONS ANALYSIS						
Daily Operational Emissions	**26.1**	**21.0**	**195.9**	**0.4**	**42.8**	**11.6**
MDAQMD Daily Threshold	137	137	548	137	82	65
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
ANNUAL EMISSIONS ANALYSIS						
	Annual Emissions (Tons Per Year)					
Total Annual Operating Emissions	**4.7**	**3.9**	**37.1**	**<0.1**	**7.6**	**2.1**
MDAQMD Annual Threshold	25	25	100	25	15	12
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Note: Emissions modeling files can be found in **Appendix A**.
SOURCE: TAHA, 2019.

b) Less-Than-Significant Impact. As discussed above, the West Mojave Desert is designated as nonattainment of the NAAQS for O_3 and PM_{10} and is designated as nonattainment of the CAAQS for O_3, PM_{10}, and $PM_{2.5}$. Therefore, there is an ongoing regional cumulative impact associated with these air pollutants. In accordance with the MDAQMD guidance, the proposed project would not have a significant air quality impact related to emissions of nonattainment pollutants so long as maximum daily and annual emissions would remain below the corresponding MDAQMD screening thresholds. As disclosed above in **Table 3-2** through **Table 3-4**, construction and operation of the proposed project would not generate emissions in excess of any daily or annual threshold. Therefore, implementation of the proposed project would have a less-than-significant air quality impact related to emissions of nonattainment pollutants within the Western Mojave Desert attainment designation area.

c) Less-Than-Significant Impact

Construction

As shown in **Table 3-2** and **Table 3-3**, criteria pollutant and ozone-precursor emissions would remain below applicable MDAQMD thresholds, which indicates there is no possibility for the occurrence of substantial concentrations of these pollutants reaching sensitive receptors. In accordance with the MDAQMD CEQA guidance, this screening analysis is sufficient to demonstrate that the proposed project would result in less-than-significant impacts related to substantial pollutant concentrations.

With regards to concentrations of air toxics, the use of heavy-duty construction equipment and haul trucks during construction activities would release diesel PM to the atmosphere through exhaust emissions. Diesel PM is a known carcinogen, and extended exposure to elevated concentrations of diesel PM can increase excess cancer risks in individuals. However, carcinogenic risks are typically assessed over timescales of several years to decades, as the carcinogenic dose-response is cumulative in nature.

Short-term exposures to diesel PM would have to involve extremely high concentrations in order to exceed the MDAQMD air quality significance threshold of 10 excess cancers per million.

Construction of the proposed project would persist for approximately 10 months, which represents less–than-three percent of the 30-year exposure period that the Office of Environmental Health Hazard Assessment (OEHHA) utilizes for assessing long-term residential and occupational carcinogenic exposures and risks. Implementation of Mitigation Measure **AQ-3** would ensure that the proposed project would comply with the CARB In-Use Off-Road Diesel Vehicle Regulation and the Airborne Toxics Control Measures, which limit diesel powered equipment and truck idling to no more than five minutes at any particular location and minimizes diesel PM emissions through inspections and maintenance. Implementation of Mitigation Measure **AQ-4** would require the construction contractor to obtain MDAQMD permits for any equipment that are not exempt under Rule 219, which would control the amount of air contaminants that may potentially be released by construction equipment. Adhering to these provisions would ensure that substantial diesel PM concentrations and other potential air contaminants at sensitive receptor locations would not be generated by on-site equipment activity. A majority of haul truck diesel PM emissions would be dispersed along the haul truck route, and at the project site haul truck idling would be limited to five minutes or less as required by the CARB truck rule. Therefore, the proposed project would result in a less-than-significant impact related to construction TAC emissions, concentrations, and exposures.

Operation

The proposed project does not include an industrial component that would constitute a new substantial stationary source of operational air pollutant emissions, nor does it include a land use that would generate a substantial number of heavy-duty truck trips within the region. Operations of the proposed project would have no substantial source of air toxic emissions. As shown in **Table 3-4**, operational emissions associated with proposed project land uses would produce daily and annual emissions substantially below the applicable MDAQMD screening threshold values. Therefore, operation of the proposed project would have a less-than-significant impact related to substantial pollutant concentration exposures at sensitive receptor locations.

d) Less-Than-Significant Impact

Construction

Odors are the only potential construction emissions other than the sources addressed above in Responses to Checklist Questions 3.3a through 3.3c. Potential sources that may produce objectionable odors during construction activities include equipment exhaust, application of asphalt and architectural coatings, and other interior and exterior finishes. Odors from these sources would be localized, generally confined to the immediate area surrounding the project site, would be temporary in nature, and would not persist beyond the termination of construction activities. The proposed project would utilize typical construction techniques, and the odors would be typical of most construction sites. In addition, as construction-related emissions dissipate away from the construction area, the odors associated with these emissions would also decrease and would be quickly diluted. Therefore, the proposed project would result in a less-than-significant impact related to construction odors.

Operation

Odors are the only potential operational emissions other than the sources addressed above in Responses to Checklist Questions 3.3a through 3.3c. Land uses and industrial operations that are associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies and fiberglass molding.[8] The proposed restaurants would produce some odors and smells associated with the preparation of food, but operations of these restaurants would comply with MDAQMD Rule 401 and Rule 402, which would prohibit any air quality discharge that would create visible dust plumes or be a nuisance or pose any harm to individuals of the public. On-site trash receptacles would have the potential to create adverse odors. The facility would properly maintain odors associated with trash in compliance with the City of Victorville Municipal Code. Therefore, the proposed project would result in a less-than-significant impact related to operations odors.

MITGATION MEASURES

AQ-1 Prior to commencement of ground disturbing activities, the project applicant and construction contractor shall prepare and submit a dust control plan to the Mojave Desert Air Quality Management District (MDAQMD). The dust control plan shall describe all applicable dust control measures that will be implemented during all construction activities (including site clearing, grading, building construction, paving, and architectural coating) to limit the generation of visible dust plumes. Rule 403 control measures to be incorporated into the dust control plan include, but are not limited to, the following:

- Use a water truck to maintain moist disturbed surfaces and actively spread water during visible dusting episodes to minimize visible fugitive dust emissions.
- For construction activities that would expose sand or fines deposits, or would expose such soil through earth moving activities, use chemical stabilization or coverings with a stabilizing layer of gravel to eliminate visible dust/sand from sand/fines deposits. All perimeter fencing shall be wind fencing or the equivalent, and perimeter fencing shall be at least 4 feet tall. The owner/operator shall maintain the fencing as needed to keep it intact and remove windblown dropout.
- Covering loaded haul vehicles while operating on publicly maintained paved surfaces.
- Stabilize all maintenance and access vehicle roads and parking areas with chemical, gravel, or asphaltic pavement sufficient to eliminate visible fugitive dust from vehicular travel and wind erosion.
- Take actions to prevent project-related trackout onto paved surfaces.
- Cleanup project-related trackout or spills on publicly maintained paved surfaces within 24 hours;
- Earthen surfaces within the project site that are not used for maintenance and access vehicle roads and parking areas shall be stabilized by natural or irrigated vegetation, compaction, chemical or other means sufficient to prohibit visible fugitive dust from wind erosion.
- Reducing non-essential earth-moving activity during high wind conditions;
- Covering or otherwise containing bulk material carried on haul trucks operating on paved roads; and,

[8]SCAQMD, *CEQA Air Quality Handbook*, 1993.

- Removing bulk material tracked onto paved road surfaces.

AQ-2 Signage that is compliant with MDAQMD Rule 403 Attachment B shall be erected at the project site entrance prior to the commencement of construction.

AQ-3 The construction contractor shall be required to comply with the California Air Resources Board (CARB) In-Use Off-Road Diesel Vehicle Regulation and Air Toxics Control Measures during all construction activities, including site clearing, building construction, paving, and architectural coating. To ensure compliance with these regulations and control measures the following measures shall be implemented during construction activities:

- Diesel-powered equipment and truck idling shall be limited to no more than five minutes at any particular location.
- Diesel-powered equipment and vehicles shall be routinely inspected and maintained to limit diesel PM emissions.

AQ-4 The construction contractor shall obtain MDAQMD permits for any miscellaneous process equipment that may not be exempt under MDAQMD Rule 219 including, but not limited to, internal combustion engines with a manufacture's maximum continuous rating greater than 50 break horsepower.

		Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
3.4 BIOLOGICAL RESOURCES. Would the project:					
a)	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 Game or U.S. Fish and Wildlife Service?	☐	☑	☐	☐
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☑	☐	☐
c)	Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☑
d)	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?	☐	☑	☐	☐
e)	Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance (e.g., oak trees or California walnut woodlands)?	☐	☐	☑	☐
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☑

a) Less-Than-Significant Impact with Mitigation Incorporated. A Baseline Biological Survey was conducted for the project site and the adjacent undeveloped parcels by Phoenix Biological Consulting in August 2021 to identify sensitive biological resources that have the potential to occur within or adjacent to the project site. The Baseline Biological Survey included a records search and a field survey. The records search was conducted using the California Natural Diversity Database (CNDDB), a computerized database that identifies past occurrences of species of special concern (e.g., plants, animals, and communities that are rare, threatened, or endangered). The field survey was conducted on the project site and the adjacent undeveloped lots on July 20, 2021.[9]

The CNDDB records search indicated eight sensitive plant species occur within 10 miles of the project site; however, none of the plant species were detected during the field survey. The field survey identified six Joshua trees (*Yucca brevifolia*) on the project site, which was recently listed as a candidate species for listing as a threatened species under the CESA. As a candidate species, the Joshua tree is protected under CESA during the listing process and is protected from unauthorized take under CESA Section 2085. The Joshua trees have the potential to be disturbed during construction of the

[9]Phoenix Biological Consulting, *Baseline Biological Survey for Amethyst Crossing,* City of Victorville, County of San Bernardino, State of California, August 27, 2021.

proposed project. If the Joshua trees are removed or relocated, an incidental take permit must be obtained from the CDFW prior to its removal or relocation, as required under CESA Section 2081(b). As part of the incidental take permit, the permittee must implement species-specific minimization and avoidance measures, and impacts on CESA-listed species must be fully mitigated. Per CESA Section 2081(c), CDFW would not issue a permit if the permit would jeopardize the continued existence of the species.

The CNDDB records search and field survey did not detect any sensitive animal species to have occurred on the project site. During the field survey, small mammal burrows were identified on the project site. These burrows appear to be old white tailed antelope ground squirrel burrows (*Ammospermophilus leucurus*) and are inactive by evidence of thick cobwebs, plants, and debris that are present in the burrow holes. Burrowing owls, a California species of special concern, was not present at the project site during the field survey; however, the Baseline Biological Survey recommends a pre-construction survey be conducted within 30 days prior to clearing and grubbing of the project site to ensure burrowing owls have not immigrated onto the project site since the biological study was performed.

Given that Joshua trees has been recently listed by CDFW as a candidate threatened species and the potential for burrowing owls to be present on the project site during construction on the project site, Mitigation Measures **BR-1** and **BR-2** would be required. If Joshua trees are relocated, Mitigation Measure **BR-1** would minimize shock during transplanting. This mitigation measure would also ensure that all minimization and avoidance measures that are part of the CDFW incidental take permit are followed. Mitigation Measure **BR-2** would require a preconstruction survey of the project site prior to clearing/vegetation removal, grubbing, and ground disturbance activities to ensure that no burrowing owls are present on the project site. If burrowing owls are detected, CDFW would be consulted to determine the amount of habitat that is needed to protect the burrowing owls and to relocate the owls prior to clearing/vegetation removal, grubbing, and ground disturbance activities. With implementation of Mitigation Measures **BR-1** and **BR-2**, impacts on Joshua trees and burrowing owls would be reduced to less-than-significant levels.

b) **Less-Than-Significant Impact with Mitigation Incorporated**. A significant impact would occur if any riparian habitat or other sensitive natural community would be lost or destroyed as a result of urban development. The Baseline Biological Survey did not detect any riparian habitat or annual rare plants on the project site. As discussed in Response to Checklist Question 3.4a, the project site contains six Joshua trees, which is identified by CDFW as a sensitive natural community.[10] Additionally, Joshua trees was recently listed as a candidate species for listing as a threatened species under the CESA. If the Joshua trees are relocated or removed, an incidental take permit must be obtained from the CDFW prior to the removal or relocation of the Joshua trees. The incidental take permit would identify and the permittee would be required to implement species-specific minimization and avoidance measures to protect the Joshua trees. Implementation of Mitigation Measure **BR-1** would be required to ensure that the proposed project would not adversely affect the Joshua trees. Therefore, a less-than-significant impact would occur with implementation of Mitigation Measure **BR-1**.

[10]California Department of Fish and Wildlife, *California Natural Community List*, August 18, 2021, available at https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=153398&inline, accessed September 13, 2021.

c) **No Impact**. A significant impact would occur if federally protected wetlands would be modified or removed as a result of the proposed project. No intermittent streams or riparian vegetation are located within or adjacent to the project site, and the project site does not contain any state or federally protected wetlands. The proposed project would not have any 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. Therefore, no impact would occur.

d) **Less-Than-Significant Impact with Mitigation Incorporated**. A significant impact would occur if the proposed project would interfere with, or remove access to, a migratory wildlife corridor or impede use of native wildlife nursery sites. The area to the north and west of the project site is developed with urban uses. Although the project site and the properties to the south and east of the project site are undeveloped, no wildlife corridors are present on or in proximity to the project site. The project site does not serve as a wildlife corridor between large open space habitats and does not contain any state or federally protected wetlands that would contain migratory fish or other wildlife species. However, the project site supports limited nesting opportunities for some migratory bird species. Although migratory birds were not detected on the project site during the field survey for the Baseline Biological Survey, migratory birds could traverse the project site and could potentially use on-site vegetation for nesting. The relocation and removal of on-site vegetation could potentially affect migratory birds; however, the proposed project is required to comply with the Migratory Bird Treaty Act (MBTA)[11] and the California Fish and Game Code (CFGC).[12] Under the MBTA and CFGC, it unlawful to take or possess any migratory nongame bird.[13] To ensure that the proposed project complies with the MBTA and CFGC, implementation of Mitigation Measures **BR-2** and **BR-3** would be required. By performing burrowing owl and bird breeding surveys prior to clearing/vegetation removal and ground disturbance activities, as well as avoiding clearing/vegetation removal and ground disturbing activities during the bird-breeding season, the proposed project will be in compliance with the MBTA and pertinent sections of the CFGC. With implementation of Mitigation Measures **BR-2** and **BR-3**, the proposed project is not expected to interfere with wildlife movement or impede the use of native wildlife nursery sites. Therefore, a less-than-significant impact would occur with implementation of Mitigation Measures **BR-2** and **BR-3**.

e) **Less-Than-Significant Impact**. VMC Title 13, Chapter 13.33 requires preservation of Joshua trees given their importance in the desert community. Six Joshua trees are present on the project site and, thus, the project applicant would be required to comply with the City's ordinance to preserve Joshua trees. The ordinance prohibits the removal of Joshua trees without obtaining approval from the Director of Parks and Recreation. Additionally, as discussed in Response to Checklist Question 3.4a, Joshua trees are protected under CESA as it is a candidate species for listing as a threatened species, and the project applicant must obtain an incidental take permit from CDFW prior to the removal or relocation of Joshua trees. As the proposed project would comply with the City's Joshua Tree Preservation Ordinance and CESA, the proposed project would not

[11]Migratory Bird Treaty Act, 16 USC Chapter 7, Subchapter II, Section 703.
[12]California Fish and Game Code Section 3513.
[13]"Take" is defined by the U.S. Fish and Wildlife Service (Federal Endangered Species Act Section 3(19) as to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." "Take" is defined by the California Fish and Game Code Section 86 as to "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.

conflict with any policies or ordinances protecting biological resources. Therefore, a less-than-significant Impact would occur.

f) **No Impact**. The project site is not located within or adjacent to the boundaries of any adopted habitat conservation plans, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. Therefore, no impact would occur.

MITGATION MEASURES

BR-1 The project applicant shall maintain the Joshua trees (*Yucca brevifolia*) at its current location on the project site. If any Joshua trees are to be relocated, removed, or otherwise taken, the project applicant shall obtain an incidental take permit from California Department of Fish and Wildlife (CDFW) prior to the relocation, removal, or take. The project applicant shall comply with all minimization and avoidance measures associated with the incidental take permit. A qualified biologist shall be present on the project site during all ground disturbance activities and shall oversee all project-related staging, storage areas, laydown areas, equipment storage, installation of exclusionary fencing, and any other ground disturbing activities to ensure that all minimization and avoidance measures that are part of the incidental take permit are followed.

Any Joshua Trees that are to be relocated on- or off-site shall require approval from the City of Victorville and shall comply with City standards, including the City's Joshua Tree Preservation Ordinance. If Joshua Trees are to be relocated on-site, the proposed location shall be identified in a landscape plan and a replanting plan shall be prepared and approved by the City. The replanting plan shall be prepared by a botanist or biologist, and recommendations from the botanist or biologists shall be incorporated into the landscape plan and implemented.

BR-2 To comply with MBTA (16 United States Code Chapter 7, Subchapter II, Section 703) and California Fish and Game Code Section 3513, a preconstruction survey shall be conducted within 30 days prior to any clearing/vegetation removal, grubbing, and ground disturbance activities to determine the presence of any burrowing owls or active burrows on the project site. If no burrowing owls or active burrows are detected, construction may proceed. If clearing/vegetation removal, grubbing, and ground disturbance activities are delayed or suspended for more than 30 days, the project site shall be resurveyed. In the event a burrowing owl or active burrow is detected, the project applicant shall consult with CDFW to determine the amount of habitat that is needed to protect the burrowing owl or active burrow on the project site and to successfully relocate the owl prior to clearing/vegetation removal, grubbing, and ground disturbance activities.

BR-3 Activities involving the removal of any trees, shrubs, or any other potential nesting habitat on the project site shall be performed prior to or after the bird-breeding season of February 1st through August 15th (i.e., only between August 16 and January 31). If clearing/vegetation removal and ground disturbing activities plan to occur during the breeding season, a bird breeding survey shall be conducted to determine if birds are nesting on the project site. The survey shall be conducted by a qualified biologist no more than seven days prior to any clearing/vegetation removal and ground disturbance activities. Work may proceed only if no active bird nests are detected. If breeding birds are detected on the project site, the project applicant shall either modify the clearing/vegetation removal and ground disturbance operations to avoid those nesting areas or postpone clearing/vegetation removal and ground disturbance operations until

the breeding season is over. A qualified biologist shall be present on the project site to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by construction activities. Once a qualified biologist determines that the young have fledged or the nest otherwise becomes inactive under natural conditions, normal construction activities can occur. The qualified biologist has the authority to stop work if nesting pairs exhibit signs of disturbance.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
3.5 CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	☐	☐	☑
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☑	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☑	☐	☐

a) **No Impact**. CEQA Guidelines Section 15064.5 generally defines a historical resource as any object, building, structure, site, area, place, record, or manuscript determined to be historically significant or significant in the architectural or cultural annals of California. Historical resources are further defined as being associated with significant events, important persons, or distinctive characteristics of a type, period or method of construction; representing the work of an important creative individual; or possessing high artistic values. The project site is undeveloped, and no structures are located on the project site. As part of the Paleontological/Cultural Resources Assessment for the project site, a records search was requested at the South Central Coastal Information Center (SCCIC). Results of the records search found three cultural resources within half-mile of the project site, but no cultural resources have been previously identified within the project site. The three identified resources include remnants of the Oro Grande Wash Road and two resources that are associated trash scatters dating from both pre- and post-World War II. Two of the resources (remnants of the Oro Grande Wash Road and trash scatters) have not been evaluated for National Register of Historic Places (NRHP) or California Register of Historic Resources (CRHR) eligibility, and one of the resources (trash scatters) is not eligible for listing in the NRHP or CRHR.[14] The project site is not listed or eligible for listing in the NRHP, CRHR, California Historical Landmarks, and California Points of Historical Interest. The project site also does not contain any resources that are considered locally historic and is not located in a historic district zone. Therefore, no impact would occur.

b) **Less-Than-Significant Impact with Mitigation Incorporated**. A significant impact would occur if a known or unknown archaeological resource would be removed, altered, or destroyed as a result of the proposed project. CEQA Guidelines Section 15064.5 defines significant archaeological resources as resources which meet the criteria for historical resources, as discussed above, or resources that constitute unique archaeological resources associated with a scientifically recognized important prehistoric or historic event or person.

According to the Paleontological/Cultural Resources Assessment for the project site, the project site is considered to have low sensitivity for cultural resources, including archaeological resources. No archaeological resources were observed during a pedestrian field survey of the project site that was conducted as part of the Paleontological/Cultural Resources Assessment. The pedestrian field survey was

[14]Duke CRM, *Paleontological/Cultural Resources Assessment for 24-Acre Project, City of Victorville, County of San Bernardino, California (Project Number C-0370),* September 23, 2021.

conducted on August 19, 2021. Although no archaeological resources are known to exist on the project site, changes to the proposed project may have the potential to disturb sediment that are previously undisturbed, and it is possible that unanticipated archaeological resources may be encountered during ground disturbance. Implementation of Mitigation Measure **CR-1** would be required to reduce the potential for the destruction of any significant archaeological resource. This mitigation measure would require construction to stop and have a qualified archaeologist to evaluate the find in the event archaeological resources are encountered during ground disturbance activities. Therefore, with implementation of Mitigation Measure **CR-1**, impacts related to archaeological resources would be less than significant.

c) **Less-Than-Significant Impact with Mitigation Incorporated**. The project site is not part of a formal cemetery and is not known to have been used for disposal of historic or prehistoric human remains. There are no known human remains on the site, and human remains are not expected to be encountered during construction of the proposed project. While no formal cemeteries, burial grounds or sites, or other places of human interment are known to exist within the project site, there is always a possibility that human remains may be unexpectedly encountered during construction. Implementation of Mitigation Measures **CR-2** and **CR-3** would ensure that construction activities would not disturb human remains. Mitigation Measure **CR-2** would ensure compliance with California Health and Safety Code Section 7050.5 and would require notification of the County Coroner in the unlikely event that human remains are discovered. Mitigation Measure **CR-3** would ensure compliance with Public Resources Code (PRC) Section 5097.98 in the unlikely event that Native American human remains are discovered. Mitigation Measure **CR-3** would require notification of the most likely descendent from the deceased Native American. With implementation of Mitigation Measures **CR-2** and **CR-3**, impacts related to human remains would be less than significant.

MITIGATION MEASURES

CR-1 If archaeological resources are encountered during ground disturbing activities, the City of Victorville Planning Department, project applicant, and project archaeologist shall be immediately informed of the discovery. All work shall cease in the area of the find or diverted away from the discovery to a distance of 50 feet until a qualified archaeologist has evaluated the find in accordance with federal, state, and local guidelines, including those set forth in Public Resources Code (PRC) Section 21083.2. Personnel of the project shall not collect or move any archaeological materials or associated materials. Construction activity may continue unimpeded on other portions of the project site. If the find is classified as a significant cultural resource pursuant to the California Environmental Quality Act (CEQA) definition of historical (CEQA Guidelines Section 15064.5[a]) and/or unique archaeological resources (PRC Section 21083.2[g]), the qualified archaeologist shall make recommendations on the treatment and disposition of the finding. The final recommendations on the treatment and disposition of the finding shall be developed in accordance with all applicable provisions of PRC Section 21083.2 and CEQA Guidelines Sections 15064.5 and 15126.4 and shall be reviewed and approved by the City of Victorville Planning Department prior to implementation. The final recommendations shall be implemented, and the City Planning Department shall be provided with a final report on the treatment and disposition of the finding prior to issuance of a Certificate of Occupancy.

CR-2 In the unlikely event that human remains are encountered, the project.applicant shall notify the County Coroner of the find immediately and shall comply with Section 7050.5 of the California Health and Safety Code, which states that no further disturbance shall occur until the County Coroner has determined the origin and disposition pursuant to PRC Section 5097.98.

CR-3 If Native American human remains are discovered on the project site, pursuant to PRC Section 5097.98, persons believed to be the most likely descended from the deceased Native American shall be notified. With the permission of the property owner or his/her authorized representative, the descendants may inspect the area where the Native American remains were discovered and may recommend to the owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The descendants shall complete their inspection and make their recommendation within 48 hours of their notification by the Native American Heritage Commission. Recommendations may include, but are not limited to, scientific removal and nondestructive analysis of human remains and items associated with Native American burials. The area where the Native American human remains were discovered shall not be damaged or further disturbed until the landowner has discussed and conferred with the most likely descendants regarding their recommendation.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
3.6 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?	☐	☐	☑	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☑	☐

a-b) Less-Than-Significant Impact. The main forms of available energy supply are electricity, natural gas, and oil. During construction of the proposed project, energy would be consumed in the form of electricity associated with the conveyance of water used for dust control, powering lights, electronic equipment, or other construction activities that require electrical power. Construction activities typically do not involve the consumption of natural gas. Construction activities would consume energy in the form of petroleum-based fuels associated with the use of off-road construction vehicles and equipment, round-trip construction worker travel to the project site, and delivery and haul truck trips. Construction activities would comply with CARB's "In-Use Off-Road Diesel Fueled Fleets Regulation", which limits engine idling times to reduce harmful emissions and reduce wasteful consumption of petroleum-based fuel. Additionally, the proposed project would comply the California Renewable Portfolio Standard, the Clean Energy and Pollution reduction Act of 2015 (Senate Bill 350). Compliance with local, state, and federal regulations would reduce short-term energy demand during the proposed project's construction to the extent feasible, and proposed project construction would not result in a wasteful or inefficient use of energy.

During future operations of the proposed land uses, Southern California Edison would provide electricity and Southwest Gas would provide natural gas to the project site. Energy use associated with operation of the proposed project would be typical of commercial uses, requiring electricity and natural gas for interior and exterior building lighting, heating, ventilation, and air conditioning, electronic equipment, machinery, refrigeration, appliances, security systems, and more. Maintenance activities during operations, such as landscape maintenance, would involve the use of electric or gas-powered equipment. In addition to on-site energy use, the proposed project would result in transportation energy use associated with vehicle trips. However, the proposed project does not involve any characteristics or processes that would require the use of equipment that would be more energy intensive than is used for comparable activities or involve the use of equipment that would not conform to current emissions standards and related fuel efficiencies. Refer to Section 3.8 Greenhouse Gas Emissions for a thorough evaluation of proposed project design elements that would enhance energy efficiency and reduce reliance on natural energy resources. Therefore, a less-than-significant impact would occur.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
3.7 GEOLOGY AND SOILS. Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to division of Mines and Geology Special Publication 42.	☐	☐	☐	☑
ii) Strong seismic ground shaking?	☐	☐	☑	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☑	☐
iv) Landslides?	☐	☐	☐	☑
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☑	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potential result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☐	☑
d) Be located on expansive soil as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☑	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☑
f) Directly or indirectly destroy a unique paleontological resource or unique geologic feature?	☐	☑	☐	☐

a.i) **No Impact**. A significant impact would occur if the proposed project would exacerbate existing environmental conditions by increasing the potential to expose people or structures to the rupture of a known earthquake fault. The Alquist-Priolo Earthquake Fault Zoning Act regulates development near active faults to mitigate the hazard of surface fault rupture. It prohibits the location of most structures for human occupancy across the trace of active faults. The Act also establishes Earthquake Fault Zones and requires geologic/seismic studies of all proposed developments within 1,000 feet of the zone. The Earthquake Fault Zones are delineated and defined by the State Geologist and identify areas where potential surface rupture along a fault could occur. According to the California Department of Conservation Earthquake Zones of Required Investigation, the project site is not located within the Alquist-Priolo Special Studies Zone, and no trace of any known active or potentially active fault passes through the project site.[15] The proposed project does not involve any activities that would potentially exacerbate existing environmental conditions so

[15]California Department of Conservation, *Earthquake Zone of Required Investigation*, https://maps.conservation.ca.gov/cgs/EQZApp/app/, accessed September 2021.

as to increase the potential to expose people or structures to the rupture of a known earthquake fault. The type of development that would occur on the project site with implementation of the proposed project is typical of urban environments and would not involve deep excavation into the Earth or boring of large areas creating unstable seismic conditions or stresses in the Earth's crust that would result in the rupture of a fault. Therefore, no impact would occur.

a.ii) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project would exacerbate existing environmental conditions by increasing the potential to expose people or structures to substantial adverse effects related to strong ground shaking from severe earthquakes. As with all properties in the seismically active Southern California region, the project site is susceptible to ground shaking during a seismic event. The ground motion characteristics of any future earthquakes in the region would depend on the characteristics of the generating fault, the distance to the epicenter, the magnitude of the earthquake, and the site-specific geologic conditions. The proposed project does not include activities that would increase the potential to expose people or structures to the adverse effects involving strong seismic ground shaking. Additionally, the design and construction of the proposed building is required to conform to the California Building Code seismic standards, as well as all other applicable codes and standards to reduce impacts from strong seismic ground shaking. Therefore, a less-than-significant impact would occur.

a.iii) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project would exacerbate existing environmental conditions by increasing the potential to expose people or structures to substantial adverse effects related to seismic-related ground failure, including liquefaction. Liquefaction typically occurs when a saturated or partially saturated soil becomes malleable and loses strength and stiffness in response to an applied stress caused by earthquake shaking or other sudden change in stress conditions. Soil liquefaction occurs when loose, saturated, granular soils lose their inherent shear strength due to excess water pressure that builds up during repeated movement from seismic activity. Liquefaction usually results in horizontal and vertical movements from the lateral spreading of liquefied materials and post-earthquake settlement of liquefied materials. The proposed project would be constructed in accordance with the California Building Code, which is designed to assure safe construction and includes building foundation requirements appropriate to site conditions. Additionally, the project applicant would be required to prepare a soils engineering report per VMC Section 16-5.02.060(b)(2). The report is required to include information regarding the nature, distribution and strength of existing soils, recommendations for grading procedures, design criteria for corrective measures, and other data required by the Building Official. Compliance with the California Building Code and implementation of the recommendations contained within the City-required soils engineering report would ensure that the proposed project would result in a less-than-significant impact.

a.iv) **No Impact**. A significant impact would occur if the proposed project would exacerbate existing environmental conditions by increasing the potential to expose people or structures to substantial adverse effects related to landslides. The project site and its surrounding area are relatively flat. It is not adjacent to any slopes or hillsides that could be potentially susceptible to landslides. Therefore, no impact would occur.

b) **Less-Than-Significant Impact**. During ground disturbing activities, such as grading, the project site could potentially be subject to soil erosion or loss of topsoil. However, the proposed project would be required to comply with applicable regulations and standards related to minimizing erosion, including the applicable erosion control requirement pursuant to VMC Sections 10.30.210 (Erosion and Sediment Control Plan) and 16-5.02.060(4) (Wind Generated Soil Erosion). VMC Section 10.30.210 requires applicants of projects involving construction activities to submit an erosion and sediment control plan that would include best management practices (BMPs) to control erosion and sediments. VMC Section 16-5.02.060(4) requires the property owner/contractor to provide sufficient control of wind-born soil and dust during and after all grading operations. With compliance with these regulations, impacts related to soil erosion and loss of topsoil would be less than significant

c) **No Impact**. A significant impact would occur if the proposed project would cause geologic unit or soil on the project site to become unstable or, if the project site is on unstable geologic unit or soil, the proposed project would exacerbate existing conditions so as to increase the potential for landslides, lateral spreading, subsidence, liquefaction, or collapse. As discussed under Response to Checklist Questions 3.7a.iii, the proposed project would not create liquefaction hazard as the proposed project would be constructed in accordance with the California Building Code and implement the recommendations contained within the City-required soils engineering report. As discussed in Response to Checklist Question 3.7a.iv, the project site is not located in an area that could be potentially susceptible to landslides. Additionally, the proposed project would not create liquefaction or landslide hazards because the proposed project does not involve activities that would affect seismic conditions or alter underlying soil or groundwater characteristics that govern liquefaction potential.

Subsidence and ground collapse generally occur in areas with active groundwater withdrawal or petroleum production. The extraction of groundwater or petroleum from sedimentary source rocks can cause the permanent collapse of the pore space previously occupied by the removed fluid. The compaction of subsurface sediments by fluid withdrawal will cause subsidence or ground collapse overlying a pumped reservoir. The project site is located in an area with commercial and residential uses and undeveloped land. The project site and its vicinity do not contain any subsurface oil extraction facilities or groundwater withdrawal activities. The proposed project would develop a commercial shopping center similar to the commercial shopping centers to the north and west of the project site. Construction and operation of the proposed project would not involve activities known to cause or trigger subsidence and is not anticipated to adversely affect soil stability or increase the potential for local or regional landslides, subsidence, liquefaction, or collapse. The proposed project would be constructed in accordance with the California Building Code, which is designed to assure safe construction and includes building foundation requirements appropriate to site conditions. Thus, the proposed project would not cause or exacerbate existing conditions associated with subsidence and collapse. No impact would occur.

d) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project would be built on expansive soils without proper site preparation or adequate foundations for proposed buildings, thus posing a hazard to life and property. Expansive soils have relatively high clay mineral content and are usually found in areas where underlying formations contain an abundance of clay minerals. Due to its high clay content, expansive soils expand with the addition of water and shrink when dried, which

can cause damage to overlying structures. Changes in soil moisture content can result from rainfall, landscape irrigation, utility leakage, roof drainage, perched groundwater, drought, or other factors. The project site is underlain entirely by young alluvial fan deposits. In the project site and its surrounding area, young alluvial fan deposits are composed of uniform medium brown silt and sand.[16] Clay was not identified in the soil underlying the project site. Thus, the potential for the project site to contain expansive soils is low. The proposed project would be required to comply with all applicable building codes and standards, including the California Building Code, which is designed to assure safe construction and includes building foundation requirements appropriate to site conditions. The project applicant would also be required to prepare a soils engineering report per the VMC Section 16-5.02.060(b)(2), which would include information regarding the nature, distribution and strength of existing soils, recommendations for grading procedures, design criteria for corrective measures, and other data required by the Building Official. Compliance with the California Building Code and implementation of the recommendations contained within the City-required soils engineering report would ensure that impacts related to expansive soils would be less-than-significant impact.

e) **No Impact**. The proposed project would not include the use of septic tanks or alternative wastewater disposal systems. The proposed project would install domestic sewer infrastructure that would connect to the existing City sanitary sewer system. Therefore, no impact would occur.

f) **Less-Than-Significant Impact with Mitigation Incorporated**. Paleontological resources are fossils (e.g., preserved bones, shells, exoskeletons, and other remains) and other traces of former living things. Paleontological resources may be present in fossil-bearing soils and rock formations below the ground surface. Ground-disturbing activities in fossil-bearing soils and rock formations have the potential to damage or destroy paleontological resources that may be present below the ground surface.

Research conducted as part of the Paleontological/Cultural Resources Assessment for the project site found one fossil locality within three miles of the project site. The fossil locality, "El Evado Edison Road" (SBCM 1.114.29), produced fossil remains of extinct horse (*Equus*), camel (*Camelidae*), and gopher tortoise (*Gopherus*) from Pleistocene-age deposits (2.5 million years ago to 11,700 years ago) an unspecified depth north of the project site.[17]

The project site is underlain entirely by young alluvial fan deposits that are composed of uniform medium brown silt and sand containing sparse granule and pebble lenses and scattered, matrix-supported, pebble-sized clasts deposits in the Holocene Epoch (11,700 years ago to today). Holocene-age deposits are typically assigned a low paleontological sensitivity, as their young age prevents the accumulation and preservation of significant biological material. However, Holocene deposits often transition with depth into older, high sensitivity Pleistocene-age deposits. An intensive pedestrian survey conducted on August 19, 2021 as part of the Paleontological/Cultural Resources Assessment did not identify any paleontological resources on the project site.[18] Additionally, the City of Victorville General Plan 2030 Resource Element considers the City to be sensitive

[16]Duke CRM, *Paleontological/Cultural Resources Assessment for 24-Acre Project, City of Victorville, County of San Bernardino, California (Project Number C-0370),* September 23, 2021.
[17]*Ibid.*
[18]*Ibid.*

regarding paleontological resources.[19] The Paleontological/Cultural Resources Assessment concluded that the project site is considered to have a high sensitivity for paleontological resources at depths exceeding four feet. Thus, implementation of Mitigation Measures **GS-1** would be required to reduce the potential for the destruction of a unique paleontological resource during ground disturbing activities. This mitigation measure would require a paleontological monitor to be present on the project site to monitor ground disturbing activities and outlines the procedures to follow in the event a paleontological resource is found on the project site. With implementation of Mitigation Measure **GS-1**, a less-than-significant impact on paleontological resources would occur.

MITIGATION MEASURES

GS-1 A paleontological monitor shall be present full-time during ground disturbing activities below four feet in depth, including but not limited to grading, trenching, utilities, and off-site easements. The paleontological monitor shall have the authority to temporarily halt or redirect grading and other construction activities if paleontological resources are discovered. The monitor shall work under the direct supervision of a qualified paleontologist (B.S./B.A. in geology, or related discipline with an emphasis in paleontology and demonstrated competence in paleontological research, fieldwork, reporting, and curation).

The qualified paleontologist shall be on the project site at the pre-construction meeting to discuss monitoring protocols. If, after excavation begins, the qualified paleontologist determines that the sediments are not likely to produce fossil resources, monitoring efforts shall be reduced.

In the event of a paleontological discovery, the monitor shall flag the area and notify the construction crew immediately. No further disturbance in the flagged area shall occur until the qualified paleontologist has cleared the area. In consultation with the qualified paleontologist, the monitor shall quickly assess the nature and significance of the find. If the specimen is not significant, it shall be quickly mapped, documented, removed and the area cleared.

If the discovery is significant, the qualified paleontologist shall notify the project applicant and the City of Victorville Planning Department immediately. In consultation with the project applicant and the City, the qualified paleontologist shall develop a plan of mitigation, which would likely include full-time monitoring, salvage excavation, scientific removal of the find, removal of sediment from around the specimen (in the laboratory), research to identify and categorize the find, curation of the find in a local qualified repository, and preparation of a report summarizing the find.

Work in the area of the discovery shall resume once the find is properly documented and the qualified paleontologist authorizes resumption of construction work.

[19]City of Victorville, *General Plan 2030*, adopted October 21, 2008.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
3.8 GREENHOUSE GAS EMISSIONS. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☑	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☑	☐

a) **Less-Than-Significant Impact**. The following GHG analysis is based on the GHG Emissions Impact Study is study that was prepared for the proposed project. The GHG Emissions Impact Study is provided in Appendix A.

GHG emissions refer to a group of emissions that are generally believed to affect global climate conditions. The greenhouse effect analogizes the Earth and the atmosphere surrounding it to a greenhouse with glass panes, where the glass panes in a greenhouse let heat from sunlight in and reduce the amount of heat that escapes. GHGs, such as carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O), keep the average surface temperature of the Earth close to 60°F. Without the natural greenhouse effect, the Earth's surface would be about 61°F cooler.[20] In addition to CO_2, CH_4, and N_2O, other environmentally prevalent GHGs include hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), black carbon (black carbon is the most strongly light-absorbing component of particulate matter emitted from burning fuels, such as coal, diesel, and biomass), and water vapor.

CO_2 is the most abundant pollutant resulting from fossil fuel combustion that contributes to climate change. The other GHGs are less abundant but have higher global warming potential (GWP) than CO_2, which is a relative measure of the capacity for each GHG to absorb radiative heat energy in the atmosphere. To account for this higher absorptive capacity, emissions of other GHGs are frequently expressed in terms of CO_2 equivalents, denoted as CO_2e. CO_2e is a unit used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. This potential, known as the GWP of a GHG, is dependent on the lifetime, or persistence, of the gas molecule in the atmosphere.

The CEQA Guidelines recommend that lead agencies adopt thresholds of significance for GHG emissions. When adopting these thresholds, the CEQA Guidelines allow lead agencies to consider thresholds of significance adopted or recommended by other public agencies or recommended by experts—provided that the thresholds are supported by substantial evidence—and/or to develop their own significance threshold. As discussed in Section 3.3 Air Quality, the proposed project is located within the jurisdiction of the MDAQMD. MDAQMD has published guidance for quantitatively assessing magnitudes of GHG emissions that would be generated by construction and operation of projects subject to CEQA.[21] The MDAQMD guidance includes significance thresholds for GHG emissions on both a daily and annual basis: a project would have a significant effect on

[20]California Environmental Protection Agency Climate Action Team, *Climate Action Report to Governor Schwarzenegger and the California Legislator*, March 2006.
[21]MDAQMD, *California Environmental Quality Act (CEQA) and Federal Conformity Guidelines*, August 2016.

the environment if construction activities or operations generated more than 548,000 pounds of CO_2e per day or 100,000 tons of CO_2e per year.

GHG emissions that would be generated by the proposed project were estimated using CalEEMod, which is the preferred regulatory emissions model for land use development projects under CEQA. CalEEMod quantifies GHG emissions from construction activities and future operation of projects. Sources of GHG emissions during proposed project construction would include heavy-duty off-road diesel equipment and vehicular travel to and from the project site. Sources of GHG emissions during proposed project operation would include employee and delivery vehicular travel, energy demand, water use, and waste generation. Based on the analysis provided in the traffic study for the proposed project, the proposed project would generate 9,474 daily vehicle trips, with 1,970 daily pass-by trips and 7,504 daily primary trips.[22] The trip generation estimates were included in the CalEEMod analysis.

Table 3-5 presents the estimated GHG emissions that would be released to the atmosphere during temporary construction activities for the proposed project in 2022—both maximum daily emissions and total annual emissions—as well as source-specific operational emissions beginning in 2023. Construction of the proposed project would result in maximum daily emissions of 8,843.2 pounds of CO_2e and approximately 668.8 tons of CO_2e emissions in total. The maximum daily emissions represent less than two percent of the MDAQMD daily threshold and the total construction emissions represent less than one percent of the annual MDAQMD threshold. Future operations of the proposed project would generate approximately 42,472.6 pounds of CO_2e daily and would produce no more than 7,751.2 tons of CO_2e annually (less than eight percent of the MDAQMD daily and annual thresholds, respectively). Emissions have been quantified and disclosed for informational purposes in accordance with recommended methodologies within the State CEQA Guidelines.

TABLE 3-5: ESTIMATED GREENHOUSE GAS EMISSIONS

Source	Daily Emissions (lbs.-CO_2e)	Annual Emissions (tons-CO_2e)
Area Source Emissions (Direct)	<0.1	<0.1
Energy Source Emissions (Indirect)	2,816.5	514.0
Mobile Source Emissions (Direct)	38,753.1	7,072.4
Waste Disposal Emissions (Indirect)	657.6	120.0
Water Distribution Emissions (Indirect)	245.3	44.8
Total Operational Emissions	**42,472.6**	**7,751.2**
Maximum Construction Emissions (Direct)	**8,843.2**	**668.8**
MDAQMD Threshold	***548,000***	***100,000***

SOURCE: TAHA, 2021.

b) Less-Than-Significant Impact. Assembly Bill (AB) 32 requires CARB to develop and enforce regulations for the reporting and verification of statewide GHG emissions and directs CARB to set a GHG emission limit, based on 1990 levels, to be achieved by 2020. The bill set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner. On December 11, 2008, CARB

[22]David Evans and Associates, *Focused Traffic Impact Analysis Report: Amethyst Crossing Development*, September 14, 2021.

adopted the Climate Change Scoping Plan, which sets forth the framework for facilitating the state's goal of reducing GHG emissions to 1990 levels by 2020. The First Update of the Scoping Plan was adopted on May 22, 2014. CARB adopted the 2017 Scoping Plan in November 2017 which details strategies to cut back 40 percent of GHGs by 2030. Neither AB 32, the updated first Scoping Plan, nor the 2017 Scoping Plan establishes regulations implementing the Legislature's statewide goals for reducing GHGs for specific projects.[23]

The Scoping Plan outlines a series of technologically feasible and cost-effective measures to reduce statewide GHG emissions, including expanding energy efficiency programs, increasing electricity production from renewable resources (at least 33 percent of the statewide electricity mix), and increasing automobile efficiency, implementing the Low-Carbon Fuel Standard, and developing a cap-and-trade program. These measures are designed to be implemented by state agencies. The proposed project would not interfere with implementation of the AB 32 measures.

With regards to local climate planning initiatives, the City adopted a Climate Action Plan (CAP) in 2015 pursuant to the requirements established in its General Plan.[24] The CAP represented the culmination of collaborative efforts between the City and the San Bernardino Association of Governments (SANBAG) based on a GHG emissions inventory established in 2008 and a target to reduce GHG emissions in compliance with AB 32 and SB 375 by 2020. To address environmental impacts under CEQA, the 2015 CAP contains a screening methodology to evaluate project consistency with local, regional, and statewide GHG emission reduction initiatives based on project design features. The 2015 CAP guidance states that projects able to accrue at least 45 points in the screening analysis related to building design, energy efficiency, and other elements that reduce GHG emissions are assumed to have less-than-significant impacts. **Table 3-6** lists the City-identified elements that individual projects can incorporate to reduce GHG emissions and their corresponding point values. The elements that the proposed project would incorporate are highlighted and in bold. As shown in the table, the proposed project would accrue 69 points using the City's screening methodology. Therefore, the design elements of the proposed project are more than sufficient to comply with the 2015 CAP and the City's vision for a sustainable future. Based on the locally established GHG emissions screening level significance threshold, implementation of the proposed project would have a less-than-significant impact related to GHG emissions.

[23] *Center for Biological Diversity v. California Department of Fish and Game* (2015) 62 CAl.4th 204, 259.
[24] City of Victorville, *City of Victorville Climate Action Plan*, September 2015.

TABLE 3-6: PROPOSED PROJECT COMPLIANCE WITH CITY OF VICTORVILLE GREENHOUSE GAS REDUCTION ELEMENTS FOR COMMERCIAL USES

Feature	Elements	Point Values
Building Envelope		
Insulation	2008 Baseline (walls R-13, roof/attic R-30)	0 points
	Modestly Enhanced Insulation (walls R-13, roof/attic R-38)	**15 points**
	Enhanced Insulation (rigid wall insulation R-13, roof/attic R-38)	18 points
	Greatly Enhanced Insulation (spray foam insulated walls R-15 or higher, roof/attic R-38 or higher)	20 points
Windows	2008 Baseline Windows (0.57 U-factor, 0.4 SHGC/1/)	0 points
	Modestly Enhanced Window Insulation (0.4 U-factor, 0.32 SHGC)	**7 points**
	Enhanced Window Insulation (0.32 U-factor, 0.25 SHGC)	8 points
	Greatly Enhanced Window Insulation (≤0.28 U-factor, ≤0.22 SHGC)	12 points
Cool Roof	**Modest Cool Roof (CRRC Rated 0.15 ASR/2/, 0.75 thermal emittance)**	**12 points**
	Enhanced Cool Roof (CRRC Rated 0.2 ASR, 0.75 thermal emittance)	14 points
	Greatly Enhanced Cool Roof (CRRC Rated 0.35 ASR, 0.75 therm. emit.)	16 points
Indoor Space Efficiencies		
Water Heaters	2008 Minimum Efficiency (0.57 Energy Factor)	0 points
	Improved Efficiency Water Heater (0.675 Energy Factor)	**14 points**
	High Efficiency Water Heater (0.72 Energy factor)	16 points
Daylighting	All peripheral rooms within building have at least one window/skylight	1 points
	All rooms within building have daylight (through windows, skylights, etc.)	**5 points**
	All rooms fully daylighted	7 points
Artificial Lighting	2008 Minimum (required)	0
	Efficient Lights (equivalent of 25 percent of in-unit fixtures high-efficacy)	**9 points**
	High Efficiency Lights (50 percent of in-unit fixtures are high-efficacy)	12 points
	Very High Efficiency Lights (100 percent of in-unit fixtures high-efficacy)	14 points
Irrigation and Landscaping		
Water Efficient Landscaping	Eliminate conventional turf from landscaping.	0 points
	Only moderate water using plants.	3 points
	Only low water using plants.	**4 points**
	Only California Native landscape that requires no or only supplemental irrigation	8 points
Toilets	**Water Efficient Toilets/Urinals (1.5 gpm)**	**3 points**
	Waterless Urinals	4 points
	Project Total Points	***69***

SOURCE: City of Victorville, 2021; TAHA, 2021.
Notes: Elements that the proposed project would incorporate are highlighted and in bold.
/a/ SHGC = solar heat gain coefficient; /2/ ASR = aged solar reflectance

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
3.9 HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☑	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☑	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☑
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☑
e) For a project located within 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 result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☑
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☑	☐
g) Expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☑

a-b) **Less-Than-Significant Impact**. The project site is undeveloped and consists primarily of native vegetation. The project site has no previous activities, including agricultural production, that could result in the release of surface or subsurface hazardous materials. Construction of the proposed project would involve the temporary use of potentially hazardous materials, including vehicle fuels, oils, and transmission fluids. Similarly, operations of the proposed project would involve the limited use and storage of common hazardous substances that are commercially available, such as cleaning supplies, pesticides, herbicides, and other landscaping supplies. The use of common hazardous substances would be similar to those that are typically used for commercial uses in the surrounding area. The proposed project does not involve any industrial uses or activities that would result in the use or discharge of unregulated hazardous materials and/or substances, or create a public hazard through the transport, use, or disposal of hazardous materials. All hazardous materials during construction and operational activities would be handled in compliance with applicable federal, state, and local standards and regulations, including those imposed by the United States Environmental Protection Agency, California Department of Toxic Substances Control, and Mojave Desert Air Quality Management District. As the proposed project would comply with all applicable standards and regulations related to the transport, use, and disposal of hazardous materials during soil remediation, construction, and operations, impacts

related to the creation of hazards to the public or the environment would be less than significant.

c) **No Impact**. No schools are located within one-quarter mile of the project site. As discussed in Response to Checklist Question 3.9a-b, the proposed project would comply with all applicable standards and regulations related to the transport, use, and disposal of hazardous materials during construction and operational activities. The proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or known proposed school. Therefore, no impact would occur.

d) **No Impact**. The California Department of Toxic Substances Control and the State Water Resources Control Board each maintain a database (EnviroStor and GeoTracker, respectively) that provides access to detailed information on hazardous waste sites and their cleanup statuses. EnviroStor focuses on hazardous waste facilities and sites with known contamination or sites with possible reason for further investigation. GeoTracker focuses on sites that impact or have the potential to impact water quality in California, with an emphasis on groundwater. A search of the EnviroStor and Geotracker databases determined that the project site is not included on any list compiled pursuant to Section 65962.5 of the Government Code.[25,26] Therefore, no impact would occur.

e) **No Impact**. A significant impact would occur if the proposed project would be located within an airport land use plan or within two miles of a public airport or public use airport and would result in a safety hazard or excessive noise for people residing or working in the area due to the project site's proximity to a public airport or public use airport. The project site is not located in an airport land use plan area, or within two miles of any public or public use airports, or private air strips. The closest airport to the project site is Hesperia Airport, which is approximately seven miles southeast of the project site. Therefore, the proposed project would not result in an airport- or airstrip-related safety hazard for people residing or working in the area, and no impact would occur.

f) **Less-Than-Significant Impact**. Construction of the proposed project would require temporary lane closures on Amethyst Road and Bear Valley Road, such as to connect to the existing utilities systems under the roadways and for roadway improvements. However, these roadways would remain accessible to vehicular traffic and emergency vehicles. Access to all surrounding properties would be maintained.

The proposed project would extend Pluto Road from Bear Valley Road to the southern perimeter of the project site, and the project site would be accessed via Amethyst Road, Bear Valley Road, and the proposed Pluto Road extension. The proposed project would not involve any uses that would interfere with the City's emergency plan, and the proposed project would be designed to accommodate emergency vehicles to the project site. The proposed project plans would be reviewed by the City's Fire Department to ensure that adequate emergency access for emergency vehicles is provided. Construction and operational activities would not require temporary or permanent closure of any streets. Therefore, the proposed project would not impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, and a less-than-significant impact would occur.

[25]Department of Toxic Substances Control, *EnviroStor*, https://www.envirostor.dtsc.ca.gov/public/, accessed September 2021.

[26]Department of Toxic Substances Control, *GeoTracker*, https://geotracker.waterboards.ca.gov/, accessed September 2021.

g) **No Impact**. Although the project site and the adjacent properties to the east and south are undeveloped and contains native vegetation, commercial and residential uses are located to the north and west of the project site and the project site is not located in a fire hazard severity zone, as identified by the California Department of Forestry and Fire Protection (CalFire). The nearest fire hazard zone is located approximately 1.5 miles southwest of the project site.[27] The proposed project would be required to comply with applicable sections of the City's Fire Code and VMC Section 8.12.080, which requires the removal of weeds, vines, shrubs or brush, grass, refuse, dirt, and noxious vegetation that constitute a fire, health or safety hazard. Additionally, the proposed project would not involve activities that would expose people or structures to the risk of loss, injury, or death involving wildland fires. Therefore, no impact would occur.

[27] California Department of Forestry and Fire Protection, *California Fire Hazard Severity Zone Viewer*, https://gis.data.ca.gov/datasets/789d5286736248f69c4515c04f58f414, accessed September 2021.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
3.10 HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☑	☐	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☑	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) result in substantial erosion or siltation on- or off-site;	☐	☐	☑	☐
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☑	☐
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☑	☐
iv) impede or redirect flood flows?	☐	☐	☑	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☑	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☑

a) **Less-Than-Significant Impact with Mitigation Incorporated**. Construction of the proposed project would require site clearing, grading, utility installation, paving, and building construction activities. During construction, surface water quality could potentially be affected by loose soils, debris, construction wastes, and fuels that could be carried off-site by surface runoff in into local storm drains, which drain into water resources. However, the proposed project would be required to comply with all federal, state, and local regulations related to water quality standards and wastewater discharge.

The project applicant and construction contractors would be required to comply with the National Pollutant Discharge Elimination System (NPDES) permit program, which was created by the Clean Water Act to address water pollution from point sources (e.g., pipes, channels, tunnels) that discharge pollutants to the waters of the United States. The NPDES Construction General Permit is issued by the State Water Resource Control Board and enforced by the City under the City's Storm Water and Urban Runoff Management and Discharge Control Ordinance (VMC Chapter 10.30). Construction activities subject to this permit include clearing, grading, excavation, stockpiling, and other ground disturbances. The NPDES Construction General Permit requires the development of a Storm Water Pollution Prevention Plan (SWPPP) prior to the beginning of construction for construction activities that would disturb one or more acres of soil. As

the proposed project would disturb 11.2 acres of land during construction, the project applicant would be required to prepare an SWPPP. Implementation of Mitigation Measure **HW-1** would ensure that an SWPPP is prepared in compliance with the NPDES permit program.

VMC Section 10.30.220 requires applicants of development projects to prepare and implement a Water Quality Management Plan (WQMP) for managing the quality of stormwater or urban runoff that flows from the project site after construction is completed and the facilities or structures are occupied and/or operational. The WQMP is required to include measures to reduce runoff.

In addition to the NPDES permit requirements and applicable sections of VMC, the project applicant would be required to implement City-adopted BMPs to minimize the discharge of pollutants during construction and operations. As the project applicant would be required to comply with all applicable water quality standards and waste discharge requirements during construction and operations of the proposed project, impacts would be less than significant.

b) **Less-Than-Significant Impact**. The project site is not currently used for groundwater recharge activities. Furthermore, the proposed project would not install any groundwater wells and would not otherwise directly or indirectly withdraw any groundwater during construction or operations of the proposed project. The proposed project would not deplete groundwater supplies or interfere substantially with groundwater recharge. Domestic water service to the project site would be provided by the Victorville Water District, which supplies potable water solely from groundwater pumped from the Mojave River Basin. As discussed in Response to Checklist Question 3.19a, Victorville Water District would be able to provide reliable water supplies for an average year, single dry year, and multiple dry years for the project site through 2045. The proposed project would be served by available water supply and would not significantly deplete groundwater supplies or interfere with groundwater recharge. Therefore, a less-than-significant impact would occur.

c.i) **Less-Than-Significant Impact**. The project site is currently undeveloped. Off-site runoff from the undeveloped property south of the project site currently enters the project site at its southern boundary in a sheet flow manner. From the project site, existing surface water drainage flows northeast towards Bear Valley Road, where it enters the City's storm drains via catch basins.

During construction, on-site soils would temporarily be exposed to surface water runoff; however, the proposed project would be required to comply with local, state, and federal regulations and standards related to minimizing potential erosion, including VMC Sections 10.30.210 (Erosion and Sediment Control Plan) and 16-5.02.060(b)(4) (Wind Generated Soil Erosion). Compliance with these regulations would control on- and off-site erosion during construction.

During project operations, a majority of the project site would be paved compared to existing conditions. The proposed project would install an underground retention system, bioretention basins in the landscaped areas at the easterly perimeter of the project site, and vegetative swales in some of the landscaped areas of the project site. These elements of the proposed project would manage on-site stormwater runoff in a manner that would not cause substantial erosion or siltation on- and off-site.

As the proposed project would comply with applicable regulations and standards pertaining to erosion and would install elements to control stormwater runoff, the proposed project would not substantially alter the existing drainage pattern of the project site in a manner that would result in substantial erosion or siltation. Therefore, a less-than-significant impact would occur.

c.ii) **Less-Than-Significant Impact**. As discussed in Response to Checklist Question 3.10c.i, off-site runoff from the undeveloped property south of the project site enters the project site at its southern boundary in a sheet flow manner. From the project site, existing surface water drainage generally flows northeast towards Bear Valley Road, where it enters the City's storm drain.

The proposed project would increase the amount of impervious surfaces on the project site compared to existing conditions. The project site would be graded in a manner that would allow off-site flows to enter the project site and diverted to the proposed Pluto Drive extension on the east side of the project site. A catch basin would be installed at Bear Valley Road. Catch basins and several underground detention basins would also be installed on the project site. The on-site catch basins would connect to storm drains under the proposed surface parking lot, which would direct on-site stormwater runoff towards the proposed underground detention basins. The proposed project would also install bioretention basins in the landscaped areas at the easterly perimeter of the project site. Vegetative swales are also proposed within the landscaped areas of the proposed surface parking lot. Overflows would drain into the existing storm drain in Bear Valley Road or into Pluto Drive. The proposed underground detention basins, bioretention basins, and vegetive swales would limit the amount of run-off leaving the project site. If the proposed catch basins are plugged, storm flows would flow out into the streets before water would rise to the elevation of the proposed building pads. The Preliminary Hydrology Study conducted for the proposed project concluded that once the proposed project is completed and the proposed grading and storm drain facilities are properly constructed, stormwater runoff would not increase in a manner that would result in flooding.[28] Additionally, per the State Water Resources Control Board Municipal Separate Storm Sewer System (MS4) permit requirements, post development peak stormwater runoff discharge rates are not allowed to exceed the estimated pre-development water discharge rate. Therefore, a less-than-significant impact would occur.

c.iii) **Less-Than-Significant Impact**. As discussed in Response to Checklist Question 3.10a, the proposed project would be required to comply with all federal, state, and local regulations related to water quality standards and wastewater discharge. Construction contractors would be required to obtain coverage under the NPDES General Construction Permit. An SWPPP would be prepared for the proposed project and would specify measures that would limit the amount of polluted runoff entering the stormwater drainage system. Additionally, the proposed project would incorporate City-adopted BMPs to minimize the discharge of pollutants during construction and operations. Compliance with applicable regulations, requirements in the SWPPP, and City-adopted BMPs would ensure that the proposed project would not create or contribute runoff water that would exceed the capacity of the City's stormwater drainage systems or provide substantial additional sources of polluted runoff during construction.

As discussed in Response to Checklist Questions 3.10c.i and 3.10c.ii, the proposed project would install additional catch basins on the project site, and on-site stormwater

[28]David Evans and Associates, *Preliminary Hydrology Study: Amethyst Crossing,* August 2021.

runoff would be conveyed towards underground detention basins under the project site. Bioretention basins and vegetative swales in the landscaped areas would also capture on-site stormwater. Overflows would drain into the existing storm drain in Bear Valley Road or into the proposed Pluto Drive extension. The proposed underground detention basins, bioretention baisns, and vegetive swales would limit the amount of run-off leaving the project site. With installation and operation of the proposed underground detention system, bioretention basins, and vegetative swales, stormwater runoff would not increase in a manner that would exceed the capacity of the existing stormwater drainage system within the public rights-of-way or provide substantial additional sources of polluted runoff. Therefore, less-than-significant impacts would occur.

c.iv) Less-Than-Significant Impact. The project site is not located within a flood hazard zone.[29] As discussed in Response to Checklist Questions 3.10c.i and 3.10c.ii, the proposed project would install additional catch basins on the project site and on-site stormwater runoff would be conveyed towards underground detention basins under the project site. Bioretention basins and vegetative swales in the landscaped areas would also capture on-site stormwater. Overflows would drain into the existing storm drain in Bear Valley Road or into the proposed Pluto Drive extension. The proposed underground detention basins, bioretention basins, and vegetive swales would limit the amount of run-off leaving the project site. With installation and operation of the proposed underground detention system, bioretention basins, and vegetative swales, stormwater runoff would not increase in a manner that would exceed the capacity of the existing stormwater drainage system within the public rights-of-way. Therefore, the proposed project would not alter the project site's drainage patterns in a manner that would impede or redirect flood flows. A less-than-significant impact would occur.

d) Less-Than-Significant Impact. A seiche is an oscillation of a body of water in an enclosed or semi-enclosed basin, such as a reservoir, harbor, or lake. A tsunami is a sea wave produced by a significant undersea disturbance. Mudflows result from the down-slope movement of soil and/or rock under the influence of gravity. The project site is not located near a body of water that is large enough to create a seiche during a seismic event. The project site is also not within a coastal zone, tsunami inundation area, of flood hazard zone.[30,31] According to the City's General Plan Safety Element, the probability of extreme flood due to dam inundation is unlikely to occur.[32] The proposed project would not involve the regular use or storage of large quantities of hazardous materials and would not involve uses or activities that would exacerbate flood risk or the risk of releasing pollutants during flooding. Therefore, less-than-significant impacts would occur.

e) No Impact. The project site is located in the Lahontan Region, which is regulated by the Lahontan Regional Water Quality Control Board (LRWQCB). Water quality standards for the Lahontan Region, including the City of Victorville, are set forth in the *Water Quality*

[29]Federal Emergency Management Agency, *FEMA Flood Map Service Center*, https://msc.fema.gov/portal/search?AddressQuery=bear%20valley%20road%20and%20amethyst%20road%2C%20victorville#searchresultsanchor, accessed September 2021.

[30]California Department of Conservation, *California Tsunami Maps and Data*, https://www.conservation.ca.gov/cgs/tsunami/maps#:~:text=Coordinated%20by%20Cal%20OES%2C%20California, accessed September 2021.

[31]Federal Emergency Management Agency, *FEMA Flood Map Service Center*, https://msc.fema.gov/portal/search?AddressQuery=bear%20valley%20road%20and%20amethyst%20road%2C%20victorville#searchresultsanchor, accessed September 2021.

[32]City of Victorville, *General Plan 2030*, adopted October 21, 2008.

Control Plan for the Lahontan Region (Basin Plan). The Basin Plan establishes water quality objectives to protect the valuable uses of surface waters and groundwater within the region. Under Section 303(d) of the Clean Water Act, the Basin Plan is intended to protect surface waters and groundwater from both point and nonpoint sources of pollution within the project area and identifies water quality standards and objectives that protect the beneficial uses of various waters. To meet the water quality objectives established in the Basin Plan, LRWQCB established total maximum daily loads, which are implemented through stormwater permits. As discussed in Response to Checklist Question 3.10a, the proposed project would be required to comply with applicable regulations associated with water quality. Compliance with these regulations would ensure that the proposed project would be consistent with the Basin Plan.

The City is underlain by the Upper Mojave River Valley Groundwater Basin. The Sustainable Groundwater Management Act requires local public agencies and groundwater sustainability agencies in high- and medium-priority basins to develop and implement groundwater sustainability plans (GSPs) or alternatives GSPs. GSPs are detailed road maps for how groundwater basins will reach long term sustainability. The project site is located in a very low-priority basin and, to date, no sustainable groundwater management plan has been developed for this groundwater basin.[33]

The proposed project would not conflict with or obstruct implementation of the Basin Plan and no sustainable groundwater management plan is applicable to the project site. Therefore, impacts related to water quality control plans or sustainable groundwater management plans would be less than significant.

MITIGATION MEASURES

HW-1 The project applicant shall prepare an SWPPP prior to the beginning of construction. The SWPPP shall specify measures that would be implemented during construction to reduce pollutants in stormwater discharges from the project site. The SWPPP shall be reviewed and approved by the City Engineering Department prior to any site clearing and construction activities.

[33]California Department of Water Resources, *SGMA Basin Prioritization Dashboard*, https://gis.water.ca.gov/app/bp-dashboard/final/, accessed September 2021.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
3.11 LAND USE AND PLANNING. Would the project:				
a) Physically divide an established community?	☐	☐	☐	☑
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☑	☐

a) **No Impact**. The project site is bordered by Amethyst Road to the west followed by commercial and residential uses, Bear Valley Road to the north followed by commercial and residential uses, and undeveloped vacant land to the east and south. The proposed project would extend Pluto Drive from Bear Valley Road to the project site's southerly perimeter. No street closures would result with implementation of the proposed project. Amethyst Road, Bear Valley Road, and Pluto Drive would provide vehicular access to the project site and the surrounding area. Access to all uses would not be disrupted. The proposed project does not include any features that would physically divide or block access to or through the community. No separation of uses or disruption of access between land use types would occur as a result of the proposed project. Therefore, no impact would occur.

b) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project conflicts with applicable land use plans, policies, or regulations in a manner that would result in a significant environmental impact. The project site is in the General Commercial Transitional (C-2T) zoning district and has a General Plan land use designation of Commercial. The proposed project would develop a commercial shopping center that consists of retail, restaurants with drive thru, and financial services on the project site. The proposed uses are consistent with the General Plan Commercial land use designation, which is defined by the City's General Plan as land uses that correspond to a wide range of retail commercial, service commercial, and office commercial activities. Commercial designated areas allow for retail, office, and professional and personal services. According to the General Plan, commercial development should be concentrated along major arterial roadways, particularly at arterial intersections and near freeway interchanges.[34] The proposed project would be constructed at the Amethyst Road/Bear Valley Road intersection, which is an arterial intersection.

In addition to the General Plan, the proposed uses on the project site are generally permitted in the C-2T zoning district. Certain uses, such as restaurants with drive-thru that are within 100 feet of a residential zoning district, would require a conditional use permit (CUP). Approval of a CUP by the City's Planning Commission is required before the conditional use is allowed on the project site. Specific conditions would be applied to the use to ensure that the conditional use would not negatively affect neighboring properties and businesses and would not be injurious to the health, safety, and welfare of the community. The proposed project would be designed to comply with all development standards for the C-2T zoning district, including the minimum lot coverage requirement of 60 percent, off-street parking standards, landscaping requirements, minimum 10-foot

[34]City of Victorville, *General Plan 2030*, adopted October 21, 2008.

front and street-side yard setback requirement, and maximum 45-foot building height requirement. The City's Development Code is contained in VMC Title 16.

The proposed project would be consistent with the General Plan Commercial land use designation and would comply all applicable regulations in the VMC, including the City's Development Code. Therefore, the proposed would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation and a less-than-significant impact would occur.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
3.12 MINERAL RESOURCES. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☑
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☑

a-b) No Impact. According to City's General Plan Resource Element, the project site is located within an MRZ-3a zone, which is an area that contain known mineral occurrences of undetermined mineral resource significance.[35] According to the California Department of Conservation, the project site and its vicinity does not contain any mines.[36] Additionally, the project site is not located near any oil fields, and no oil extraction and/or quarry activities have historically occurred on or are presently conducted at the project site. Therefore, the proposed project would not result in the loss of availability of any known regionally valuable or locally important mineral resource, and no impact would occur.

[35]City of Victorville, *General Plan 2030*, Figure RE-1. Victorville Planning Area Mineral Land Classification Map, adopted October 21, 2008.

[36]California Department of Conservation, *Mines Online*, https://maps.conservation.ca.gov/mol/index.html, accessed September 2021.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
3.13 NOISE. Would the project:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☑	☐	☐
b) Generation of excessive ground-borne vibration or ground-borne noise levels?	☐	☐	☑	☐
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, expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☑

a) **Less-Than-Significant Impact with Mitigation Incorporated**. Sound is technically described in terms of the loudness (amplitude) and frequency (pitch). The standard unit of measurement for sound is the decibel (dB). Since the human ear is not equally sensitive to sound at all frequencies, the A-weighted scale (dBA) reflects the normal hearing sensitivity range of the human ear.

Noise is generally defined as unwanted sound. The degree to which noise can impact the human environment ranges from levels that interfere with speech and sleep (annoyance and nuisance) to levels that cause adverse health effects (hearing loss and psychological effects). Human response to noise is subjective and can vary greatly from person to person. Factors that influence individual response include the intensity, frequency, and pattern of noise, the amount of background noise present before the intruding noise, and the nature of work or human activity that is exposed to the noise source.

Studies have shown that the smallest perceptible change in sound level for a person with normal hearing sensitivity is approximately 3 dBA. A change of at least 5 dBA would be noticeable and a 10-dBA increase is subjectively heard as a doubling in loudness. Noise levels decrease as the distance from the noise source to the receiver increases. Noise levels generated by a stationary noise source, or "point source," will decrease by approximately 6 dBA over hard surfaces (e.g., pavement) for each doubling of the distance. For example, if a noise source produces a noise level of 89 dBA at a reference distance of 50 feet, then the noise level would be 83 dBA at a distance of 100 feet over hard surface from the noise source, 77 dBA at a distance of 200 feet, and so on. Noise levels generated by a mobile source will decrease by approximately 3 dBA over hard surfaces for each doubling of the distance.

This noise analysis discusses sound levels in terms of Day-Night Sound Level (L_{dn}), Community Noise Equivalent Level (CNEL), and Equivalent Noise Level (L_{eq}). L_{dn} is a measure of 24-hour noise levels that adds a 10 dBA penalty for sounds occurring between 10:00 p.m. to 7:00 a.m. the next day. An additional 10 dBA for sounds occurring at those hours reflects increased human sensitivity to noises during nighttime hours, particularly at times when people are sleeping and background noise levels are

lower. CNEL is an average sound level during a 24-hour period. CNEL is a noise measurement scale, which accounts for noise source, distance, single event duration, single event occurrence, frequency, and time of day. Human reaction to sound between 7:00 p.m. and 10:00 p.m. is as if the sound were actually 5 dBA higher than if it occurred from 7:00 a.m. to 7:00 p.m. From 10:00 p.m. to 7:00 a.m., humans perceive sound as if it were 10 dBA higher due to the lower background level. Hence, CNEL is obtained by adding an additional 5 dBA to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and 10 dBA to sound levels in the night from 10:00 p.m. to 7:00 a.m. Because CNEL accounts for human sensitivity to sound, CNEL is always a higher number than the actual 24-hour average. L_{eq} is the average noise level on an energy basis for any specific time period. The L_{eq} for one hour is the average energy noise level during the hour. The average noise level is based on the energy content (acoustic energy) of the sound. L_{eq} can be thought of as the level of a continuous noise which has the same energy content as the fluctuating noise level. The equivalent noise level is expressed in units of dBA.

Summary of Applicable Noise Regulations/Standards

The City of Victorville has established noise standards to control unnecessary, excessive, and annoying noise. These standards are codified in VMC Title 13, Chapter 13.01 (Noise Control Ordinance). VMC Section 13.01.040 sets the base ambient noise levels based on zoning, as shown in **Table 3-7**. VMC Section 13.01.040 also notes that if the ambient noise level exceeds the applicable limit, the ambient noise level shall be the new standard.

TABLE 3-7: CITY OF VICTORVILLE BASE AMBIENT NOISE LEVELS

Zone	Time	Sound Level Decibels (dBA)
All residential zones	10:00pm to 7:00am	55
	7:00am to 10:00pm	65
All commercial zones	Anytime	70
All industrial zones	Anytime	75

SOURCE: City of Victorville, *Victorville Municipal Code Section 13.01.040 - Base ambient noise levels*, 2002.

VMC Section 13.01.050 prohibits noise levels from exceeding the base ambient noise levels presented in VMC Section 13.01.040 by the following dBA for the specified cumulative time period:

- Less than 5 dBA for a cumulative period of more than thirty minutes in any hour;
- Less than 10 dBA for a cumulative period of more than fifteen minutes in any hour;
- Less than 15 dBA for a cumulative period of more than five minutes in any hour;
- Less than 20 dBA for a cumulative period of more than one minute in any hour; and
- 20 dBA or more for any period of time.

However, VMC Section 13.01.060 exempts certain noisy activities from the provisions set forth in the Noise Control chapter of the VMC. Exempt noise source exemptions including, but are not limited to:

- All mechanical devices, apparatus or equipment used, related to, or connected with emergency machinery, vehicle, or work.
- Traffic on any roadway or railroad right-of-way.
- Construction activity on private properties that are determined by the Director of Building and Safety to be essential to the completion of a project.

The City of Victorville General Plan 2030 Noise Element provides guidance which is intended to limit exposure to excessive noise levels throughout the City. The General Plan defines sensitive receptors as hospitals, convalescent homes, schools, churches, and sensitive wildlife habitats. The Noise Element includes land use compatibility standards that identifies acceptable and unacceptable noise levels for various land uses as established by the U.S. Department of Housing and Urban Development and State of California Guidelines. **Table 3-8** presents Victorville's Land Use Compatibility Standards for land uses relevant to the proposed project.

TABLE 3-8: VICTORVILLE LAND USE COMPATIBILITY STANDARDS

	Community Noise Exposure L_{dn} or CNEL, dB						
Land Use Categories	**55**	**60**	**65**	**70**	**75**	**80+**	**-**
Residential – Low-Density, Single-Family, Duplex, Multi-Family, Mobile Home	1	1	2	2	3	4	4
Schools, Libraries, Churches, Hospitals, Nursing Homes	1	1	2	3	3	4	4
Office Buildings, Business Commercial, Retail Commercial, and Professional	1	1	1	2	2	3	3

1. NORMALLY ACCEPTABLE: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
2. CONDITIONALLY ACCEPTABLE: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and Schools, Libraries, Churches, Hospitals, Nursing Homes needed noise insulation features included in the design. Conventional construction, with closed windows and fresh air supply systems or air conditioning will normally suffice.
3. NORMALLY UNACCEPTABLE: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
4. CLEARLY UNACCEPTABLE: New construction or development should generally not be undertaken.

SOURCE: City of Victorville, *General Plan 2030 Noise Element*, 2008.

Existing Conditions

Noise- and vibration-sensitive land uses are locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Residences, schools, hospitals, guest lodging, libraries, and some passive recreation areas would each be considered noise- and vibration-sensitive and may warrant unique measures for protection from intruding noise. Noise sensitive receptors within 500 feet of the project site include, but are not limited, to the following:

- Residences located approximately 80 feet to the west along Sierra Road;
- Residences located approximately 80 feet to the north along Pluto Drive;
- Residences located approximately 300 feet to the north along Galaxy Street; and
- Residences located approximately 350 feet to the southwest along Old Ranch Road.

Existing noise levels in the project site vicinity were obtained from a recent IS/MND that was prepared for the Southern California Logistics Airport (SCLA) Lot 44 Distribution Center project. Noise measurements for this SCLA IS/MND were taken on roadways and under similar noise conditions to the project site vicinity.[37] Noise measurements were taken using a Brule & Kjær Hand-held Analyzer Type 2250 equipped with a Type 4189 pre-polarized microphone on Tuesday, April 20, 2021, between 10:00 a.m. and 11:30 a.m. Using the measurements presented in the SCLA IS/MND, anticipated noise levels within the project site vicinity would range from 54.9 to 61.6 dBA L_{eq}. Roadway noise would be the dominant source of noise in the project site vicinity, which is consistent with what is noted in the City's General Plan Noise Element. **Table 3-9** presents the existing ambient noise levels in the project site vicinity.

TABLE 3-9: EXISTING AMBIENT NOISE LEVELS

Receptors	Sound Level (dBA, L_{eq})
Residence (12140 Galaxy St.)	54.9
Bear Valley Rd. near Pluto Dr.	61.6
Residence (13627 Sierra Rd.)	54.9
Amethyst Rd. between Sierra Rd. and Old Ranch Rd.	61.6

SOURCE: City of Victorville, *Southern California Logistics Airport (SCLA) Lot 44 Distribution Center Project - Initial Study/Mitigated Negative Declaration,* 2021; TAHA, 2021.

Construction Noise

Construction activity would result in temporary increases in ambient noise levels in the project site vicinity on an intermittent basis. Noise levels would fluctuate depending on the construction phase, equipment type and duration of use, distance between the noise source and receptor, and presence or absence of noise attenuation barriers. Typical noise levels from various types of equipment that may be used during each construction phase are listed in **Table 3-10**. The noise levels shown in **Table 3-10** take into account the likelihood that multiple pieces of construction equipment would be operating simultaneously and the typical overall noise levels that would be expected for each phase of construction. However, not every piece of equipment listed would operate simultaneously during each construction phase and the phased noise levels presented in **Table 3-10** are conservative. Furthermore, construction equipment would not typically be located in a single location and would not present a concentrated noise source. Construction noise would be more typically represented by loudest piece of equipment such as a tractor, which would generate a noise level of approximately 80 dBA L_{eq} at 50 feet. The nearest noise sensitive receptors are residences approximately 80 feet to the southwest along Sierra Road and to the north along Pluto Drive. At this distance, noise levels generated by a tractor would be approximately 75.9 dBA L_{eq}. This noise level would be generated when equipment would be operating along the property line, such as during sidewalk construction and trenching to install underground utilities along the street frontages of the project site. However, the majority of heavy earth work would occur within the project site and, typically, equipment would be operating at greater distances from nearby noise sensitive receptors. As a result, construction noise levels at noise sensitive receptors would be lower for a majority of the time.

[37] City of Victorville, Southern California Logistics Airport (SCLA) Lot 44 Distribution Center Project - Initial Study/Mitigated Negative Declaration, 2021.

TABLE 3-10: CONSTRUCTION EQUIPMENT NOISE LEVEL RANGES	
Construction Equipment	**Noise Level at 50 Feet (dBA, L_{eq})**
SITE PREPARATION	
Dozer	77.7
Tractor	80.0
Front End Loader	75.1
Backhoe	73.6
Site Preparation Combined	**83.3**
BUILDING CONSTRUCTION PHASE	
Crane	72.6
Generator	77.6
Forklift	63.2
Tractor	80.0
Front End Loader	75.1
Backhoe	73.6
Building Construction Combined	**83.7**
PAVING PHASE	
Paver	74.2
Concrete Mixer	74.8
Roller	73.0
Paving Combined	**78.8**
ARCHITECTURAL COATING	
Air Compressor	73.7
Architectural Coating Combined	**73.7**
SOURCE: Federal Highway Administration, *Roadway Construction Noise Model, Version 1.1*, 2008; Noise Levels of Lift Trucks, 25 May 2001, rigolett.home.xs4all.nl/ENGELS/equipment/liftfr.htm.	

In addition to construction work on the project site, roadway improvements would occur within Bear Valley Road and Amethyst Road. Construction activities on the roadways would primarily be related to lane striping, construction of a median in Bear Valley Road, and construction of turning lanes into the project site. The distance between roadway work and the nearest sensitive receptors is approximately 50 feet. Construction noise from the roadways would be more typically represented by the noise level of a paver, which would generate a noise level of 74.2 dBA L_{eq} at 50 feet.

The proposed project would not require nighttime construction activities. Construction would occur during the daytime generally between 7:00 a.m. and 5:00 p.m. While the applicable noise level limit for daytime construction would be 65 dBA, VMC Section 13.01.060 exempts construction activities on private properties that are determined by the Director of Building and Safety to be essential to the completion of a project from the provisions of the Noise Control Ordinance. Nonetheless, the proposed project may result in noise levels that would be disruptive to nearby sensitive receptors. To reduce construction noise levels at nearby noise sensitive receptors during

construction activities, the proposed project would implement Mitigation Measures **N-1** through **N-3**. Mitigation Measure **N-1** would require construction equipment to be equipped with mufflers to reduce engine noise, which would reduce noise levels by approximately 5 dB. The implementation of Mitigation Measure **N-1** would lower maximum construction noise levels at sensitive receptors. The loudest construction equipment used during construction work on the project site would generate a noise level of 70.9 dBA L_{eq} at the nearest sensitive receptors located 80 feet away when equipment is operated near the boundary of the project site. Additionally, roadway work construction noise levels would approximately be 69.2 dBA L_{eq} at the nearest sensitive receptors located 50 feet away when construction equipment, such as a paver, is operated along the center of Bear Valley Road and Amethyst Road. Noise levels may at times be above the 65 dB base ambient noise level; however, noise occurrences would often be short and temporary and construction noise would still be exempt per VMC Section 13.01.060. Additionally, construction activities would occur throughout the project site, along different segments of the roadways, and would not be concentrated at one point. As a result, noise levels at sensitive receptors are anticipated to be lower than predicted and would likely be below the standards set forth in the City's Noise Control Ordinance and comply with the Victorville Land Use Compatibility Standards.

Although difficult to quantify, Mitigation Measures **N-2** and **N-3** would also help control noise levels by locating construction staging areas away from noise sensitive receptors and establishing a noise disturbance coordinator who would respond to local complaints about construction noise. With implementation of Mitigation Measures **N-1** through **N-3**, construction noise impacts would be reduced to less than significant levels.

Operational Noise

Stationary Sources. The proposed project would include several stationary sources of noise typical of commercial developments. Heating, ventilation, and air conditioning (HVAC) systems in particular may generate unwanted noise in the project site vicinity. HVAC equipment without muffling or enclosures typically generates a noise level of approximately 60 dBA L_{eq} at 50 feet. HVAC noise at the nearest sensitive receptor would be approximately 50.5 dBA L_{eq} at 150 feet. HVAC equipment would likely be located on rooftops which would further increase distance to receptors and, thereby, reduce noise levels. Additionally, the City's design guidelines for Commercial zoning districts (VMC Section 16-3.10.060[c][4][iv]) requires the use of parapet walls to screen rooftop equipment, which would reduce HVAC noise levels by 10 dBA L_{eq} or more. As a result, HVAC noise levels would be below the standards set forth in VMC Section 13.01.040 and would comply with the Victorville Land Use Compatibility Standards.

Parking would be provided in a surface parking lot. Sources of noise in the parking lot would include engines accelerating, doors slamming, car alarms, and people talking. Noise levels from the proposed parking lot is estimated to be 55.4 dBA L_{eq} at 50 feet during peak hours. Parking noise at the nearest noise sensitive receptors would be 45.9 dBA L_{eq} at 150 feet during peak hours. Parking lot noise levels would be below the standards set forth in VMC Section 13.01.040 and would comply with the Victorville Land Use Compatibility Standards.

Another source of stationary noise that would occur with implementation of the proposed project include the menu board intercom system for the proposed restaurants' drive-thru and vehicles circulating through the drive-thru. The proposed menu board intercoms are expected to be similar to the HME SPP2 Intercom System, which is measured to have a

typical noise level of 72 dBA L_{eq} at four feet from the speaker post. The system is also likely to be equipped with an automatic volume control system that will automatically reduce the sound level produced by the intercom as the ambient noise level decreases. Intercom noise at the nearest receptors would be approximately 44.0 dBA L_{eq} at 100 feet. Vehicles travelling within the drive-thru areas would travel at speeds less than five miles per hour and would not generate noise levels that would exceed traffic noise along Amethyst Road or Bear Valley Road. As a result, drive-thru noise levels would be below the standards set forth in VMC Section 13.01.040 and would comply with the Victorville Land Use Compatibility Standards.

In summary, stationary noise sources associated with the proposed project would result in noise levels that would be below the standards set forth in VMC Section 13.01.040 and would comply with the Victorville Land Use Compatibility Standards. Therefore, a less-than-significant impact with regards to stationary noise would occur.

Mobile Sources. The proposed project would generate approximately 668 AM Peak Hour trips and 789 PM Peak Hour trips. Caltrans has stated that a doubling of traffic volumes on a roadway segment is typically needed to audibly increase traffic noise.[38] Project-related trips are not anticipated to double traffic on Bear Valley Road or Amethyst Road as these roads are high-volume super arterial streets, as noted in the City of Victorville General Plan Circulation Map. Additionally, VMC Section 13.01.060 exempts traffic on any roadway or railroad right-of-way from the provisions of the Noise Control Ordinance. Therefore, the proposed project would result in a less-than-significant impact related to mobile noise.

b) Less-Than-Significant Impact.

Construction Vibration

Construction activity can generate varying degrees of vibration, depending on the construction procedure and the construction equipment used. Operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of a construction site often varies depending on soil type, ground strata, and construction characteristics of the receiver building(s). The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, and to damage at the highest levels.

Because construction activity is short-term and equipment moves around a project site, the primary concern regarding construction vibration relates to building damage. Activities that can result in damage include site preparation, building construction, and paving in close proximity to sensitive structures. Typical vibration levels associated with relevant construction equipment are provided in **Table 3-11**. Importantly, construction would not require pile driving, which generates elevated vibration levels above what is typically produced by other pieces of construction equipment.

[38]Caltrans, *Technical Noise Supplement, page 6-5*, September 2013.

TABLE 3-11: VIBRATION VELOCITIES FOR CONSTRUCTION EQUIPMENT	
Equipment	**Peak Particle Velocity at 25 Feet (inches/second)**
Vibratory Roller	0.210
Large Bulldozer	0.089
Loaded Trucks	0.076
Small Bulldozer	0.003
SOURCE: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, September 2018.	

The City of Victorville has not established vibration standards for construction activities. The Federal Transit Administration has published guidance stating that non-engineered timber and masonry buildings (e.g., single-family residences) can withstand peak particle velocity (PPV) vibration of levels of at least 0.2 inches per second without experiencing damage. A vibratory roller would generate the greatest vibration level of 0.210 inches per second of the equipment anticipated to be used during construction A vibratory roller operating 150 feet away from sensitive receptors would generate vibration level of 0.014, which would be less than the 0.2 inches per second threshold for damage to non-engineered timber and masonry buildings. Therefore, a less-than-significant impact related to construction vibration would occur.

Operational Vibration

The proposed project would not include significant sources of vibration. Vehicle trips associated with the proposed project would not generate perceptible vibration levels as rubber-tired vehicles rarely create ground-borne vibration problems unless there is a discontinuity or bump in the road that causes the vibration.[39] Therefore, a less-than-significant impact related to operational vibration would occur.

c) **No Impact**. The proposed project is not located within an airport land use plan and is not located within two miles of a private airstrip or public airport. The nearest airport is Hesperia Airport located approximately seven miles southeast of the project site. The proposed project does not have any potential to expose people working or residing in the area to excessive aircraft noise. Therefore, the proposed project would not expose people on the project site to excessive airport noise, and no impact would occur.

MITGATION MEASURES

N-1 Power construction equipment (including combustion engines), fixed or mobile, shall be equipped with muffling devices consistent with manufacturers' standards. All equipment shall be properly maintained to assure that no additional noise, due to worn or improperly maintained parts, would be generated.

N-2 Noise and vibration construction activities whose specific location on the project site may be flexible (e.g., operation of compressors and generators) shall be conducted as far away as possible from the nearest sensitive land uses, and natural and/or manmade barriers (e.g., intervening construction trailers) shall be used to screen propagation of noise from such activities towards these land uses. The construction contractor shall locate construction staging areas away from noise-sensitive uses.

[39]Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, September 2018.

N-3 A "noise disturbance coordinator" shall be established. The noise disturbance coordinator shall be responsible for responding to local complaints about construction noise. The noise disturbance coordinator shall determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and shall be required to implement reasonable measures such that the complaint is resolved. The project applicant and construction contractor shall post signs at the construction site listing the telephone number for the noise disturbance coordinator. Project plans, such as site plans and grading plans, submitted to the City shall also include the name and telephone number of the noise disturbance coordinator.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
3.14 POPULATION AND HOUSING. Would the project:				
a) Induce substantial unplanned population growth in an area either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☑	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☑

a) **Less-Than-Significant Impact**. The proposed commercial shopping center does not include any housing. While the proposed project would increase the number of employees on the project site, it is expected that workers from nearby communities would be available to serve the needs of the proposed project. Employees are not expected to relocate to the surrounding area and, thus, would not result in a substantial permanent increase in population. The project site is served by existing water and sewer facilities, gas and electric utilities, and roadways. The proposed extension of Pluto Drive is not expected to induce unplanned population growth since the proposed extension would be used to provide direct access to the proposed shopping center and would terminate at the southern perimeter of the project site. Additionally, the project site is already served by Bear Valley Road and Amethyst Road. The installation of new water and sewer lines under the extended roadway is also not expected to induce unplanned population growth. The water and sewer lines under the project site would connect to the new lines under Pluto Drive, which would connect to the existing water and sewer lines under Bear Valley Road. The proposed roadway extension and water and sewer lines under Pluto Drive would not encourage development beyond what is already planned in the City. No additional water and sewer facilities, and gas and electric utilities would be needed to serve the proposed project other than connections to existing infrastructure that serves the surrounding area. Therefore, the proposed project would not directly or indirectly induce substantial unplanned population growth, and impacts would be less-than-significant.

b) **No Impact**. The project site is undeveloped. No housing would be displaced as a result of the proposed project, and the proposed project would not require the construction of replacement housing elsewhere. Therefore, no impact would occur.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
3.15 PUBLIC SERVICES. Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i) Fire protection?	☐	☑	☐	☐
ii) Police protection?	☐	☑	☐	☐
iii) Schools?	☐	☐	☑	☐
iv) Parks?	☐	☐	☑	☐
v) Other public facilities?	☐	☐	☑	☐

a.i) **Less-Than-Significant Impact with Mitigation Incorporated**. A significant impact would occur if the proposed project would result in the provision of or need for new or physically altered fire protection services, the construction and/or operation of which would cause significant environmental impacts in order to maintain service ratios, response times, or other performance objectives. The Victorville Fire Department (VFD) provides fire protection and paramedic services to residents and businesses within the City. The City is served by four fire station. Fire Station 313, located at 13086 Amethyst Road, is the nearest fire station to the project site. According to the City's General Plan Safety Element, the City has a goal of having a response time of five minutes. The project site is within 1.2 "road mile" of this fire station, which would ensure a maximum response time of five minutes or less.

Construction of the proposed project may generate traffic associated with the movement of construction equipment, removal of demolition and excavation materials, and construction worker trips. Although slow-moving construction-related vehicles may be present along streets, emergency vehicles would be able to circumvent slow-moving construction-related vehicles using sirens during emergencies. Although construction of the proposed project would not involve any street closures, temporary partial lane closures may be required during construction. To ensure that emergency access would remain available along all surrounding streets, Mitigation Measure **PS-1** would be required. This mitigation measure would require the preparation of a Construction Traffic Management Plan and ensure that adequate emergency access is maintained along the surrounding streets and at adjacent uses.

The proposed project would be constructed in compliance with the requirements of the City's Fire Code (VMC Title 8, Chapter 8.08), which adopts the California Fire Code with amendments. The proposed project would be required to provide monitored fire alarm systems for the proposed buildings, an on-site fire protection system in accordance with VFD and the City's Water Department standards, and a water supply system with street hydrants that comply with the VFD standards. The proposed project would be designed to

accommodate emergency access to the project site, and fire access routes would be designed to meet the minimum width and turning dimensions as required by VFD. All buildings would be constructed to meet the current building code requirements for fire safety. The applicant would be required to submit project plans to VFD and incorporate VFD fire protection and suppression features that are appropriate for the proposed project. Compliance with the City and California Fire Codes and the inclusion of VFD fire protection and suppression measures would ensure that operations of the proposed project would not result in the need for VFD to construct new fire stations, expand the existing Fire Station 313, or expand any other fire stations within the City.

The City collects a development impact fees to assist the City in providing fire protection services. Payment of the development impact fees would be applied to fire facilities and/or equipment to offset the incremental increase in the demand for fire protection services that would be created by the proposed project.

As the proposed project would be required to comply with the City and California Fire Codes, comply with VFD requirements, and pay development impact fees, the proposed project would not increase demand on VCD fire protection services in a manner that would result in the need to construct new or physically altered fire facilities, the construction of which would cause significant environmental impacts. During construction, implementation of Mitigation Measure **PS-1** would ensure that emergency access would remain available along all surrounding streets. Therefore, impacts related to fire protection services would be less than significant with incorporation of Mitigation Measure **PS-1**.

a.ii) **Less-Than-Significant Impact with Mitigation Incorporated**. A significant impact would occur if the proposed project would result in the provision of or need for new or physically altered police protection services, the construction and/or operation of which would cause significant environmental impacts in order to maintain service ratios, response times, or other performance objectives. The City of Victorville contracts with the San Bernardino County Sheriff's Department for police services and is served by the Victorville Police Department (VPD) provides police protection services to residents and businesses within the City. VPD headquarters is located at 14200 Amargosa Road, approximately 3.7 "road miles" northeast of the project site.

Construction of the proposed project may generate traffic associated with the movement of construction equipment, removal of demolition and excavation materials, and construction worker trips. Although slow-moving construction-related vehicles may be present along streets, emergency vehicles would be able to circumvent slow-moving construction-related vehicles using sirens during emergencies. Although construction of the proposed project would not involve any street closures, temporary partial lane closures may be required during construction. To ensure that emergency access would remain available along all surrounding streets, Mitigation Measure **PS-1** would be required. This mitigation measure would require the preparation of a Construction Traffic Management Plan and ensure that adequate emergency access is maintained along the surrounding streets and at adjacent uses.

The project plans would be submitted to the City for review, and appropriate on-site security features would be applied as required by VPD. Additionally, the proposed project would be required to pay development impact fees to offset the incremental increase in the demand for police protection services that would be created by the proposed project. The development impact fees would be used to help pay for any

additional law enforcement facilities, police facility improvements, vehicles, equipment, and other services that may occur as a result of the proposed project. Therefore, the proposed project would not increase demand on VPD in a manner that would result in the need to construct new or physically altered police facilities, the construction of which would cause significant environmental impacts. During construction, implementation of Mitigation Measure **PS-1** would ensure that emergency access would remain available along all surrounding streets. Therefore, impacts related to fire protection services would be less than significant with incorporation of Mitigation Measure **PS-1**.

a.iii) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project would induce substantial employment or population growth, which could increase demand for school facilities that would exceed the capacity of the school, necessitating a new school or physical alteration of an existing school, the construction of which would cause a significant environmental impact. The project site is located within the Hesperia Unified School District (HUSD). Hollyvale Elementary, Hesperia Junior High, and Hesperia High Schools serve the project site. In the 2019-2020 school year, Hollyvale Elementary School, which serves grades K through 6, had a total enrollment of 1,132 students.[40] Hesperia Junior High School, which serves grades 7 and 8, had a total enrollment of 585 students during the 2019-2020 school year.[41] Hesperia High School, which serves grades 9 through 12 had a total enrollment of 2,098 students during the same school year.[42]

The need for new school facilities is typically associated with a population increase that generates an increase in enrollment large enough to cause new schools to be constructed. The proposed project does not include any residential units. As discussed in Response to Checklist Question 3.14a, although the proposed project would increase the number of employees on the project site, the proposed project is not expected to result in a permanent increase in population since workers from nearby communities are expected to serve the needs of the proposed project. Nevertheless, it is possible that employees from the project site may decide to have their children attend schools that serves the project site (rather than from the employees' school of residence), which could potentially increase student population of the schools that serve the project site. While the proposed project would have the potential to generate a direct demand for school facilities, the applicant would be required to pay development impact fees to HUSD. Pursuant to Section 65995(3)(h) of the California Government Code, the payment of statutory fees "...is deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization." Therefore, a less-than-significant impact would occur.

[40]California Department of Education, *Data Quest: 2019-20 Enrollment by Grade, Hollyvale Elementary Report (36-75044-6108112)*, https://dq.cde.ca.gov/dataquest/dqcensus/enrgrdlevels.aspx?agglevel=School&year=2019-20&cds=36750446108112, accessed September 2021.

[41]California Department of Education, *Data Quest: 2019-20 Enrollment by Grade, Hesperia Junior High Report (36-75044-6059547)*, https://dq.cde.ca.gov/dataquest/dqcensus/enrgrdlevels.aspx?agglevel=School&year=2019-20&cds=36750446059547, accessed September 2021.

[42]California Department of Education, *Data Quest: 2019-20 Enrollment by Grade, Hesperia High Report (36-75044-6030407)*, https://dq.cde.ca.gov/dataquest/dqcensus/enrgrdlevels.aspx?agglevel=School&year=2019-20&cds=36750443630407, accessed September 2021.

a.iv) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project would induce substantial population growth resulting in the need for and/or the provision of new or physically altered parks, the construction of which would cause significant environmental impacts. The City's Public Services Department is responsible for the provision, maintenance, and operation of public recreational and park facilities and services within the City. As discussed in Response to Checklist Question 3.14a, the proposed project is not expected to result in a permanent increase in population since no residential uses are proposed and employees from the project site would come from nearby communities. Although it is possible that employees from the project site may use nearby parks and recreational facilities, the additional demand on nearby parks and recreational facilities are not expected to increase in a manner that would require the need for or the provision of new or physically altered parks and recreational facilities. Therefore, impacts would be less than significant.

a.v) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project would result in substantial employment or population growth that could generate a demand for other public facilities, including roads, transit, utilities, and libraries, that would exceed the capacity available to serve the project site, necessitating new or physically altered public facilities, the construction of which would cause significant environmental impacts. Potential impacts to roads and transit are discussed in Section 3.17, Transportation, and potential impacts to utilities are discussed in Section 3.19, Utilities and Service Systems.

With regards to libraries, the closest libraries to the project site are Hesperia Branch Library (approximately 3.9 miles southeast of the project site) and Victorville City Library (approximately 4.9 miles northeast of the project site). The proposed project would increase employment on the project site, which could potentially create a direct demand on library facilities. The Hesperia Branch Library is part of the San Bernardino County Public Library system, which is financed primarily by property taxes from the service area. The Victorville City Library is funded through the City's General Fund, which comes in part from property and sales taxes. As a result, the proposed project would contribute to the financing of library services, which would mitigate the need for new or physically altered government facilities that support library use. Therefore, less-than-significant impacts related to library facilities would occur.

MITIGATION MEASURES

PS-1 Prior to issuance of any grading or building permits, or as required by the City Engineer, a Construction Traffic Management Plan shall be submitted for review and approval by the City of Victorville Engineering Department. The Construction Traffic Management Plan shall, at a minimum, address the following:

- Identify the location and duration of any potential lane and sidewalk closures.
- Traffic control for any lane closure, detour, or other traffic circulation disruptions.
- Identify the routes that construction vehicles would use.
- Identify detour routes for partial lane closures.
- Proposed construction phasing plan for the proposed project.
- Specify the hours during which transport activities can occur.
- Haul trucks entering or existing the project site onto public streets shall yield to the public traffic at all times.

- Location of construction-related parking and staging areas. All construction-related parking and staging areas shall be kept out of public roadways and shall occur on-site or within the identified construction staging areas.

The Construction Traffic Management Plan shall conform to the latest version of Caltrans' *California Manual on Uniform Traffic Control Devices* and all City of Victorville requirements. The project applicant shall coordinate with the City Engineering Department, Victorville Fire Department, and Victorville Police Department to ensure that adequate emergency access is maintained along the surrounding streets and at adjacent uses, and that the timing and duration of the proposed temporary lane and/or sidewalk closures would not adversely affect operations of adjacent uses.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
3.16 RECREATION. Would the project:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☑	☐
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☑

a) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project results in an increased use of existing parkland and recreational facilities in a manner that would accelerate or induce their physical deterioration. As discussed in Response to Checklist Question 3.15a.iv, although the proposed project would not result in a permanent increase in population, employees from the project site may use nearby parks and recreational facilities, which would create additional demand on these parks and recreational facilities. However, the increase in the use of existing public park and recreational facilities by the proposed project would not be at a level that would result in physical deterioration of existing parks and other recreational facilities and would not require the need for new or physically altered facilities. Thus, the proposed project would not substantially increase the use of existing parks and recreational facilities in a manner that would cause or accelerate deterioration of existing parks and recreational facilities. A less-than-significant impact is anticipated.

b) **No Impact**. A significant impact would occur if the proposed project includes or requires the construction or expansion of recreational facilities, the construction and operation of which would have an adverse physical effect on the environment. The proposed project does not include any parks and recreational facilities. Additionally, as discussed in Response to Checklist Question 3.15a.iv, the proposed project would not require the need for new or physically altered parks and recreational facilities. Therefore, no impacts would occur.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
3.17 TRANSPORTATION. Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☑	☐
b) Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	☐	☐	☑	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☑	☐
d) Result in inadequate emergency access?	☐	☑	☐	☐

a) **Less-Than-Significant Impact**. The proposed project would provide several roadway improvements, which are identified in Section 2.2, Project Description. The General Plan Circulation Element designates Amethyst Road and Bear Valley Road as super arterials. The east side of Amethyst Road would be widened as part of the proposed project. Additionally, a portion of the project site would be dedicated to the Amethyst Road and Bear Valley Road rights-of-way so that the roadway widths of these two streets would be consistent with the General Plan Circulation Element super arterial designation.

Per the City 's General Plan Circulation Element, super arterials should have two bicycle lanes with traffic buffers. The proposed five-foot Class II bike lanes on Bear Valley Road and Amethyst Road would be consistent with the General Plan super arterial roadway designation for these two streets. The City's General Plan Circulation Element and Non-Motorized Transportation Plan also proposes Class II bike lanes on Bear Valley Road. The striped five-foot bike lane that the proposed project would construct along the project frontage of Bear Valley Road would be consistent with and further the City's plan to construct a bike lane along this street. Although neither the Circulation Element nor the Non-Motorized Transportation Plan proposes a future bikeway on Amethyst Road, an existing Class II bikeway is located on Amethyst Road north of Bear Valley Road. The proposed bike lane that would front the project site on Amethyst Road would connect and be an extension to this Class II bikeway facility. The proposed bikeways on Bear Valley Road and Amethyst Road would provide a safe, non-motorized transportation option to existing and future residents and businesses and would be consistent with the City's General Plan Circulation Element and Non-Motorized Transportation Plan.

The proposed project would construct sidewalks along the Amethyst Road, Bear Valley Road, and the proposed Pluto Drive extension rights-of-way. These sidewalks would support pedestrian activity and pedestrian access to the project site.

Victor Valley Transit Authority (VVTA) Bus Routes 21P, 21W, 52, and 54 currently serve the project site. The nearest bus stops for these routes are located adjacent to and across the street from the project site on Bear Valley Road, east of Amethyst Road. The existing bus stops would remain and would continue to serve the project site and its surrounding area with implementation of the proposed project. The proposed project does not include elements that would conflict with the operation of these bus routes.

The proposed project does not include elements that would conflict with City policies that support alternative transportation modes, including pedestrian activities, bicycling, and public transit.

The proposed project would not conflict with the City's General Plan and Non-Motorized Transportation Plan. The proposed improvements would be consistent with the City's General Plan Circulation Element's goals to provide a safe, efficient transportation system that enhances mobility for local residents and businesses; meeting diverse transportation needs of existing and future residents and businesses in through convenient, safe, and multi-modal means; and developing and maintaining infrastructure that supports the transportation and circumstances needs of the community in a cost-effective and environmentally sensitive manner. Additionally, all proposed roadway, driveway, bikeway, and sidewalk improvements would be required to conform with City standards. Therefore, the proposed project would not conflict with any program plan, ordinance or policy addressing the circulation system, and a less-than-significant impact would occur.

b) **Less-Than-Significant Impact.** CEQA Guidelines Section 15064.3 identifies vehicle miles traveled (VMT) as a criteria for evaluating a project's transportation impact. The City's adopted VMT Analysis Guidelines identifies two screening criteria to determine whether a VMT analysis is required for a development project. If the proposed project meets one of the following criteria, the proposed project would be considered to have a less-than-significant impact on VMT, and a VMT analysis would not be required:

1. The proposed project would result in a net increase of 1,285 or less weekday daily vehicle trips; or

2. The proposed project consists of the following types of land uses and do not exceed the maximum size for these land uses:

    - Single-Family or Multi-Family Residential – 136 dwelling units or less
    - Office – 227,000 square feet
    - Retail – 122,000 square feet
    - Warehouse – 829,000 square feet
    - Light Industrial – 296,000 square feet
    - K-12 Public School
    - Daycare/Childcare/Pre-K
    - Affordable Housing
    - Student Housing
    - Community Institutions, Social Services, and Public Buildings

The proposed project does not meet the first screening criterion since the proposed is estimated to generate a total of 9,474 weekday daily vehicle trips. However, the proposed project would meet the second screening criterion. The proposed project would construct a 98,000-square foot commercial shopping center, which would be below the screening criterion's 122,000-square footage threshold for retail uses. As the proposed project would meet VMT screening criterion 2, the proposed project is expected to have a less-than-significant impact with regards to VMT. Therefore, a less-than-significant impact would occur.

c) **Less-than-Significant Impact**. The proposed roadway improvements, Pluto Drive extension, and all access and circulation associated with the proposed project would be designed and constructed in conformance with all applicable City requirements (including

applicable sections of the Development Code [VMC Title 16] and minimum Engineering Department standards). Additionally, the proposed commercial uses on the project site would be similar to the existing shopping centers to the north and west of the project site. The proposed project would not introduce incompatible uses that would increase hazards. Furthermore, the proposed project would be designed to comply with VFD requirements regarding fire emergency access. The proposed project plans would be reviewed by the Development Department, Engineering Department, and VFD during the City's site plan review process to ensure all applicable requirements are met and that no hazardous features are proposed. Therefore, a less-than-significant impact would occur.

d) **Less-Than-Significant Impact with Mitigation Incorporated**. The proposed roadway improvements, Pluto Drive extension, and all access and circulation associated with the proposed project would be designed and constructed in conformance with all applicable City requirements (including applicable sections of the Development Code [VMC Title 16] and minimum Engineering Department standards). Additionally, the proposed project would be designed to comply with VFD requirements regarding fire emergency access. The proposed project design would be reviewed by the Development Department, Engineering Department, and VFD during the City's site plan review process to ensure that adequate access to and from the project site would be provided for emergency vehicles.

During construction, temporary partial lane closures may be required. To ensure that emergency access would remain available along all surrounding streets, Mitigation Measure **PS-1** would be required. With implementation of Mitigation Measure **PS-1**, a less-than-significant impact would occur.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
3.18 TRIBAL CULTURAL RESOURCES. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?	☐	☑	☐	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☑	☐	☐

a-b) Less-Than-Significant Impact with Mitigation Incorporated. The project site is currently vacant and undeveloped. As discussed in Response to Checklist Question 3.5a, the project site is not listed or eligible for listing in the National Register of Historic Places, California Register of Historic Resources, California Historical Landmarks, and California Points of Historical Interest. Additionally, the project site does not contain any resources that are considered locally historic and is not located in a historic district zone.

According to the Paleontological/Cultural Resources Assessment conducted for the project site, Native American cultural resources have been identified for the project site in the Native American Heritage Commission's (NAHC) Sacred Lands File.[43] As a result, tribal cultural resources could potentially be encountered during ground disturbance activities for the proposed project. If Native American human remains are discovered on the project site, Mitigation Measure **CR-3** would ensure that persons believed to be the most likely descended from the deceased Native American are notified pursuant to PRC Section 5097.98. With permission of the property owner or his/her authorized representative, the descendants may inspect the area where the Native American remains were discovered and may recommend measures for treating or disposing the human remains and any associated grave goods with appropriate dignity. This mitigation measure also requires the area where the Native American human remains were discovered to not be damaged or further disturbed until the landowner has discussed and conferred with the most likely descendants regarding their recommendation.

To comply with Assembly Bill (AB) 52, the City mailed notices to interested tribes (Cabazon, Morongo, San Manuel, and Twenty-Nine Palms Band of Mission Indians) on October 26, 2021 regarding the proposed project. None of the tribes that are traditionally and culturally affiliated with the project site have requested consultation.

As the NAHC Sacred Lands File has identified Native American cultural resources on the project site, tribal cultural resources could potentially be encountered during ground

[43]Duke CRM, *Paleontological/Cultural Resources Assessment for 24-Acre Project, City of Victorville, County of San Bernardino, California (Project Number C-0370),* September 23, 2021.

disturbance activities, and implementation of Mitigation Measures **CR-3** and **TR-1** would be required to reduce the potential for the destruction of any significant tribal cultural resource. With implementation of Mitigation Measures **CR-3** and **TR-1**, impacts on tribal cultural resources would be reduced to less than significant levels.

MITIGATION MEASURES

See Mitigation Measure **CR-3**.

TR-1 If requested by a California Native American tribe affiliated with the area, soil disturbance activities on the project site shall be monitored by a qualified tribal monitor. If tribal resources are discovered during soil disturbance or construction activities, work shall cease in the area of the find until an appropriate Tribal Representative has evaluated the find. Construction personnel shall not collect or move any tribal resources. Construction activity may continue unimpeded on other portions of the project site. Any tribal resources shall be treated with appropriate dignity and protected and preserved as appropriate.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
3.19 UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☑	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☑	☐
c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☑	☐
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☑	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☑	☐

a) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project would require or result in the relocation or construction of new utilities facilities or service systems, which would cause significant environmental effects.

Water Services. Water for the project site is served by Victorville Water District (VWD). VWD's potable water system supplies water solely from groundwater pumped from the Mojave River Basin. According to the 2020 Urban Water Management Plan, VWD has adequate water supplies to meet demands during average, single-dry, and multiple-dry years throughout 2045. The projected water demand takes into account undeveloped land that is expected to be developed by 2040 based on the data received from the City's Development Department and General Plan.[44] The proposed project is estimated to use approximately 13,524 gallons per day of water, which would create additional demand on existing water facilities as the proposed project would introduce new commercial uses to a site that is currently undeveloped.[45] As the proposed project would be consistent with the commercial General Plan land use designation for the project site, water demand for the proposed project has already been accounted for in the 2020 Urban Water Management Plan, and sufficient water supplies would be available to serve the proposed project.

[44]Victorville Water District, *2020 Urban Water Management Plan*, June 2021.

[45]Based on the City of Victorville *Sewer Master Plan Final Report* wastewater generation rate of 115 gallons per day per 1,000 square feet for commercial use. Estimated water demand is assumed to be 120 percent of wastewater flows.

The project site is located in an area with commercial and residential uses that are served by existing water facilities, including 24-, 16-, and 12-inch water lines under Amethyst Road and 12-, 14-, and 16-inch water lines under Bear Valley Road.[46] The proposed project would construct a 12-inch water line under the proposed Pluto Drive extension that would connect to the existing 14-inch water line under Bear Valley Road. Installation of water supply infrastructure under Pluto Drive would primarily involve trenching in order to place the lines below surface. The applicant would be required to pay all connection and meter fees to VWD and adhere to VWD's requirements for ensuring that the appropriate connections are made to the existing main. The environmental effects associated with the installation of a 12-inch water line under the proposed Pluto Drive extension and connections to the existing water supply infrastructure under Bear Valley Road are within the limits identified for the proposed project and, thus, has been considered in the respective sections of this IS/MND.

The estimated water demand for the proposed project would be typical for commercial uses and is not expected to exceed available supplies or the available capacity within the distribution infrastructure that serves the project site. The proposed project would be required to comply with State conservation mandates and regulations of the State Water Resources Control Board, as well as VWD rules, regulations, and ordinances in effect at the time of the service connection. Adequate water supplies would be available to the proposed project, and new or expanded water facilities would not be required. Therefore, impacts related to water supply infrastructure would be less than significant.

Wastewater. Wastewater generated from the project site would be collected by sewer pipelines that are maintained by the City. The project site is located in an area with commercial and residential uses that are served by existing sewer lines. Wastewater collected by the City is conveyed to the Victor Valley Wastewater Reclamation Authority (VVWRA) regional wastewater treatment plant. VVWRA treats about 10.7 million gallons of wastewater per day and has a wastewater treatment capacity of 18 million gallons per day.[47] The proposed project is estimated to generate approximately 11,270 gallons per day of wastewater, which is 0.1 percent of the available capacity at the VVWRA regional wastewater treatment plant.[48] VVWRA would have adequate available capacity to serve the proposed project.

The project site is located in an area with commercial and residential uses that are served by existing sewer mains under Amethyst Road and Bear Valley Road. The City operates a 12-inch sewer main under Amethyst Road fronting the project site and an 8-inch sewer main under Bear Valley. The proposed project would construct an 8-inch sewer line under the proposed Pluto Drive extension that would connect to the existing 8-inch sewer main under Bear Valley Road. Installation of wastewater infrastructure would primarily involve trenching in order to place the lines below surface. The environmental effects associated with the installation of the 8-inch sewer line under the proposed Pluto Drive extension and connections to the existing wastewater

[46]Victorville Water District, Water Service for EWTR20-00256, APN 3072-211-13 and 3072-211-16, "Will Serve Letter", December 2, 2020.

[47]Victor Valley Wastewater Reclamation Authority, *Welcome to VVWRA*, https://www.vvwra.com/about_us/welcome/default.htm, accessed September 2021; California Regional Water Quality Control Board Lahonta Region, *Meeting of May 6-7, 2020*, https://www.waterboards.ca.gov/lahontan/board_info/agenda/2020/agenda2020may_item_7_vvwra_npdes_permit_ada.pdf , accessed September 2021.

[48]Assumes a wastewater generation rate of 115 gallons per day per 1,000 square feet for commercial use (City of Victorville, *Sewer Master Plan Final Report*, Table 2-4 Calibrated unit Flow Factors, December 2016).

infrastructure under Bear Valley Road are within the limits identified for the proposed project and, thus, has been considered in the respective sections of this IS/MND.

The estimated wastewater generation for the proposed project would be typical of commercial uses and is not expected to exceed the available treatment capacity for VVWRA and the sewer infrastructure that serves the project site. Thus, new or expanded wastewater treatment facilities would not be required, and impacts would be less than significant.

Stormwater Drainage. As discussed in Response to Checklist Questions 3.10c.i and 3.10c.ii, existing surface water drainage from the project site generally flows northeast towards Bear Valley Road, where it enters the City's storm drain via the curb and gutters. The proposed project would install an additional catch basin within the Bear Valley Road right-of-way. Catch basins and several underground detention basins would also be installed on the project site. The on-site catch basins would connect to storm drains under the proposed surface parking lot that would direct on-site stormwater runoff towards the underground detention basins. The proposed project would also install bioretention basins in the landscaped areas at the easterly perimeter of the project site. Vegetative swales are also proposed within the landscaped areas of the proposed surface parking lot. Overflows would drain into the existing storm drain in Bear Valley Road or into the proposed Pluto Drive extension. The proposed underground detention basins, bioretention basins, and vegetive swales would limit the amount of run-off leaving the project site. If the proposed catch basins were plugged, storm flows would flow out into the streets before water would rise to the elevation of the proposed building pads. The Preliminary Hydrology Study conducted for the proposed project concluded that once the proposed project is completed and the proposed grading and storm drain facilities are properly constructed, stormwater runoff would not increase in a manner that would result in flooding.[49] Additionally, per the State Water Resources Control Board MS4 permit requirements, post development peak stormwater runoff discharge rates are not allowed to exceed the estimated pre-development water discharge rate. Therefore, stormwater runoff that would be discharge into the existing storm drain system would not significantly increase compared to existing conditions. Construction and operations of the proposed storm drainage infrastructure is within the limits identified for the proposed project and, thus, have been considered in the respective sections of this IS/MND.

As the proposed project would not cause a substantial increase in the peak flow rates or volumes that would exceed the drainage capacity of existing stormwater drainage facilities, new or expanded stormwater drainage facilities beyond those that would be installed by proposed project would not be required, and impacts would be less than significant.

Electric Power, Natural Gas, and Telecommunications. Energy use associated with operation of the proposed project would be typical of commercial uses, requiring electricity and natural gas for interior and exterior building lighting, HVAC, electronic equipment, machinery, refrigeration, appliances, security systems, and more. Telecommunication services include phone, television, and internet providers. The proposed project would be served by Southern California Edison for electricity, and Southwest Gas for natural gas. Frontier and Spectrum would provide telecommunication services for the project site. Although the project site is undeveloped, it is located is in a portion of the City that is served by existing electrical power and natural gas services. Existing utility poles and lines are

[49]David Evans and Associates, *Preliminary Hydrology Study: Amethyst Crossing,* August 2021.

located along the perimeter of the project site fronting Amethyst Road and Bear Valley Road. New electricity and natural gas connections would be established for the proposed project. In accordance with VMC 16-5.12.170, the applicant of the proposed project must underground the existing above ground utilities along Bear Valley Road and Amethyst Road (including electricity, telephone, and cable lines) as these utility lines would provide direct service to the proposed project. Construction associated with placing these utility wires underground would primarily involve trenching. The environmental effects associated with the underground installation of the existing utility wires are within the limits identified for the proposed project and, thus, has been considered in the respective sections of this IS/MND. Any work that may affect services to the existing electric, natural gas, and telecommunications lines would be coordinated with service providers. Therefore, impacts associated with electric power, natural gas, and telecommunications facilities would be less than significant.

b) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project would increase water usage such that the project site would not have enough water supplies during normal, dry and multiple dry years. Water for the project site is served by VWD. VWD's potable water system supplies water solely from groundwater pumped from the Mojave River Basin. VWD's water enterprise includes approximately 694 miles of distribution and transmission mains, 34 active wells, 4 booster pumping stations, 26 water storage reservoirs, 1 recycled water storage tank, and 25 pressure-regulating stations. According to the 2020 Urban Water Management Plan, VWD has adequate water supplies to meet demands during average, single-dry, and multiple-dry years throughout 2045.[50]

As discussed in Response to Checklist Question 3.19a, the proposed project is estimated to use approximately 13,524 gallons per day of water, which would create additional demand on existing water facilities as the proposed project would introduce new commercial uses to a site that is currently undeveloped. As the proposed project would be consistent with the commercial General Plan land use designation for the project site, water demand for the proposed project has already been accounted for in the 2020 Urban Water Management Plan, and sufficient water supplies would be available to serve the proposed project. Therefore, impacts would be less than significant.

c) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project generates wastewater that exceeded the capacity of the project site's wastewater treatment provider. As discussed in Response to Checklist Question 3.19a, wastewater on the project site is treated at by VVWRA, and VVWRA has sufficient remaining available treatment capacity to adequately serve the proposed project. The proposed project is estimated to generate approximately 11,270 gallons per day of wastewater, which is 0.1 percent of the available capacity at the VVWRA regional wastewater treatment plant. It is anticipated that the amount of wastewater that would be generated by the proposed project would be met, and no new entitlements or resources would be required to meet the proposed project's expected wastewater needs. Therefore, less-than-significant impacts would occur.

d-e) **Less-Than-Significant Impact**. The City of Victorville disposes non-hazardous solid waste in the Victorville Sanitary Landfill, which is operated by the County of San Bernardino Department of Public Works, Solid Waste Management Division. The

[50]Victorville Water District, *2020 Urban Water Management Plan*, June 2021.

Victorville Sanitary Landfill has a max permitted throughput of 3,000 tons per day, a max permitted capacity of 93,400,000 cubic yards, and a remaining capacity of 79,400,000 cubic yards.[51]

Using the CalEEMod solid waste disposal rates,[52] the proposed project is estimated to generate approximately 414 tons of solid waste per year, or approximately 1.1 tons of solid waste per day, which represent less than 0.1 percent of the permitted daily intake capacity at the Victorville Sanitary Landfill. The proposed project can be adequately served by the City's solid waste provider.

The applicant of the proposed project would be required to comply with CalGreen Code Section 4.408, which requires that at least 65 percent of demolition and construction debris be diverted from landfills by recycling and/or salvage for reuse. PRC Section 41780.01(a) states that it is California's policy goal to reduced, recycled, or composted at least 75 percent of solid waste generated by 2020, and annually thereafter. The proposed project would be required to comply with these and other applicable regulations related to solid waste. As the proposed project can be adequately served by the City's solid waste provider and would comply with applicable regulations related to solid waste, less-than-significant impacts would occur.

[51]CalRecycle, *Victorville Sanitary Landfill (36-AA-0045)*, https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1870?siteID=2652, accessed September 2021.

[52]California Air Pollution Officers Association, *California Emissions Estimator Model (CalEEMod, Version 2016.3.2) User's Guide*, Appendix D Default Data Tables, Table 10.1 Solid Waste Disposal Rates, October 2017.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
3.20 WILDFIRE. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☑
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☑
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☑
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☑

a) **No Impact**. A significant impact would occur if the proposed project would be located in or near a state responsibility area or land classified as a very high fire hazard severity zone (VHFHSZ) and would substantially impair an adopted emergency response plan or emergency evacuation plan. A fire hazard severity zone is a mapped area developed by CalFire that designates zones with varying degrees of fire hazard (i.e., moderate, high, and very high). Areas that are designated as Very High or High Fire Hazard Severity Zones are the most likely to experience wildfire. The project site is not located in or near a state responsibility area or in a VHFHSZ, as identified by CalFire. The nearest fire hazard zone (including VHFHSZ) is located approximately 1.5 miles southwest of the project site.[53] The proposed project would not involve activities that would expose people or structures to the risk of loss, injury, or death involving wildland fires. Therefore, the project site would not be subject to severe wildfires or wildfires of greater concern and would not impair the implementation of an adopted emergency evacuation plan for areas that are designated as VHFHSZ. No impact would occur.

b) **No Impact**. A significant impact would occur if the proposed project would be located in or near a state responsibility area or land classified as VHFHSZ and would exacerbate wildfire risks that would expose project occupants to pollutant concentrations for a wildfire or the uncontrolled spread of a wildfire. The project site and surrounding area is relatively flat. Although the project site and the adjacent properties to the east and south are undeveloped and contains native vegetation, the project site is not located in a state responsibility area or in a VHFHSZ. Additionally, commercial and residential uses are situated to the north and west of the project site. The proposed project would be required to comply with applicable sections of the City's Fire Code and VMC Section 8.12.080, which requires the removal of weeds, vines, shrubs or brush, grass, refuse, dirt, and noxious vegetation that constitute a fire, health or safety hazard. Additionally, the

[53]California Department of Forestry and Fire Protection, *California Fire Hazard Severity Zone Viewer*, https://gis.data.ca.gov/datasets/789d5286736248f69c4515c04f58f414, accessed July 2021.

proposed project would not involve activities that would expose people or structures to the risk of loss, injury, or death involving wildland fires. As the project site is not within a state responsibility area or a VHFHSZ, and the proposed project would be in compliance with the applicable sections of the City's Fire Code and VMC Section 8.12.080, it is unlikely that the proposed project would exacerbate wildfire risks. Therefore, no impact would occur.

c) **No Impact**. A significant impact would occur if the proposed project would be located in or near a state responsibility area or land classified as VHFHSZ and would require the installation or maintenance of infrastructure that may exacerbate the risk of fire or ongoing impacts to the environment. The project site and the adjacent properties to the east and south are undeveloped and contains native vegetation. However, commercial and residential uses are situated to the north and west of the project site. The proposed project does not involve the installation or maintenance of infrastructure or utilities that may exacerbate fire risk. As discussed in Section 3.19, Utilities and Service Systems, the proposed project would be adequately served by existing utilities. Although the proposed project would extend Pluto Drive from Bear Valley Road to the southerly perimeter of the project site, the roadway extension would be paved and would not be used for wildfire access. The existing utility poles and lines along Bear Valley Road and Amethyst Road would be placed underground in accordance with VMC 16-5.12.170. Additionally, the project site is not located in or near a state responsibility area or in a VHFHSZ. As the proposed project does not involve the installation or maintenance of infrastructure or utilities that may exacerbate fire risk, is not located in or near a state responsibility area, and is not located in a VHFSZ, no impact would occur.

d) **No Impact**. A significant impact would occur if the proposed project would be located in or near a state responsibility area or land classified as VHFHSZ and would expose people or structures to significant risks after a wildfire, such as downslope or downstream flooding or landslides. As discussed in Response to Checklist Question 3.20a, the proposed project is not located in or near a state responsibility area or in a VHFHSZ. The project site and its surrounding area is relatively flat. No slopes or hills are located in the vicinity of the project site and, thus, people or structures would not be exposed to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. Therefore, no impact would occur.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
3.21 MANDATORY FINDINGS OF SIGNIFICANCE. Would the project:				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☑	☐	☐
b) Does the project have impacts which are individually limited, but cumulatively considerable? (Cumulatively considerable means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects).	☐	☑	☐	☐
c) Does the project have environmental effects which cause substantial adverse effects on human beings, either directly or indirectly?	☐	☑	☐	☐

a) **Less-Than-Significant Impact with Mitigation Incorporated**. A significant impact would occur if the proposed project would have the potential to degrade the quality of the environment; substantially reduce, threaten, or eliminate fish, plant, or wildlife habitats or population, including rare or endangered species; or eliminate historical, archaeological, or paleontological resources. The preceding analyses conclude that no significant impacts to the environment would occur with implementation of mitigation measures. All mitigation measures identified in this Initial Study would be implemented to ensure that the proposed project would not degrade the quality of the environment.

Proposed project effects on air quality are discussed in Section 3.3 Air Quality of this Initial Study. As discussed in Response to Checklist Question 3.3a, implementation of Mitigation Measures **AQ-1** and **A-2** would ensure that Rule 403 control requirements are implemented during construction to limit the emissions of $PM_{2.5}$ and PM_{10}. As discussed in Response to Checklist Question 3.3c, implementation of Mitigation Measures **AQ-3** and **AQ-4** would reduce short-term exposure of diesel PM and other potential air contaminants. With implementation of Mitigation Measures **AQ-1** through **AQ-4**, pollutant concentrations and emission of PM_{10} and $PM_{2.5}$ and other potential air contaminants would be lower during construction.

Proposed project effects on fish wildlife species are discussed in Section 3.4 Biological Resources of this Initial Study. As discussed in Response to Checklist Question 3.4a, the project site has six Joshua trees, which was recently listed as a candidate species for listing as a threatened species under the CESA. As a candidate species, the Joshua tree is protected under CESA during the listing process and is protected from unauthorized take under CESA Section 2085. Construction of the proposed project has the potential to disturb these Joshua trees. However, Mitigation Measure **BR-1** would require that the Joshua trees be maintained at its current location, and an incidental take

permit must be obtained from CDFW if the trees are to be relocated, removed, or otherwise taken. This mitigation measure would also ensure that all minimization and avoidance measures associated with a CDFW incidental take permit be followed. With implementation of Mitigation Measure **BR-1**, the proposed project would not reduce the amount of or eliminate Joshua trees on the project site.

The CNDDB records search and field survey for the project site did not detect any sensitive animal species to have occurred on the project site. Burrowing owls is a California species of special concern.[54] Although this species was not present during the field survey of the project site, Mitigation Measure **BR-2** would require a preconstruction survey to ensure that burrowing owls have not immigrated onto the project site within 30 days prior to any clearing/vegetation removal, grubbing, and ground disturbance activities and, if detected, this mitigation measure would ensure that the burrowing owls are protected and relocated.

As discussed in Response to Checklist Question 3.4d, although migratory birds were not detected on the project site, on-site vegetation may potentially provide nesting sites for migratory birds and the relocation and removal of on-site vegetation could potentially affect migratory birds. Mitigation Measures **BR-2** and **BR-3** would be implemented to ensure that burrowing owls and nesting birds would not be adversely affected by the proposed vegetation removal. Mitigation Measure **BR-3** would require clearing/vegetation removal and ground disturbing activities to occur outside of the bird-breeding season and, if these activities were to occur during the bird-breeding season, a bird breeding survey would be required. If breeding birds are detected on the project site, nesting areas would need to be avoided or clearing/vegetation removal and ground disturbance operations would need to be postponed until the breeding season is over. With implementation of Mitigation Measures **BR-2** and **BR-3**, the proposed project is not expected to interfere with wildlife movement.

No historic resources are located on the project site (Response to Checklist Question 3.5a) and no archaeological resources and paleontological resources have been identified on the project site (Response to Checklist Questions 3.5b and 3.7f, respectively). However, it is possible that unanticipated archaeological resources, paleontological resources, or human remains may be encountered during ground disturbance. If archaeological resources are encountered, Mitigation Measure **CR-1** would ensure that archaeological resource would not be adversely affected during ground disturbing activities. Similarly, Mitigation Measure **GS-1** would reduce the potential for the destruction of a unique paleontological resource during ground disturbing activities. Mitigation Measure **CR-2** would require that human remains encountered on the project site would not be disturbed until the County Coroner has determined the origin and disposition pursuant to PRC Section 5097.98. Mitigation Measure **CR-3** would ensure that if Native American human remains are discovered on the project site, the most likely descendent from the deceased Native American are notified. The descendent would have the ability to provide recommendations regarding the treatment or disposal of the human remains. Implementation of Mitigation Measures **CR-1** through **CR-3** and **GS-1** would ensure that archaeological resources, paleontological resources, and human remains are protected.

[54]Phoenix Biological Consulting, *Baseline Biological Survey for Amethyst Crossing, City of Victorville, County of San Bernardino, State of California,* August 27, 2021.

As discussed in Response to Checklist Question 3.10a, the proposed project would be required to comply with the NPDES permit program, which requires the preparation of an SWPPP for projects that would disturb one or more acres of soil. As the proposed project would disturb 11.2 acres of land during construction, Mitigation Measure **HW-1** would be implemented to ensure that an SWPPP is prepared in compliance with the NPDES permit program.

As discussed in Response to Checklist Question 3.13a, construction activities have the potential to increase noise levels in a manner that would be disruptive to nearby sensitive receptors. Mitigation Measures **N-1** through **N-3** would lower construction noise levels at sensitive receptors.

As discussed in Section 3.18, Tribal Cultural Resources, tribal cultural resources could potentially be encountered during ground disturbance activities. In the event that tribal resources are discovered during soil disturbance or construction activities, Mitigation Measures **CR-3** and **TR-1** would ensure that tribal resources are protected.

With implementation of Mitigation Measures **AQ-1** through **AQ-4**, **HW-1**, and **N-1** through **N-3**, the proposed project would not degrade the quality of the environment. Mitigation Measures **BR-1**, **BR-2**, and **BR-3** would ensure that the proposed project would not reduce, threaten, or eliminate fish, plant, or wildlife habitats or population. Mitigation Measures **CR-1**, **CR-3**, **GS-1**, and **TR-1** would ensure that important examples of major periods of California history or prehistory would not be eliminated. Therefore, impacts would be less than significant with implementation of mitigation measures.

b) **Less-Than-Significant Impact with Mitigation Incorporated**. A significant impact would occur if the proposed project, in conjunction with related projects, would result in impacts that are less than significant when viewed separately but significant when viewed together. As discussed in this Initial Study, potential impacts on air quality; candidate, sensitive, and special status species; migratory wildlife; archaeological, paleontological, and tribal resources; hydrology and water quality; noise; fire and police protection services, and emergency access would be reduced to less than significant levels with implementation of mitigation measures. The proposed project would have either no impact or less-than-significant impacts for all other environmental topic areas considered in this IS/MND. As a result, the proposed project would not significantly contribute to cumulative impacts even though other projects may be constructed in the surrounding area. Therefore, a less-than-significant impact is anticipated with incorporation of mitigation measures.

c) **Less-Than-Significant Impact with Mitigation Incorporated**. A significant impact may occur if the proposed project has the potential to cause substantial adverse effects on human beings, either directly or indirectly. As discussed throughout this Initial Study, the proposed project would have less-than-significant impacts (with and without incorporation of mitigation measures) or no impacts on the environment. Mitigation measures have been prescribed, where applicable, to reduce all potential environmental impacts to less than significant levels. Upon implementation of mitigation measures included in this Initial Study and compliance with existing regulations, the proposed project would not have the potential to result in substantial adverse impacts on human beings either directly or indirectly. Therefore, a less-than-significant impact is anticipated with incorporation of the mitigation measures identified in this Initial Study.

4.0 LIST OF PREPARERS AND SOURCES CONSULTED

This section also documents all the sources that contributed in the preparation of this IS/MND.

4.1 LEAD AGENCY

City of Victorville
Development Department
Planning Division
14343 Civic Drive
PO Box 5001
Victorville, CA 92395

Contact: Alex Jauregui, Senior Planner
(760) 955-5135

4.2 INITIAL STUDY PREPARERS

Terry A. Hayes Associates Inc.
3535 Hayden Avenue, Suite 350
Culver City, CA 90232

Contact: Teresa Li, AICP, Senior Planner
Anders Sutherland, Air Quality/Greenhouse Gas
Kieran Bartholow, Noise
Billy Shondy, Noise
Henry Hapov, GIS Specialist
Natasha Mapp, Document Production

4.3 SOURCES CONSULTED

California Air Pollution Officers Association, *California Emissions Estimator Model (CalEEMod, Version 2016.3.2) User's Guide,* Appendix D Default Data Tables, Table 10.1 Solid Waste Disposal Rates, October 2017.

California Department of Conservation, *California Important Farmland Finder*, https://maps.conservation.ca.gov/DLRP/CIFF/, accessed September 2021.

California Department of Conservation, California Tsunami Maps and Data, https://www.conservation.ca.gov/cgs/tsunami/maps#:~:text=Coordinated%20by%20Cal%20OES%2C%20California, accessed September 2021.

California Department of Conservation, *Earthquake Zone of Required Investigation*, https://maps.conservation.ca.gov/cgs/EQZApp/app/, accessed September 2021.

California Department of Conservation, *Mines Online*, https://maps.conservation.ca.gov/mol/index.html, accessed September 2021.

California Department of Education, *Data Quest: 2019-20 Enrollment by Grade, Hollyvale Elementary Report (36-75044-6108112)*, https://dq.cde.ca.gov/dataquest/dqcensus/enrgrdlevels.aspx?agglevel=School&year=2019-20&cds=36750446108112, accessed September 2021.

California Department of Education, *Data Quest: 2019-20 Enrollment by Grade, Hesperia Junior High Report (36-75044-6059547)*, https://dq.cde.ca.gov/dataquest/dqcensus/enrgrdlevels.aspx?agglevel=School&year=2019-20&cds=36750446059547, accessed September 2021.

California Department of Education, *Data Quest: 2019-20 Enrollment by Grade, Hesperia High Report (36-75044-6030407)*, https://dq.cde.ca.gov/dataquest/dqcensus/enrgrdlevels.aspx?agglevel=School&year=2019-20&cds=36750443630407, accessed September 2021.

California Department of Fish and Wildlife, *California Natural Community List*, August 18, 2021, available at https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=153398&inline, accessed September 13, 2021.

California Department of Forestry and Fire Protection, *California Fire Hazard Severity Zone Viewer*, https://gis.data.ca.gov/datasets/789d5286736248f69c4515c04f58f414, accessed September 2021.

California Department of Transportation, *California State Scenic Highway System Map*, https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa, accessed September 2021.

California Department of Transportation, *Technical Noise Supplement*, September 2013.

California Department of Water Resources, *SGMA Basin Prioritization Dashboard*, https://gis.water.ca.gov/app/bp-dashboard/final/, accessed September 2021.

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

California Regional Water Quality Control Board Lahonta Region, *Meeting of May 6-7, 2020*, https://www.waterboards.ca.gov/lahontan/board_info/agenda/2020/agenda2020may_item_7_vvwra_npdes_permit_ada.pdf, accessed September 2021.

California Regional Water Quality Control Board, *Water Quality Control Plan for the Lahontan Region*, effective March 31, 1995, including amendments effective August 1995 through October 29, 2019, available at https://www.waterboards.ca.gov/lahontan/water_issues/programs/basin_plan/references.html, accessed August 2021.

CalRecycle, *Victorville Sanitary Landfill (36-AA-0045)*, https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1870?siteID=2652, accessed September 2021.

City of Victorville, *City of Victorville Climate Action Plan*, September 2015.

City of Victorville, *General Plan 2030*, adopted October 21, 2008.

City of Victorville, *Non-Motorized Transportation Plan*, June 2010.

City of Victorville, *Sewer Master Plan Final Report*, December 2016.

City of Victorville, Southern California Logistics Airport (SCLA) Lot 44 Distribution Center Project - Initial Study/Mitigated Negative Declaration, 2021.

City of Victorville, *Victorville Municipal Code*, 2021, available at https://library.municode.com/ca/victorville/codes/code_of_ordinances, accessed September 2021.

David Evans and Associates, *Focused Traffic Impact Analysis Report: Amethyst Crossing Development*, September 14, 2021.

David Evans and Associates, Preliminary Hydrology Study: Amethyst Crossing, August 2021.

Department of Toxic Substances Control, *EnviroStor*, https://www.envirostor.dtsc.ca.gov/public/, accessed September 2021.

Department of Toxic Substances Control, *GeoTracker*, https://geotracker.waterboards.ca.gov/, accessed September 2021.

Duke CRM, Paleontological/Cultural Resources Assessment for 24-Acre Project, City of Victorville, County of San Bernardino, California (Project Number C-0370), September 23, 2021.

Federal Emergency Management Agency, FEMA Flood Map Service Center, https://msc.fema.gov/portal/search?AddressQuery=bear%20valley%20road%20and%20amethyst%20road%2C%20victorville#searchresultsanchor, accessed September 2021.

Federal Highway Administration, Roadway Construction Noise Model, Version 1.1, 2008.

Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, September 2018.

Mojave Desert Air Quality Management District, *California Environmental Quality Act (CEQA) and Federal Conformity Guidelines*, August 2016.

Phoenix Biological Consulting, Baseline Biological Survey for Amethyst Crossing, City of Victorville, County of San Bernardino, State of California, August 27, 2021.

Terry A. Hayes Associates, *Amethyst Crossing Project: Greenhouse Gas Emissions Impact Study*, September 2021.

Victor Valley Wastewater Reclamation Authority, *Welcome to VVWRA*, https://www.vvwra.com/about_us/welcome/default.htm, accessed September 2021.

Victorville Water District, *2020 Urban Water Management Plan*, June 2021

Victorville Water District, Water Service for EWTR20-00256, APN 3072-211-13 and 3072-211-16, “Will Serve Letter”, December 2, 2020.

Appendix A

Greenhouse Gas Emissions Impact Study

AMETHYST CROSSING PROJECT

GREENHOUSE GAS EMISSIONS IMPACT STUDY

Prepared for

HIGHLAND PARK DEVELOPMENT

Prepared by

TERRY A. HAYES ASSOCIATES INC.

SEPTEMBER 2021

taha 2021-072

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ACRONYMS	
AB	Assembly Bill
BACT	Best Available Control Technology
BAU	Business-as-Usual
CAA	Clean Air Act
CAFE	Corporate Average Fuel Economy
Cal/EPA	California Environmental Protection Agency
CALGreen	Green Building Standards Code
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CAS	Climate Adaptation Strategy
CAT	Climate Action Team
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CH_4	Methane
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
E.O.	Executive Order
EISA	Energy Independence and Security Act
GHG	Greenhouse Gas
GWP	Global Warming Potential
HFC	Hydrofluorocarbons
HQTA	High Quality Transit Areas
HSC	Health and Safety Code
IPCC	Intergovernmental Panel on Climate Change
LCFS	Low-Carbon Fuel Standard
LEV	Low Emission Vehicle
LOS	Level of Service
mpg	miles per gallon
$MTCO_2e$	Metric Tons of Carbon Dioxide Equivalents
N_2O	Nitrous Oxide
NAT	No-Action-Taken
NMA	Neighborhood Mobility Areas
OPR	Office of Planning and Research
PFC	Perfluorocarbons
PSD	Prevention of Significant Deterioration

ACRONYMS	
RTP	Regional Transportation Plan
SANBAG	San Bernardino Association of Governments
SB	Senate Bill
SBCOG	San Bernardino Council of Governments
SCAG	Southern California Association of Governments
SCS	Sustainable Communities Strategies
SF6	Sulfur Hexafluoride
TPA	Transit Priority Areas
USEPA	U.S. Environmental Protection Agency
VMT	Vehicle Miles Traveled

1.0 SUMMARY OF FINDINGS

Terry A. Hayes Associates Inc. (TAHA) completed a Greenhouse Gas (GHG) Emissions Impact Study (Study) for the Amethyst Crossing Project (Project) proposed to be located on a 10.69-acre site on the southeast corner of Bear Valley Road and Amethyst Road in the City of Victorville, California. The Study analyzed environmental impacts related to GHG emissions that would occur during construction and future operation of the Project in accordance with the California Environmental Quality Act (CEQA) Statutes and Guidelines. The determination of potentially significant impacts is framed through addressing the Environmental Checklist criteria outlined in Appendix G of the CEQA Guidelines, as well as the locally adopted GHG emissions screening methodology. **Table 1** presents the Appendix G criteria for GHG Emissions and discloses the conclusions of the Study for the Project. Potential environmental impacts related to GHG emissions were determined to be less-than-significant and no mitigation measures are required.

TABLE 1: SUMMARY OF IMPACT STATEMENTS

Impact Statement	Project Level of Significance	Mitigation Measures
Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Less-Than-Significant Impact	None
Would the Project conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Less-Than-Significant Impact	None

SOURCE: TAHA, 2021.

2.0 INTRODUCTION

2.1 STUDY PURPOSE

This Study compares the Project's characteristics with applicable regulations, plans, and policies set forth by the State of California, the Southern California Association of Governments (SCAG) and the City of Victorville (City) to reduce GHG emissions to determine whether the Project is consistent with and/or would conflict with the provisions of these plans. To assist in analyzing the Project's potential to conflict with applicable regulations, plans and policies, this Study also estimated the Project's GHG emissions generated by construction and future operations, taking into account mandatory and voluntary energy and resource conservation measures that have been incorporated into the Project design to reduce GHG emissions. The City is the Lead Agency under CEQA.

2.2 PROJECT DESCRIPTION

The Project would be located on a 10.69-acre site situated on the southeast corner of the intersection of Amethyst Road and Bear Valley Road in Victorville comprising two parcels: 3072-211-13 (approximately XX acres) and 3072-211-16 (approximately YY acres). The Project's regional location is depicted in **Figure 1**. The Project site is currently vacant, undeveloped land with shrubs and other small vegetation scattered throughout. Proposed land uses comprising the Project include approximately 82,600 square feet of commercial shopping center space, 4,500 square feet of banking financial center space, and 10,900 square feet of fast-food restaurant and café space. The Project would also include a surface parking lot providing 513 parking spaces. **Figure 2** shows a conceptual site plan for the Project.

Construction of the Project is anticipated to begin in March 2022 would last for approximately 10 months, with tenant occupancy expected in early 2023. Activities comprising construction of the Project would generally consist of:

- Site clearing to remove existing vegetation and debris, anticipated to last one month.
- Construction of the foundations and building envelopes, anticipated to begin in April 2022 and last up to nine months through the end of 2022.
- Paving of the access driveways and installation of accessibility features, anticipated to begin in September 2022 and last approximately two months.
- Architectural finishing and landscaping, anticipated to be completed in the last two months of construction.

Following the completion of construction, operation of the Project is expected to begin in 2023.

Source: TAHA, 2021.

taha
environmental planners

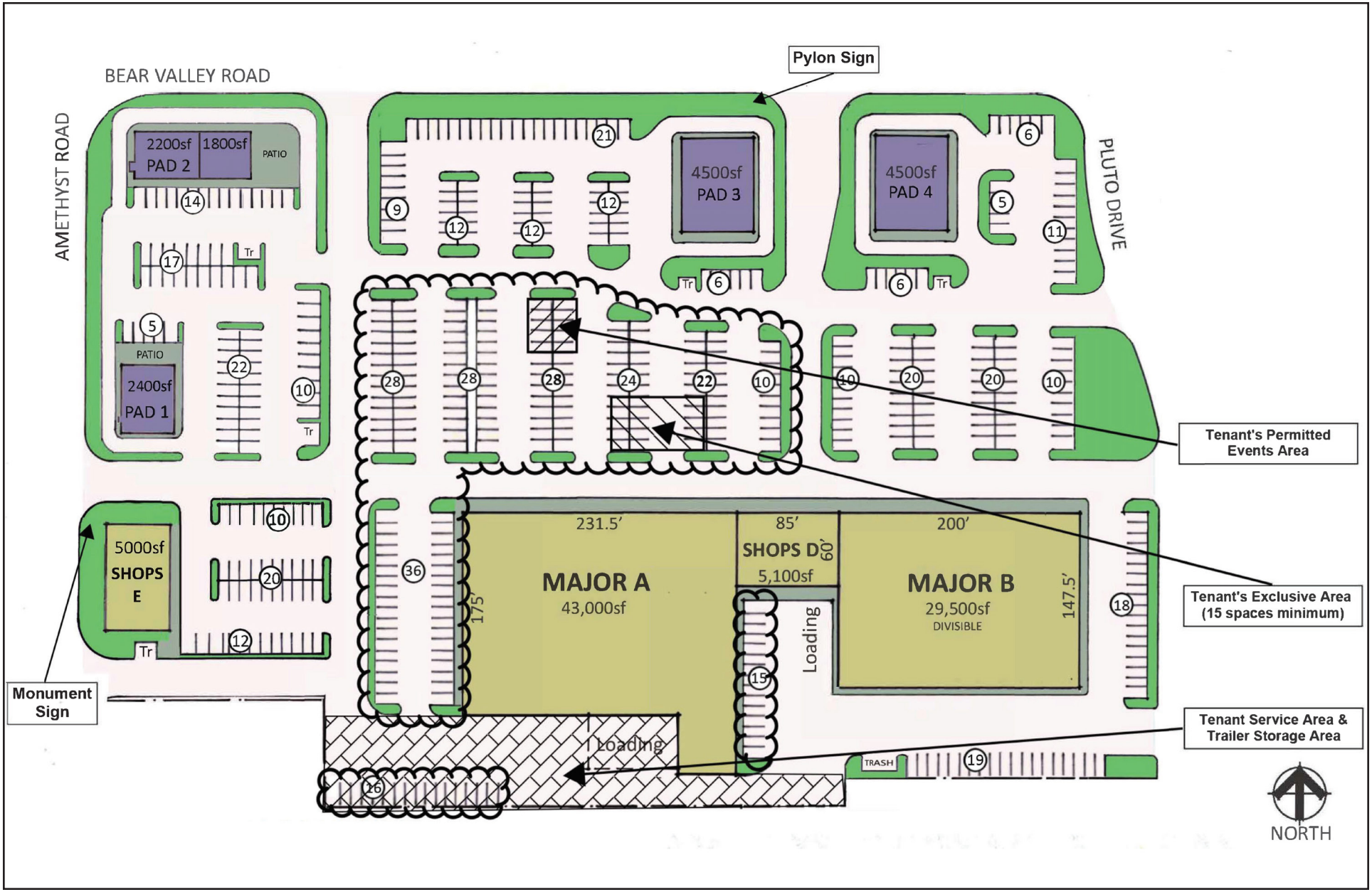
TAHA 2021-072

Amethyst Crossing Project
Greenhouse Gas Emissions Impact Study

HIGHLAND PARK DEVELOPMENT

FIGURE 1

PROJECT LOCATION



Source: LR/A Architecture, 2021.

taha environmental planners
TAHA 2021-072

Amethyst Crossing Project
Greenhouse Gas Emissions Impact Study

HIGHLAND PARK DEVELOPMENT

FIGURE 2

SITE PLAN

3.0 GREENHOUSE GAS EMISSIONS

This section begins with an introductory discussion of the atmospheric science involving GHG emissions and identifies the most environmentally prevalent gases. The section also includes the regulatory framework of applicable rules, regulations, plans, and guidance related to GHG emissions and discusses the existing GHG emissions landscape at the state, regional, and local levels. Thresholds of significance for GHG emissions are then identified, and an assessment of Project impacts is presented.

3.1 ENVIRONMENTAL SETTING

Global climate change refers to variations in average long-term meteorological conditions on Earth as a whole, including changes in temperature, wind patterns, precipitation, and frequency and severity of extreme weather events. Historical records indicate that global climate fluctuations have occurred in the past due to natural phenomena; however, recent data increasingly suggests that the current global conditions are distinct from previous patterns and are influenced by anthropogenic (human-sourced) GHG emissions. Global warming, a related concept, is the observed increase in average temperature of Earth's surface and atmosphere. One identified cause of global warming is an increase of GHGs in the atmosphere. GHGs are those compounds in Earth's atmosphere that play a critical role in determining Earth's surface temperature.

Earth's natural warming process is known as the "greenhouse effect." It is called the greenhouse effect because Earth and the atmosphere surrounding it are similar to a greenhouse with glass panes in that the glass allows solar radiation (sunlight) into Earth's atmosphere but prevents radiative heat from escaping, thus warming Earth's atmosphere. Some levels of GHGs keep the average surface temperature of Earth close to a hospitable 60 degrees Fahrenheit. However, it is believed that excessive concentrations of anthropogenic GHGs in the atmosphere can result in increased global mean temperatures, with associated adverse climatic and ecological consequences.[1]

Scientists studying the particularly rapid rise in global temperatures have determined that human activity has resulted in increased emissions of GHGs, primarily from the burning of fossil fuels (from motor vehicle travel, electricity generation, consumption of natural gas, industrial activity, manufacturing, etc.), deforestation, agricultural activity, and the decomposition of solid waste. Scientists refer to the global warming context of the past century as the "enhanced greenhouse effect" to distinguish it from the natural greenhouse effect.[2]

Global GHG emissions due to human activities have grown since pre-industrial times. As reported by the United States Environmental Protection Agency (USEPA), global carbon emissions from fossil fuels increased by over 16 times between 1900 and 2008 and by about 1.5 times between 1990 and 2008. In addition, in the Global Carbon Budget 2014 report, published in September 2014, atmospheric carbon dioxide (CO_2) concentrations in 2013 were found to be 43 percent above the concentration at the start of the Industrial Revolution, and the present concentration is the highest

[1]USEPA, *Climate Change: Basic Information*, https://19january2017snapshot.epa.gov/climatechange/climate-change-basic-information_.html, accessed August 25, 2021.

[2]Pew Center on Global Climate Change, *Climate Change 101: Understanding and Responding to Global Climate Change*.

during at least the last 800,000 years.[3] Global increases in CO_2 concentrations are due primarily to fossil fuel use, with land use change providing another significant but smaller contribution. With regard to emissions of non-CO_2 GHG, these have also increased significantly since 1990.[4] In particular, studies have concluded that it is very likely that the observed increase in methane (CH_4) concentration is predominantly due to agriculture and fossil fuel use.[5]

GHGs are a class of pollutants that are generally understood to play a critical role in controlling atmospheric temperature near the Earth's surface by allowing high frequency shortwave solar radiation to enter the planet's atmosphere and then subsequently trapping low frequency infrared radiative energy that would otherwise emanate back out into space. The greenhouse effect compares the Earth and the atmosphere surrounding it to a greenhouse with glass panes; the glass panes in a greenhouse let heat from sunlight in and reduce the amount of heat that escapes. The levels of GHGs in the atmosphere affect how much heat energy can be absorbed.

In August 2007, international climate talks held under the auspices of the United Nations Framework Convention on Climate Change led to the official recognition by the participating nations that global emissions of GHG must be reduced. According to the "Ad Hoc Working Group on Further Commitments of Annex I Parties under the Kyoto Protocol," avoiding the most catastrophic events forecast by the United Nations Intergovernmental Panel on Climate Change (IPCC) would entail emissions reductions by industrialized countries in the range of 25 to 40 percent below 1990 levels. Because of the Kyoto Protocol's Clean Development Mechanism, which gives industrialized countries credit for financing emission-reducing projects in developing countries, such an emissions goal in industrialized countries could ultimately spur efforts to cut emissions in developing countries as well.[6]

With regard to the adverse effects of global warming, as reported by SCAG:

> *Global warming poses a serious threat to the economic well-being, public health and natural environment in southern California and beyond. The potential adverse impacts of global warming include, among others, a reduction in the quantity and quality of water supply, a rise in sea level, damage to marine and other ecosystems, and an increase in the incidences of infectious diseases. Over the past few decades, energy intensity of the national and state economy has been declining due to the shift to a more service-oriented economy. California ranked fifth lowest among the states in CO_2 emissions from fossil fuel consumption per unit of Gross State Product. However, in terms of total CO_2 emissions, California is second only to Texas in the nation and is the 12th largest source of climate change emissions in the world, exceeding most nations. The SCAG region, with close to half of the state's population and economic activities, is also a major contributor to the global warming problem.*[7]

[3]C. Le Quéré, et al., *Global Carbon Budget 2014*, (Earth System Science Data, 2015, doi:10.5194/essd-7-47-2015).

[4]USEPA, *Global Greenhouse Gas Emissions Data*, www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data, accessed August 24, 2021.

[5]USEPA, *Atmospheric Concentrations of Greenhouse Gas*, updated June 2015.

[6]United Nations Framework Convention on Climate Change, *Press Release—Vienna UN Conference Shows Consensus on Key Building Blocks for Effective International Response to Climate Change*, August 31, 2007.

[7]SCAG, *The State of the Region—Measuring Regional Progress*, December 2006, p. 121.

3.1.1 GHG Fundamentals

GHGs are those compounds in the Earth's atmosphere which play a critical role in determining temperature near the Earth's surface. GHGs include CO_2, CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3).[8] Compounds that are regulated as GHGs are discussed below in **Table 2**.[9,10]

TABLE 2: DESCRIPTION OF PREVALENT GHGS[/a//]

Greenhouse Gas	General Description
Carbon Dioxide (CO_2)	An odorless, colorless GHG, which has both natural and anthropocentric sources. Natural sources include the following: decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic (human-caused) sources of CO_2 are burning coal, oil, natural gas, and wood.
Methane (CH_4)	A flammable gas and the main component of natural gas. When one molecule of CH_4 is burned in the presence of oxygen, one molecule of CO_2 and two molecules of water are released. A natural source of CH_4 is the anaerobic decay of organic matter. Geological deposits, known as natural gas fields, also contain CH_4, which is extracted for fuel. Other sources are from landfills, fermentation of manure, and cattle.
Nitrous Oxide (N_2O)	A colorless GHG. High concentrations can cause dizziness, euphoria, and sometimes slight hallucinations. N_2O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is used in rocket engines, race cars, and as an aerosol spray propellant.
Hydrofluorocarbons (HFCs)	Chlorofluorocarbons (CFCs) are gases formed synthetically by replacing all hydrogen atoms in CH_4 or ethane (C_2H_6) with chlorine and/or fluorine atoms. CFCs are non-toxic, non-flammable, insoluble, and chemically unreactive in the troposphere (the level of air at Earth's surface). CFCs were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. Because they destroy stratospheric ozone, the production of CFCs was stopped as required by the Montreal Protocol in 1987. HFCs are synthetic man-made chemicals that are used as a substitute for CFCs as refrigerants. HFCs deplete stratospheric ozone, but to a much lesser extent than CFCs.
Perfluorocarbons (PFCs)	PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere. High-energy ultraviolet rays about 60 kilometers above Earth's surface are able to destroy the compounds. PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane and hexafluoroethane. The two main sources of PFCs are primary aluminum production and semi-conductor manufacturing.
Sulfur Hexafluoride (SF_6)	An inorganic, odorless, colorless, non-toxic, and non-flammable gas. SF_6 is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semi-conductor manufacturing, and as a tracer gas for leak detection.
Nitrogen Trifluoride (NF_3)	An inorganic, non-toxic, odorless, non-flammable gas. NF_3 is used in the manufacture of semi-conductors, as an oxidizer of high energy fuels, for the preparation of tetrafluorohydrazine, as an etchant gas in the electronic industry, and as a fluorine source in high power chemical lasers.

/a/ GHGs in this table are identified in the Kyoto Protocol and/or were recently added to the IPCC's Fifth Assessment Report.
SOURCE: Association of Environmental Professionals (AEP), *Alternative Approaches to Analyze Greenhouse Gas Emissions and Global Climate Change in CEQA Documents, Final*, June 29, 2007; USEPA, *Acute Exposure Guideline Levels (AEGLs) for Nitrogen Trifluoride*; January 2009.

[8]As defined by California Assembly Bill 32 and Senate Bill104.

[9]Intergovernmental Panel on Climate Change, *Second Assessment Report, Working Group I: The Science of Climate Change*, 1995, https://www.ipcc.ch/pdf/climate-changes-1995/ipcc-2nd-assessment/2nd-assessment-en.pdf, accessed August 24, 2021.

[10]Intergovernmental Panel on Climate Change, *Fourth Assessment Report, Working Group I Report: The Physical Science Basis*, *Table 2.14,* 2007, https://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html, accessed August 24, 2021.

More specifically, these gases allow high-frequency shortwave solar radiation to enter the Earth's atmosphere, but retain some of the low frequency infrared energy, which is radiated back from the Earth towards space, resulting in a warming of the atmosphere. Not all GHGs possess the same ability to induce climate change. Carbon dioxide is the most abundant GHG in Earth's atmosphere. Other GHGs are less abundant but have higher global warming potential than CO_2. Thus, emissions of other GHGs are commonly quantified in the units of equivalent mass of carbon dioxide (CO_2e). Global Warming Potential (GWP) is based on a number of factors, including the radiative efficiency (heat-absorbing ability) of each gas relative to that of CO_2, as well as the decay rate of each gas (the amount removed from the atmosphere over a given number of years) relative to that of CO_2.

The larger the GWP, the more that a given gas warms the Earth compared to CO_2 over that time period.[11] These GWP ratios are available from the IPCC. Historically, GHG emission inventories have been calculated using the GWPs from the IPCC's Second Assessment Report (SAR). The IPCC updated the GWP values based on the latest science in its Fourth Assessment Report (AR4). The updated GWPs in the IPCC AR4 have begun to be used in recent GHG emissions inventories and are shown in **Table 3**. By applying the GWP ratios, project-related CO_2e emissions can be tabulated in metric tons per year (units expressed as $MTCO_2e$/year). Typically, the GWP ratio corresponding to the warming potential of CO_2 over a 100-year period is used as a baseline.

TABLE 3: ATMOSPHERIC LIFETIMES AND GLOBAL WARMING POTENTIALS

Greenhouse Gas	Atmospheric Lifetime (years)	Global Warming Potential (100-year time horizon)
Carbon Dioxide (CO_2)	50–200	1
Methane (CH_4)	12 (+/-3)	25
Nitrous Oxide (N_2O)	114	298
HFC-23: Fluoroform (CHF_3)	270	14,800
HFC-134a: 1,1,1,2-Tetrafluoroethane (CH_2FCF_3)	14	1,430
HFC-152a: 1,1-Difluoroethane ($C_2H_4F_2$)	1.4	124
PFC-14: Tetrafluoromethane (CF_4)	50,000	7,390
PFC-116: Hexafluoroethane (C_2F_6)	10,000	12,200
Sulfur Hexafluoride (SF_6)	3,200	22,800
Nitrogen Trifluoride (NF_3)	740	17,200

SOURCE: IPCC, Climate Change 2007: *Working Group I: The Physical Science Basis, Direct Global Warming Potentials*. www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html, accessed August 24, 2021.

[11]GWPs and associated CO_2e values were developed by the IPCC and published in its SAR in 1996. Historically, GHG emission inventories have been calculated using the GWPs from the IPCC's SAR. The IPCC updated the GWP values based on the latest science in its AR4. The California Air Resources Board (CARB) has begun reporting GHG emission inventories for California using the GWP values from the IPCC AR4.

3.1.2 Projected Impacts of Global Warming in California

In 2009, California adopted a statewide Climate Adaptation Strategy (CAS) that summarizes climate change impacts and recommends adaptation strategies across seven sectors: Public Health, Biodiversity and Habitat, Oceans and Coastal Resources, Water, Agriculture, Forestry, and Transportation and Energy. The California Natural Resources Agency will be updating the CAS and is responsible for preparing reports to the Governor on the status of the CAS. The Natural Resources Agency has produced climate change assessments which detail impacts of global warming in California.[12] These include:

- Sea level rise, coastal flooding and erosion of California's coastlines would increase, as well as sea water intrusion.
- The Sierra snowpack would decline between 70 and 90 percent, threatening California's water supply.
- Higher risk of forest fires resulting from increasing temperatures and making forests and brush drier. Climate change will affect tree survival and growth.
- Attainment of air quality standards would be impeded by increasing emissions, accelerating chemical processes, and raising inversion temperatures during stagnation episodes resulting in public health impacts.
- Habitat destruction and loss of ecosystems due to climate change affecting plant and wildlife habitats.
- Global warming can cause drought, warmer temperatures and saltwater contamination resulting in impacts to California's agricultural industry.

With regard to public health, as reported by the Center for Health and the Global Environment at the Harvard Medical School, the following are examples of how climate change can affect cardio-respiratory disease: (1) pollen is increased by higher levels of atmospheric CO_2; (2) heat waves can result in temperature inversions, leading to trapped masses or unhealthy air contaminants by smog, particulates, and other pollutants; and (3) the incidence of forest fires is increased by drought secondary to climate change and to the lack of spring runoff from reduced winter snows. These fires can create smoke and haze, which can settle over urban populations causing acute and exacerbating chronic respiratory illness.[13]

[12]State of California, Department of Justice, Office of the Attorney General, *Climate Change Impacts in California*, https://oag.ca.gov/environment/impact, accessed August 25, 2021.

[13]Paul R. Epstein, et al., *Urban Indicators of Climate Change – Report from the Center for Health and the Global Environment*, (Harvard Medical School and the Boston Public Health Commission, August 2003), unpaginated.

3.2 REGULATORY FRAMEWORK

Climate change and GHG emissions are administered by an evolving body of laws, regulations, and case law. Below are summaries of key judiciary decisions, regulations, and planning initiatives related to the management and reduction of GHG emissions.

3.2.1 Federal

Clean Air Act (CAA). In *Massachusetts v. Environmental Protection Agency* (2007) 549 U.S. 497, the United States Supreme Court held in April 2007 that the USEPA has statutory authority under Section 202 of the federal CAA to regulate GHG emissions. The court did not hold that the USEPA was required to regulate GHG emissions; however, it indicated that the agency must decide whether GHG emissions cause or contribute to air pollution that is reasonably anticipated to endanger public health or welfare. On December 7, 2009, the USEPA Administrator signed two distinct findings regarding GHG emissions under Section 202(a) of the CAA (42 United States Code Section 7521):

- The USEPA adopted a Final Endangerment Finding for the six defined GHG pollutants (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6), determining that emissions of the identified pollutants threaten the public health and welfare of future generations. The Endangerment Finding is required before USEPA can regulate GHG emissions under Section 202(a)(1) of the CAA consistently with the United States Supreme Court Decision.
- The USEPA also adopted a cause or contribute finding in which the Administrator concluded that GHG emissions from motor vehicle engines contribute to air pollution, which poses an ongoing threat to public health and welfare.

On June 23, 2014, the United States Supreme Court ruled in *Utility Air Regulatory Group. vs. Environmental Protection Agency* that the USEPA exceeded its statutory authority under the CAA when it determined that stationary source emissions of GHGs would trigger permitting obligations under the Prevention of Significant Deterioration (PSD) program and Title V of the CAA. The Court, however, upheld those portions of USEPA's rulemaking that require a source to apply best available control technology (BACT) to GHG emissions where the source would otherwise trigger PSD permitting on account of its emissions of other pollutants. The Supreme Court's decision was limited to USEPA's regulation of GHG emissions under the PSD and Title V provisions of the CAA, and it left unanswered other questions regarding USEPA's permitting and BACT authority under the PSD program, and the USEPA's efforts to regulate GHG emissions from stationary sources.

Energy Independence and Security Act (EISA). The EISA of 2007 includes several key provisions that will increase energy efficiency and the availability of renewable energy, which will reduce GHG emissions as a result. The Act facilitates the reduction of GHG emissions by requiring the following:

- Increasing the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard that requires fuel producers to use at least 36 billion gallons of biofuel in 2022;
- Prescribing or revising standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances;

- Achieving approximately 25 percent greater efficiency for light bulbs by phasing out old incandescent light bulbs between 2012 and 2014; requiring approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020;
- Establishing a minimum average fuel economy of 35 miles per gallon (mpg) for the combined fleet of cars and light trucks by 2020; and,
- Directing the National Highway Traffic Safety Administration to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for trucks.

Additional provisions of EISA address energy savings in government and public institutions, promote research for alternative energy, additional research in carbon capture, international energy programs, and the creation of green jobs.

Light-Duty Vehicle Greenhouse Gas (GHG) and Corporate Average Fuel Economy (CAFE) Standards. On May 19, 2009, President Obama announced a national policy for fuel efficiency and emissions standards in the United States auto industry. The adopted federal standard applied to passenger cars and light-duty trucks for model years 2012 through 2016. The rule surpassed the prior CAFE standards and required an average fuel economy standard of 35.5 mpg and 250 grams of CO_2 per mile by model year 2016, based on USEPA calculation methods. These standards were formally adopted on April 1, 2010. In August 2012, standards were adopted for model year 2017 through 2025 passenger cars and light-duty trucks. By 2020, new vehicles are projected to achieve 41.7 mpg—if GHG reductions are achieved exclusively through fuel economy improvements—and 213 grams of CO_2 per mile (Phase 2 standards). By 2025, new vehicles are projected to achieve 54.5 mpg and 163 grams of CO_2 per mile, a reduction of approximately 50 percent relative to 2010.

Heavy-Duty Vehicle Program. The Heavy-Duty Vehicle Program was adopted on August 9, 2011, to establish the first fuel efficiency requirements for medium- and heavy-duty vehicles beginning with the model year 2014. The rule included provisions related to combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles to be implemented through year 2018 as Phase 1. Phase 2 standards for medium- and heavy-duty vehicles through model year 2027 were developed by USEPA and United States Department of Transportation subsequent to the observed efficacy of the Phase 1 program.

3.2.2 State

California has adopted statewide legislation to address issues related to various aspects of climate change and GHG emissions. The governor of California has also issued several executive orders (E.O.) related to the State's evolving climate change policy.

California Greenhouse Gas Reduction Targets

Executive Order S-3-05. On June 1, 2005, E.O. S-3-05 set the following GHG emission reduction targets: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels. E.O. S-3-05 calls for the Secretary of California Environmental Protection Agency (Cal/EPA) to be responsible for coordination of State agencies and progress reporting. A 2011 California Energy Commission report

concludes, however, that the primary strategies to achieve this target should be major "decarbonization" of electricity supplies and fuels, and major improvements in energy efficiency.[14]

In response to the E.O. S-3-05, the Secretary of the Cal/EPA created the Climate Action Team (CAT). California's CAT originated as a coordinating council and included the Secretaries of the Natural Resources Agency, and the Department of Food and Agriculture, and the Chairs of the California Air Resources Board (CARB), Energy Commission, and Public Utilities Commission. The original council was an informal collaboration between the agencies to develop potential mechanisms for reductions in GHG emissions in the State. The original mandate for the CAT was to develop proposed measures to meet the emission reduction targets set forth in E.O. S-3-05. The CAT has since expanded and currently has members from 18 State agencies and departments. The CAT also has ten working groups which coordinate policies among their members. The CAT is responsible for preparing reports that summarize the State's progress in reducing GHG emissions. The most recent CAT Report was published in December 2010. The CAT Report discusses mitigation and adaptation strategies, State research programs, policy development, and future efforts.

Assembly Bill (AB) 32 and Senate Bill (SB) 32. In 2006, the California State Legislature adopted AB 32—codified in the California Health and Safety Code [HSC], Division 25.5 – California Global Warming Solutions Act of 2006—which focuses on reducing GHG emissions in California to 1990 levels by 2020. AB 32 defines regulated GHGs as CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6 and represents the first enforceable statewide program to limit emissions of these GHGs from all major industries with penalties for noncompliance. The law further requires that reduction measures be technologically feasible and cost effective. Under AB 32, the CARB has the primary responsibility for reducing GHG emissions. AB 32 required CARB to adopt rules and regulations directing State actions that would achieve GHG emissions reductions equivalent to 1990 Statewide levels by 2020.

A specific requirement of AB 32 was to prepare a Climate Change Scoping Plan for achieving the maximum technologically feasible and cost-effective GHG emission reduction by 2020 (HSC Section 38561 (h)). CARB developed an AB 32 Climate Change Scoping Plan (2008 Scoping Plan) that contained strategies to achieve the 2020 emissions cap. The 2008 Scoping Plan was approved in 2008 and contains a mix of recommended strategies that combined direct regulations, market-based approaches, voluntary measures, policies, and other emission reduction programs calculated to meet the 2020 Statewide GHG emission limit and initiate the transformations needed to achieve the State's long-range climate objectives.

As required by AB 32, CARB approved the 1990 GHG emissions inventory, thereby establishing the emissions limit for 2020. The 2020 emissions limit was originally set at 427 $MMTCO_2e$ using the GWP values from the IPCC SAR. CARB also projected the State's 2020 GHG emissions under No-Action-Taken (NAT) conditions – that is, emissions that would occur without any plans, policies, or regulations to reduce GHG emissions. CARB originally used an average of the State's GHG emissions from 2002 through 2004 and projected the 2020 levels at approximately 596 $MMTCO_2e$ (using GWP values from the IPCC SAR). Therefore, under the original projections, the State must reduce its 2020 NAT emissions by 28.4 percent in order to meet the 1990 target of 427 $MMTCO_2e$.

[14]California Energy Commission, *California's Energy Future – The View to 2050*, May 2011.

The First Update to the Climate Change Scoping Plan (2014 Scoping Plan) was approved by CARB in May 2014 and built upon the 2008 Scoping Plan with new strategies and recommendations. In 2014, CARB revised the target using the GWP values from the IPCC AR4 and determined that the 1990 GHG emissions inventory and 2020 GHG emissions limit is 431 $MMTCO_2e$. CARB also updated the State's 2020 NAT emissions estimate to account for the effect of the 2007–2009 economic recession, new estimates for future fuel and energy demand, and the reductions required by regulation that were adopted for motor vehicles and renewable energy. CARB's projected Statewide 2020 emissions estimate using the GWP values from the IPCC AR4 is 509.4 $MMTCO_2e$. Therefore, under the 2014 Scoping Plan, the emission reductions necessary to achieve the 2020 emissions target of 431 $MMTCO_2e$ would be 78.4 $MMTCO_2e$, or a reduction of GHG emissions by approximately 15.4 percent.

In 2016, the California State Legislature adopted SB 32—which adds Section 38566 to the HSC and requires a commitment to reducing statewide GHG emissions by 2020 to 1990 levels and by 2030 to 40 percent less than 1990 levels—and its companion bill AB 197, which provides additional direction for developing the Scoping Plan. Both were signed by Governor Brown to update AB 32 and include an emissions reduction goal for the year 2030. SB 32 and AB 197 amend AB 32 and establish a new climate pollution reduction target of 40 percent below 1990 levels by 2030 and include provisions to ensure the benefits of State climate policies reach into disadvantaged communities.

In response to the 2030 GHG reduction target, CARB adopted the 2017 Climate Change Scoping Plan (2017 Scoping Plan) at a public meeting held in December 2017. The 2017 Scoping Plan outlines the strategies that the State will implement to achieve the 2030 GHG reduction target. The strategies build on the existing Cap-and-Trade Regulation, the low-carbon fuel standard (LCFS), improved emissions standards, increasing renewable energy, and reducing methane emissions from agricultural and other wastes by using it to meet California's energy needs. CARB's projected Statewide 2030 emissions take into account 2020 GHG reduction policies and programs. The 2017 Scoping Plan also comprehensively addresses GHG emissions from natural and working lands of California, including the agriculture and forestry sectors. The adopted 2017 Scoping Plan includes ongoing and statutorily required programs and continuing the Cap-and-Trade Program. This Scoping Plan Scenario was modified from the January 2017 Proposed Scoping Plan to reflect AB 398, including removal of the 20 percent refinery measure.

CARB states that the Scoping Plan Scenario "is the best choice to achieve the State's climate and clean air goals". Under the Scoping Plan Scenario, the majority of the reductions would result from the continuation of the Cap-and-Trade regulation. Additional reductions are achieved from electricity sector standards (i.e., utility providers to supply at least 50 percent renewable electricity by 2030), doubling the energy efficiency savings at end uses, additional reductions from the LCFS, implementing the short-lived GHG strategy (e.g., hydrofluorocarbons), and implementing the mobile source strategy and sustainable freight action plan. The alternatives were designed to consider various combinations of these programs, as well as consideration of a carbon tax in the event the Cap-and-Trade regulation is not continued. However, in July 2017, the California Legislature voted to extend the Cap-and-Trade regulation to 2030.

The 2017 Scoping Plan discusses the role of local governments in meeting the State's GHG reductions goals because local governments have jurisdiction and land use authority related to:

community-scale planning and permitting processes, local codes and actions, outreach and education programs, and municipal operations. Furthermore, local governments may have the ability to incentivize renewable energy, energy efficiency, and water efficiency measures.

Executive Order B-16-2012. E.O. B-16-2012 establishes benchmarks for reducing transportation-related GHG emissions. It requires agencies to implement the Plug-in Electric Vehicle Collaborative and California Fuel Cell Partnership by 2015 and sets forth targets specific to the transportation section, including the goal of reducing transportation related GHG emissions to 80 percent less than 1990 levels.

Executive Order B-30-15. E.O. B-30-15 established a medium-term goal for 2030 of reducing GHG emissions by 40 percent below 1990 levels and requires CARB to update its current AB 32 Scoping Plan to identify measures to meet the 2030 target. The executive order supports E.O. S-03-05, described above, but is currently only binding on State agencies. However, there are current (2015/2016) proposals (i.e., SB 32) at the State legislature to adopt a legislative target for 2030.

Renewable Energy Standards/Renewable Portfolios Standard

Senate Bill 1078 and Senate Bill 107. SB 1078 (2002) and SB 107 (2006) created the Renewable Energy Standard, which required electric utility companies to increase procurements from eligible renewable energy resources by at least 1 percent of their retail sales annually until reaching 20 percent by 2010. SB 2X 1 (2011) requires a Renewables Portfolio Standard, functionally the same thing as the Renewable Energy Standard, of 33 percent by 2020. In 2013, the statewide average for the three largest electrical suppliers (Pacific Gas and Electric, Southern California Edison, and San Diego Gas & Electric) was 22.7 percent. As noted below, SB 350 increased the renewable requirement to 50 percent for 2030.

Senate Bill 350. SB 350, also known as the Clean Energy and Pollution Reduction Act of 2015, was approved in 2015 and includes key provisions to require the following by 2030: (1) a renewables portfolio standard of 50 percent and (2) a doubling of efficiency for existing buildings.

Senate Bill 1 and Senate Bill 1017 (Million Solar Roofs). SB 1 and SB 1017 enacted in August 2006 sets a goal to install 3,000 megawatts of new solar capacity by 2017 - moving the State toward a cleaner energy future and helping lower the cost of solar systems for consumers. The Million Solar Roofs Program is a ratepayer-financed incentive program aimed at transforming the market for rooftop solar systems by driving down costs over time. It provides up to $3.3 billion in financial incentives that decline over time.

Assembly Bill 811. AB 811, enacted July 21, 2008, authorizes California cities and counties to designate districts within which willing property owners may enter into contractual assessments to finance the installation of renewable energy generation and energy efficiency improvements that are permanently fixed to the property.

Pavley Rules/Advanced Clean Cars

Assembly Bill 1493 (Pavley I). AB 1493, adopted in 2002, required the CARB to develop and adopt standards for vehicle manufacturers to reduce GHG emissions coming from passenger vehicles and light-duty trucks at a “maximum feasible and cost-effective reduction” by January 1, 2005. Pavley I

took effect for model years starting in 2009 and extending to 2016 and the Low Emission Vehicle (LEV) III GHG will cover 2017 to 2025. It is estimated that the standard will reduce climate change emissions by 30 percent in 2016 compared to the emissions in the same year without the standards.[15]

Executive Order S-1-07, the Low Carbon Fuel Standard. On January 18, 2007, E.O. S-1-07 was issued requiring a reduction of at least ten percent in the carbon intensity of California's transportation fuels by 2020. Regulatory proceedings and implementation of the Low Carbon Fuel Standard are CARB's responsibility. The Low Carbon Fuel Standard has been identified by CARB as a discrete early action item in the CARB Scoping Plan. CARB expects the Low Carbon Fuel Standard to achieve the minimum ten percent reduction goal; however, many of the early action items outlined in the Scoping Plan work in tandem with one another. To avoid the potential for double-counting emission reductions associated with AB 1493 (see previous discussion), the Scoping Plan has modified the aggregate reduction expected from the Low Carbon Fuel Standard to 9.1 percent.

State CEQA Guidelines

Senate Bill 97 (Chapter 185, Statutes of 2007). Enacted in 2007, SB 97 directed the State Office of Planning and Research (OPR) to develop CEQA Guidelines "for the mitigation of GHG emissions or the effects of GHG emissions." In December 2009, OPR adopted amendments to the CEQA Guidelines, (Guidelines Amendments), Appendix G, Environmental Checklist, which created a new resource section for GHG emissions and indicated criteria that may be used to establish significance of GHG emissions. The amendments became effective on March 8, 2010.

The State CEQA Guidelines require lead agencies to describe, calculate, or estimate the amount of GHG emissions that would result from a project. Section 15064.4 calls for a good-faith effort when describing, calculating, or estimating GHG emissions. The lead agency has discretion to determine whether to use a model or methodology to quantify GHG emissions, and which model or methodology to use, or rely on a qualitative analysis or performance-based standards. The lead agency should consider the following factors, among others, when assessing the significance of impacts from GHG emissions on the environment.

- The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting;
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and,
- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

The administrative record for the Guidelines Amendments also clarifies "that the effects of greenhouse gas emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impact analysis. The revised guidelines do not require or recommend a specific analysis methodology or provide quantitative criteria for determining the significance of GHG

[15]CARB, *Clean Air Standards - Pavley, Assembly Bill 1493*, May 6, 2013.

emissions and the guidelines confirm that lead agencies have the discretion to determine appropriate significance thresholds.

Land Use and Transportation Planning

Senate Bill 375 (Chapter 728, Statutes of 2008), which establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG, was adopted by the State on September 30, 2008. Under SB 375, CARB is required, in consultation with the State's Metropolitan Planning Organizations, to set regional GHG reduction targets for the passenger vehicle and light-duty truck sector for 2020 and 2035. In February 2011, CARB adopted the GHG emissions reduction targets of 8 percent by 2020 and 13 percent by 2035 relative to 2005 GHG emissions for the SCAG, which is the Metropolitan Planning Organization for the region in which the City is located. Of note, the proposed reduction targets explicitly exclude emission reductions expected from the AB 1493 and the LCFS regulations.

Under SB 375, the reduction target must be incorporated within that region's Regional Transportation Plan (RTP), which is used for long-term transportation planning, in a Sustainable Communities Strategy (SCS). Certain transportation planning and programming activities would then need to be consistent with the SCS; however, SB 375 expressly provides that the SCS does not regulate the use of land, and further provides that local land use plans and policies (e.g., general plan) are not required to be consistent with either the RTP or SCS.

Senate Bill 743. SB 743, adopted September 27, 2013, encourages land use and transportation planning decisions and investments that reduce vehicle miles traveled (VMT), which contribute to GHG emissions, as required by AB 32. Key provisions of SB 743 include reforming aesthetics and parking CEQA analysis for urban infill projects and eliminating the measurement of auto delay, including Level of Service (LOS), as a metric that can be used for measuring traffic impacts in transit priority areas. SB 743 requires the OPR to develop revisions to the CEQA Guidelines establishing criteria for determining the significance of transportation impacts of projects within transit priority areas that promote the "…reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses". It also allows OPR to develop alternative metrics outside of transit priority areas.

Energy Efficiency

Title 24 Standards. The California Energy Commission (CEC) first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations (CCR), Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the State. Although not originally intended to reduce GHG emissions, increased energy efficiency and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically (typically every three years) to allow for the consideration and inclusion of new energy efficiency technologies and methods. The Energy Efficiency Standards for Residential and Nonresidential Buildings focuses on several key areas to improve the energy efficiency of renovations and addition to existing buildings as well as newly constructed buildings and renovations and additions to existing buildings. The major efficiency improvements to the residential Standards involve improvements for attics, walls, water heating, and lighting, whereas the major efficiency

improvements to the nonresidential Standards include alignment with the American Society of Heating, Refrigerating and Air-Conditioning Engineers 90.1-2013 national standards. Furthermore, the standards require that enforcement agencies determine compliance with CCR, Title 24, Part 6 before issuing building permits for any construction. The most recently published Title 24 standards for nonresidential buildings were codified in 2019.

California Green Building Standards (CALGreen). Part 11 of the Title 24 Building Energy Efficiency Standards is referred to as the CALGreen Code. The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality." The CALGreen Code is not intended to substitute for or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission. The CALGreen Code establishes mandatory measures for new residential and non-residential buildings. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design and overall environmental quality.

Renewable Energy. The State has adopted regulations to increase the proportion of electricity from renewable sources. In November 2008, Governor Schwarzenegger signed E.O. S-14-08, which expands the State's Renewables Portfolio Standard to 33 percent renewable power by 2020. On April 12, 2011, Governor Jerry Brown signed SB X1-2 to increase California's Renewables Portfolio Standard to 33 percent by 2020. SB 350 (Chapter 547, Statues of 2015) further increased the Renewables Portfolio Standard to 50 percent by 2030. The legislation also included interim targets of 40 percent by 2024 and 45 percent by 2027. On September 10, 2018, Governor Jerry Brown signed SB 100, which further increased California's Renewables Portfolio Standard to achieve 50 percent renewable resources by December 31, 2026, and a 60 percent target by December 31, 2030, while requiring retail sellers and local publicly owned electric utilities to procure eligible renewable electricity for 44 percent of retail sales by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030, and that CARB should plan for 100 percent eligible renewable energy resources and zero-carbon resources by December 31, 2045.

California Supreme Court

The California Supreme Court considered the CEQA issue of determining the significance of GHG emissions in its decision, *Center for Biological Diversity v. California Department of Fish and Wildlife and Newhall Land and Farming* ("Newhall," 2015) 62 Cal.4th 204. The Court questioned a then-common CEQA approach to GHG analyses for development projects that compared project emissions to the reductions from the "business-as-usual" (BAU) that will be needed Statewide to reduce emissions to 1990 levels by 2020, as required by AB 32. The Court upheld the BAU method as a valid approach but concluded that the BAU method was improperly applied in the case of the Newhall project because the target for the project was incorrectly deemed consistent with the Statewide emission target of a percent below BAU for the year 2020 as specified in the AB 32 Scoping Plan. In other words, the Court said that the percent below BAU target specified in the AB 32 Scoping Plan is intended as a measure of the GHG reduction effort required by the State as a whole, and it cannot necessarily be applied to the impacts of a specific project in a specific location,

particularly where the record did not show that the Newhall project had been assumed or considered in the AB 32 Scoping Plan.

The Court provided some guidance to evaluating the cumulative significance of a proposed land use project's GHG emissions but noted that none of the approaches could be guaranteed to satisfy CEQA for a particular project. The Court did not require that projects must rely on the Court's guidance in an analysis. However, this Draft EIR considers the potential GHG emissions associated with the Project within the context of the Court's guidance.

The Court also addressed project-level GHG emission inventories in the context of Statewide GHG emission inventories and reduction goals. If a project-level inventory were to include additional upstream embedded emissions associated with consumption of goods and services, or downstream transportation emissions, outside of the State, it would no longer be comparable to the State inventory and a threshold based on State reduction targets could not be used to evaluate the project's GHG emissions. Given the California Supreme Court's determination that it is appropriate under CEQA to compare project GHG emissions to a threshold related to the State reduction goals, there is no logical rationale to include GHG emissions in a CEQA project inventory if they are not included in the State's GHG inventory, nor to use methodologies to account for emissions different from those employed in the State's GHG inventory. Thus, consistent with the Court's ruling, a project-level GHG emissions inventory under CEQA need not include additional upstream embedded emissions or downstream emissions to maintain consistency with the Statewide GHG emission inventory methodology.

3.2.3 Regional

Southern California Association of Governments (SCAG). SB 375 requires CARB to develop regional CO_2 emission reduction targets, compared to 2005 emissions, for cars and light trucks only for 2020 and 2035 for each metropolitan planning organization (MPO). Each MPO is to prepare an SCS as part of the RTP in order to reduce CO_2 by better aligning transportation, land use, and housing. SCAG is the MPO for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial counties. SCAG addresses regional issues related to transportation, the economy, community development, and the environment. SCAG develops plans pertaining to transportation, growth management, hazardous waste management, housing, and air quality. SCAG prepares the RTP/SCS every four years to support the land use and transportation conformity components of the Air Quality Management Plans, which provide some GHG-reduction co-benefits.

The SCAG Regional Council formally adopted the *Connect SoCal 2020–2045 RTP/SCS* (*Connect SoCal*) on September 3, 2020. Rooted in the 2008 and 2012 RTP/SCS plans, *Connect SoCal*'s "Core Vision" focuses on maintaining and enhancing management of the transportation network while also expanding mobility choices by creating hubs that connect housing, jobs, and transit accessibility. The "Core Vision" of *Connect SoCal* is organized into six key focus areas that expand upon progress made in the 2016 RTP/SCS: Sustainable Development, System Preservation and Resilience, Demand & System Management, Transit Backbone, Complete Streets, and Goods Movement. *Connect SoCal* incorporates a range of best practices for increasing transportation choices, reducing dependence on personal automobiles, further improving air quality and reducing GHG emissions, and encouraging growth in walkable, mixed-use communities with convenient access to transit infrastructure and employment. A new component of the *Connect SoCal* plan is the Regional Growth

Forecast, which was developed to project expected population, households, and jobs at the jurisdictional level throughout the 191 cities and unincorporated SCAG areas through 2045. Strategies to guide integrated land use development decisions and transportation investments to achieve regional goals are provided in the *Connect SoCal* Growth Vision, which informed SCAG's Forecasted Development Pattern.

Each of the six key focus areas in *Connect SoCal* contains strategies to achieve the intended holistic objectives of the *Connect SoCal* Growth Vision. The Sustainable Development focus area is the portion of the planning document dedicated to the SCS, which is the most directly applicable element to GHG emissions. The SCS evaluated the following Priority Growth Areas (PGAs) that were selected and developed based on their ability to support potential mode shift and shortened trip distances:

- Transit Priority Areas (TPAs) are defined as an area within one-half mile of a major transit stop that is existing or planned. This includes an existing rail or bus rapid transit station, a ferry terminal served by bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods. (Based on California Public Resources Code Section 21099 (a)(7) and California Public Resources Code Section 21064.3)

- High Quality Transit Areas (HQTAs) are generally walkable transit villages or corridors, consistent with the adopted RTP/SCS that are within one half-mile of a well-serviced transit stop or a transit corridor with 15-minute or less service frequency during peak commute hours. Freeway transit corridors with no bus stops on the freeway alignment do not have a directly associated HQTA. A high-quality transit corridor is defined as a corridor with fixed route bus service containing intervals no longer than 15 minutes during peak commute hours (based on California Public Resources Code Section 21155(b)).

- Livable Corridors refer to an arterial network that is a subset of the HQTAs based on level of transit service and land use planning efforts.

- Neighborhood Mobility Areas (NMAs) are areas with high intersection density (generally 50 intersections per square mile or more), low to moderate traffic speeds and robust residential retail connections which can support the use of Neighborhood Electric Vehicles or active transportation for short trips.

- Job Centers are areas with significantly higher employment density than surrounding areas.

Connect SoCal devised a growth priority hierarchy in order to optimize opportunities for shorter trip distances and drivers to switch to electric vehicles, which directs growth towards the areas described above in the following order: TPAs, Livable Corridors, Job Centers, HQTAs, and NMAs. Development in these areas will be guided by the following *Connect SoCal* strategies to reduce GHG emissions: focusing growth near destinations and mobility options; promoting diverse housing choice; leveraging technology innovations; supporting implementation of sustainability policies; and promoting a green region. SCAG, in conjunction with CARB, determined that implementation of *Connect SoCal* would achieve regional GHG reductions relative to 2005 SCAG areawide levels of

approximately eight percent in 2020 and approximately 19 percent by 2045.[16] The regional GHG emissions reductions achieved through the *Connect SoCal* Growth Vision are consistent with the regional targets set forth by CARB through SB 375.

San Bernardino County Regional Greenhouse Gas Reduction Plan. First published in 2008 and updated in 2011, 2014, and most recently 2021, the San Bernardino Council of Governments (SBCOG) led the preparation of the San Bernardino County Regional Greenhouse Gas Reduction Plan (*SBC GHG Plan*) through a collaborative partnership with 23 jurisdictions throughout the County.[17] The 2021 *SBC GHG Plan* involved the preparation of a baseline 2016 GHG emissions inventory for each of the jurisdictions and forecasting of emissions scenarios in the 2020, 2030, and 2045 horizon years. The *SBC GHG Plan* contains specific reduction measures for each of the jurisdictions to meet the targets set forth in AB 32 (statewide GHG emissions 80 percent below 1990 levels by 2050) and SB 32 (statewide GHG emissions 40 percent lower than 1990 levels by 2030). The emissions inventory focused on sources that could be regulated and controlled at the local level and excluded large stationary sources that are subject to statewide regulations. The City of Victorville profile in the 2021 *SBC GHG Plan* determined that the City would meet and exceed its GHG goal for 2020 primarily through mandatory statewide control measures—accounting for approximately 75 percent of reductions between 2016 and 2020–and also through adopted local strategies.

3.2.4 Local

City of Victorville Climate Action Plan. The City of Victorville General Plan requires that the City adopt a Climate Action Plan (CAP) to meet mandated GHG emission reduction targets. In 2008, City staff partnered with the San Bernardino Association of Governments (SANBAG) to conduct a countywide GHG inventory and ultimately published the 2015 CAP as the culmination of the collaborative efforts.[18] The 2015 CAP built on the regional work of the original 2008 and 2011 *SBC GHG Plans* and refined it to provide City-specific information and to develop the local implementation plan for selected GHG reduction measures. The CAP was prepared specifically to demonstrate how the City will reduce GHGs in compliance with AB 32 and SB 375 by 2020. The CAP involves both existing and new construction within the City and across all industries including residential, commercial, industrial, municipal (public), and institutional. The CAP includes the City's screening table process to allow for the streamlining of CEQA impact determinations regarding project consistency with local, regional, and statewide GHG emission reduction initiatives.

3.3 EXISTING SETTING

GHG emissions are the result of both natural and human-influenced activities. Volcanic activity, forest fires, decomposition, industrial processes, landfills, consumption of fossil fuels for power generation, transportation, heating, and cooling are the primary sources of GHG emissions. Without human activity, the Earth would maintain an approximate, but varied, balance between the emission of GHGs into the atmosphere and the storage of GHG in oceans and terrestrial ecosystems.

[16]SCAG, *Connect SoCal 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy*, May 2020.
[17] San Bernardino Council of Governments (SBCOG), *Final San Bernardindo County Regional Greenhouse Gas Reduction Plan*, March 2021.
[18]City of Victorville – Development Department, *City of Victorville Climate Action Plan*, September 2015.

Increased combustion of fossil fuels (e.g., gasoline, diesel, coal, etc.) has contributed to a rapid increase in atmospheric levels of GHGs over the last 150 years.

The primary effect of rising global concentrations of atmospheric GHG levels is a rise in the average global temperature of approximately 0.2 degrees Celsius per decade, determined from meteorological measurements worldwide between 1990 and 2005. Climate change modeling using 2000 emission rates shows that further warming is likely to occur given the expected rise in global atmospheric GHG concentrations from innumerable sources of GHG emissions worldwide (including from economically developed and developing countries and deforestation), which would induce further changes in the global climate system during the current century.[19]

Adverse impacts from global climate change worldwide and in California could include:

- Declining sea ice and mountain snowpack levels, thereby increasing sea levels and sea surface evaporation rates with a corresponding increase in atmospheric water vapor due to the atmosphere's ability to hold more water vapor at higher temperatures;[20]
- Rising average global sea levels primarily due to thermal expansion and the melting of glaciers, ice caps, and the Greenland and Antarctic ice sheets;[21]
- Changing weather patterns, including changes to precipitation, ocean salinity, and wind patterns, and more energetic aspects of extreme weather including droughts, heavy precipitation, heat waves, extreme cold, and the intensity of tropical cyclones;[22]
- Declining Sierra Mountains snowpack levels, which account for approximately half of the surface water storage in California, by 70 percent to as much as 90 percent over the next 100 years;[23]
- Increasing the number of days conducive to ozone formation (e.g., clear days with intense sun light) by 25 percent to 85 percent (depending on the future temperature scenario) in high ozone areas located in the Southern California area and the San Joaquin Valley by the end of the 21st Century;[24] and,
- Increasing the potential for erosion of California's coastlines and seawater intrusion into the Sacramento Delta and associated levee systems due to the rise in sea level.[25]

CARB maintains the statewide GHG emission inventory. **Table 4** shows GHG emissions from 2009 to 2018 in California by economic sector as defined in the 2008 Scoping Plan.[26] California's GHG emissions have followed a declining trend over the past decade. In 2018, emissions from routine emitting activities statewide were approximately 29.3 $MMTCO_2e$ (six percent) lower than 2009 levels.

[19]USEPA, *Draft Endangerment Finding*, 74 Fed. Reg. 18886, 18904, April 24, 2009.
[20]*Ibid*.
[21]Intergovernmental Panel on Climate Change, *Climate Change 2013: The Physical Science Basis, Fifth Assessment Report*, ISBN 978 1 107 05799-1 Hardback; 978 1 66182-0 Paperback. 2013.
[22]Intergovernmental Panel on Climate Change, *Climate Change 2013: The Physical Science Basis, Fifth Assessment Report*, ISBN 978 1 107 05799-1 Hardback; 978 1 66182-0 Paperback. 2013.
[23]Cal/EPA, *Climate Action Team* Report *to Governor Schwarzenegger and the California Legislature*, 2006.
[24]*Ibid*.
[25]*Ibid*.
[26]CARB, *2000-2018 GHG Inventory (2020 Edition)*, available at https://ww2.arb.ca.gov/ghg-inventory-data.

TABLE 4: CALIFORNIA GREENHOUSE GAS EMISSIONS INVENTORY TREND

Sector	CO_2e Emissions (Million Metric Tons)									
	2009	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
Transportation	168.0	165.1	161.8	161.4	161.2	162.6	166.2	169.8	171.0	169.5
Electric Power	101.3	90.3	89.2	98.2	91.4	88.9	84.8	68.6	62.1	63.1
Industrial	87.2	91.0	89.3	88.9	91.6	92.4	90.1	88.9	88.7	89.2
Commercial and Residential	44.5	45.9	46.0	43.5	44.2	38.2	38.8	40.6	41.3	41.4
Agriculture	32.9	33.7	34.4	35.5	33.8	34.8	33.4	33.2	32.3	32.6
High Global Warming Potential	12.3	13.5	14.5	15.5	16.8	17.7	18.6	19.3	20.0	20.5
Recycling and Waste	8.5	8.7	8.7	8.7	8.7	8.8	8.8	8.9	9.0	9.1
Emissions Total	**454.7**	**448.2**	**443.9**	**451.7**	**447.7**	**443.4**	**440.7**	**429.3**	**424.4**	**425.4**

SOURCE: CARB, *California Greenhouse Gas Emission Inventory - 2020 Edition*, available at https://ww3.arb.ca.gov/cc/inventory/data/data.htm.

Of note, between October 23, 2015, and February 18, 2016, an exceptional natural gas leak event occurred at the Aliso Canyon natural gas storage facility that resulted in unexpected GHG emissions of considerable magnitude. The exceptional incident released approximately 109,000 metric tons of CH_4, which equated to approximately 1.96 $MMTCO_2e$ of unanticipated emissions in 2015 and an additional 0.52 $MMTCO_2e$ in 2016. According to the CARB, these emissions will be mitigated in the future through projects funded by the Southern California Gas Company based on legal settlement and are tracked separately from routine inventory emissions.[27,28] Emissions associated with the transportation sector in 2017 were similar to those in 2009 despite substantial statewide growth, demonstrating improvements made in fuel economy to reduce average vehicle emissions.

Regional and local GHG emissions inventories have also been prepared in recent years. For the SCAG region, development of the 2012 RTP/SCS included an MPA-wide GHG emissions inventory for the base year of 2012, as well as a projection for the year 2020.[29] Similar to the California GHG emissions profile, transportation, industrial, and electricity uses represented the greatest contributors to the MPA inventory. Total SCAG emissions were forecasted to be approximately 216 $MMTCO_2e$ in 2020, with approximately 38.5 percent of emissions within the SCAG region being attributed to the transportation sector. SCAG modeling prepared to support the Program Environmental Impact Report (PEIR) for the *Connect SoCal* plan estimated that in 2019, on-road light, medium, and heavy-duty vehicle GHG emissions were approximately 75.8 $MMTCO_2e$, of which 11.42 $MMTCO_2e$—approximately 15 percent—occurred within San Bernardino County.[30]

At the local level, the 2021 *SBC GHG Plan* established that the City of Victorville generated approximately 889,825 $MTCO_2e$ of GHG emissions in 2016 and committed to reducing its community GHG emissions to a level that is 40 percent below its 2008 GHG emissions level by 2030. To achieve this goal, Victorville will need to reduce its annual emissions by 499,257 $MTCO_2e$ by 2030. The Pavley vehicle standards, the state's low carbon fuel standards, the RPS, and other state measures are forecasted to reduce GHG emissions in Victorville's on-road and building energy sectors by approximately 368,438 $MTCO_2e$ annually in 2030, accounting for approximately 73.8 percent of necessary reductions. The remaining 130,819 $MTCO_2e$ in reductions will come from local initiatives in the building energy (86,849 $MTCO_2e$), on-road transportation (22,291 $MTCO_2e$), off-road

[27]CARB, *California Greenhouse Gas Inventory for 2000-2015: Trends of Emissions and Other Indicators*, June 2017.
[28]CARB, *Determination of Total Methane Emissions from the Aliso Canyon Natural Gas Leak Incident*, October 2016.
[29]SCAG, *Final SCAG Regional Greenhouse Gas Inventory and Reference Case Projections, 1990-2035*, May 2012.
[30]SCAG, *Draft Program Environmental Impact Report for Connect SoCal*, December 2019.

equipment (1,619 $MTCO_2e$), waste management (13,930 $MTCO_2e$), new development (5,311 $MTCO_2e$), water conveyance (564 $MTCO_2e$), wastewater (254 $MTCO_2e$), and agriculture (one $MTCO_2e$) sectors. The 2021 SBC GHG Plan determined that the City would meet its 2030 GHG reduction goals based on the comprehensive strategy developed in collaboration with SBCOG.

3.4 METHODOLOGY AND SIGNIFICANCE THRESHOLDS

This section describes the methodological approach to the GHG emissions impact assessment and presents a discussion of the applicable thresholds of significance.

3.4.1 Methodology

Amendments to the CEQA Guidelines Section 15064.4 were adopted to assist lead agencies in determining the significance of in determining the significance of the impacts of GHG emissions. Section 15064.4(a) states that a lead agency shall make a good faith effort to describe, calculate, or estimate the amount of GHG emissions resulting from a project. In accordance with Section 15064.4(c), GHG emissions that would be generated by the Project were estimated using the California Emissions Estimator Model (CalEEMod, Version 2020.4.0), which is the preferred regulatory tool recommended by the Mojave Desert Air Quality Management District (MDAQMD) for estimating GHG emissions from proposed land use development projects. CalEEMod relies on an emissions factors database compiled from the CARB EMission FACtor (EMFAC) on-road mobile source emissions inventory model and the CARB OFFROAD off-road equipment model, as well as regional survey data for energy resource consumption, water use, and solid waste generation. The following discussions describe sources of GHG emissions during temporary construction activities and future long-term operations.

Construction

Construction of the Project is anticipated to commence in March 2022 and last for approximately 10 months, with operations beginning in 2023. Construction activities would generally site clearing and leveling (one month) followed by foundations and building envelope construction (nine months), during which time paving of driveways and access points, architectural finishing, and landscape installation would occur. Reasonably conservative inventories of equipment, vehicles, and personnel for each activity were developed with input the Project team and supplemented with regional defaults incorporated into the model. **Table 5** provides a succinct overview of the construction schedule, maximum daily equipment inventory, and construction traffic estimates for each activity involved. Details pertaining to the schedule and source activities can be found in **Appendix A**.

TABLE 5: CONSTRUCTION SCHEDULE SUMMARY

Phase Description	Start Date	Duration (Months)	Max Daily Equipment	Average Daily Round Trips		
				Workers	Haul Trucks	Deliveries
Clearing & Leveling	Mar-2022	1	5	20	16	-
Foundations & Construction	Apr-2022	9	7	80	-	40
Paving & Access Points	Sep-2022	2	6	20	-	4
Finishing & Landscaping	Oct-2022	2	2	20	-	2

SOURCE: TAHA, 2021.

Construction of the Project would result in short-term GHG emissions produced by construction equipment exhaust. The OFFROAD model is the statewide emissions inventory for off-road equipment compiled by the CARB; factors from OFFROAD are built into the CalEEMod software based on the Project location. CalEEMod provides options for specifying equipment types, horsepower ratings, load factors, and operational hours per day during each activity. Construction equipment inventories were provided by the Project team for ease phase of construction, and default average equipment horsepower and default load factors derived from the statewide inventory for each type of equipment were relied upon to estimate daily emissions. CalEEMod calculates emissions of CO_2, CH_4, and N_2O from construction equipment.

Additionally, construction activities generate GHG emissions from on-road vehicle trips from personal vehicles for worker commuting, vendor deliveries of equipment and materials, and trucks for soil and debris hauling. These GHG emissions are based on the number of trips and the vehicle miles traveled (VMT), along with emission factors from EMFAC for CO_2, CH_4, and N_2O. CalEEMod accounts for running exhaust and evaporative emissions, as well as vehicle starts. The CalEEMod program contains default trip lengths for workers, vendors, and material hauling based on regional survey data that were employed in the analysis of construction-related GHG emissions.

Operations

Sources of GHG emissions during Project operation will include energy consumption, landscaping equipment, vehicular travel, water use, and waste generation. The Project consists of development of a mixed-use building providing approximately 82,600 square feet of commercial shopping center space, 4,500 square feet of banking financial center space, and 10,900 square feet of fast-food restaurant and café space. The Project would also include a surface parking lot providing 513 parking spaces that would use minimal electricity for lighting. Emissions modeling files are included in **Appendix A**.

Mobile Source Emissions

The trip generation analysis prepared for the Project determined that operations would generate approximately 9,474 daily vehicle trips, of which approximately 1,970 would be pass-by trips and 7,504 would be primary trips. The mobile source GHG emissions modeling assumed that the daily trip rate would occur on both weekdays and weekends. Daily trip rates were adjusted in CalEEMod to reflect Project-specific trip generation.

Emissions from Energy Consumption

GHG emissions from electricity and natural gas use are based on the size of the land uses, the electrical demand factors for the land uses, the GHG emission factors for the utility provider, and the GWP values for the pollutants analyzed. Electricity and natural gas emissions were calculated using the CalEEMod emissions inventory model, which multiplies an estimate of the energy usage by applicable emissions factors corresponding to the utility companies serving the Project. Electricity is provided to the Project site by Southern California Edison (SCE) and natural gas is provided by the Southern California Gas (SoCalGas) Company. SCE was selected as the utility provider for the CalEEMod input.

Building electricity and natural gas consumption is separated into energy consumed by the built environment and energy consumed by uses that are independent of the construction of the building, such as plug-in appliances. CalEEMod calculates electricity consumption from systems covered by Title 24 (e.g., heating, ventilation, and air conditioning system, and lighting system); energy use from lighting; and energy use from office equipment, appliances, plug-ins, and other sources are not covered by Title 24 or lighting. CalEEMod electricity and natural gas usage rates are based on the California Commercial End-Use Survey and California Residential Appliance Saturation Survey studies sponsored by the California Energy Commission. The data are specific for climate zones; therefore, Zone 10 was selected based on the zip code tool. The Project would be subject to the 2019 Title 24 standards which are incorporated into the CalEEMod database.

Emissions from Water Use

Emissions related to water usage and wastewater generation were calculated using CalEEMod emission inventory model which multiplies an estimate of the water usage by the applicable energy intensity factor to determine the embodied energy necessary to supply potable water. GHG emissions are related to the energy used to convey, treat, and distribute water and wastewater. Thus, the emissions are generally indirect emissions from the production of electricity to power these systems. GHG emissions are then calculated based on the amount of electricity consumed multiplied by the GHG intensity factors for the utility provider. In this case, embodied energy for Southern California supplied water and GHG intensity factors for SCE were selected in CalEEMod. CalEEMod was used to estimate indirect Project GHG emissions associated with water use.

Emissions from Solid Waste Disposal

Emissions related to solid waste were calculated using the CalEEMod emissions inventory model, which multiplies an estimate of the waste generated by applicable emissions factors, provided in Section 2.4 of USEPA's AP-42, Compilation of Air Pollutant Emission Factors. CalEEMod solid waste generation rates for each applicable land use type were selected for this analysis.

Consistency with Applicable Plans and Policies

Although the Study methodology included a quantitative disclosure of estimated GHG emissions for informational purposes in accordance with the State CEQA Guidelines, the impact assessment and significance determination primarily relied on an evaluation of the Project's consistency with—or otherwise lack of interference or obstruction towards—plans and policies that have been adopted to reduce GHG emissions. The City's 2015 CAP provides a streamlined screening table process to demonstrate whether a proposed project is consistent with the 2015 CAP and AB 32 emission reduction targets (i.e., reducing statewide emissions to 80 percent below 1990 levels by 2050). The screening table process employs a points-based compliance guide to demonstrating that a project was designed with implemented strategies to reduce GHG emissions through natural resource and energy conservation, improving energy efficiency, building envelope features, and

In addition to the 2015 CAP, the most directly applicable plans and policies include the Climate Change Scoping Plan at the state level and *Connect SoCal* and the *San Bernardino County Regional GHG Reduction Plan* at the regional level. In the 2017 Scoping Plan Update, CARB established a statewide target of six $MTCO_2e$ per capita by 2030 and two $MTCO_2e$ per capita by 2050 from light and medium duty autos and trucks. SCAG adopted regional GHG reduction targets set by CARB for

light and medium duty autos and trucks of eight percent by 2020 and 19 percent by 2035 in its *Connect SoCal* Growth Vision.

3.4.2 Significance Thresholds

In accordance with Appendix G of the State CEQA Guidelines, the Project would have a significant impact related to GHG if it would:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; and/or,
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

Section 15064.4 of the CEQA Guidelines was adopted to assist lead agencies in determining the significance of impacts of GHGs. Consistent with developing practice, this section states that lead agencies should make a good-faith effort to describe, calculate, or estimate the amount of GHG emissions resulting from a project, and that the lead agency should consider the following factors when assessing the significance of impacts from GHG emissions on the environment:

- The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting;
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and
- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

The CEQA Guidelines require lead agencies to adopt GHG thresholds of significance. When adopting these thresholds, the amended Guideline allows lead agencies to consider thresholds of significance adopted or recommended by other public agencies, or recommended by experts, provided that the thresholds are supported by substantial evidence, and/or to develop their own significance threshold. In addition to quantification, Section 15064.4 recommends consideration of several other qualitative factors that may be used in the determination of significance (i.e., extent to which a project may increase or reduce GHG emissions; whether a project exceeds an applicable significance threshold; and the extent to which a project complies with regulations or requirements adopted to implement a reduction or mitigation of GHGs).

Section 15064.4 does not establish a threshold of significance. Lead agencies have the discretion to establish significance thresholds for their respective jurisdictions, and in establishing those thresholds, a lead agency may appropriately look to thresholds developed by other public agencies, or suggested by other experts, such as the California Air Pollution Control Officers Association (CAPCOA), as long as any threshold chosen is supported by substantial evidence (See CEQA Guidelines Section 15064.7(c)). The CEQA Guidelines amendments also clarify that the effects of GHG emission are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impact analysis (See CEQA Guidelines Section 15103(f)).

The CARB 2017 Scoping Plan recognizes that for individual projects, "[a]chieving net zero increases in GHG emissions, resulting in no contribution to GHG impacts, may not be feasible or appropriate for every project, however, and the inability of a project to mitigate its GHG emissions to net zero does not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA." Therefore, it is possible for an individual project to generate GHG emissions without resulting in a significant and unavoidable impact.

In conjunction with its 2015 CAP, the City has adopted a *Greenhouse Gas Emissions Screening Table Review* approach to assessing the potential significance of proposed development projects subject to CEQA requirements. Based on the proposed project type—either residential or commercial/industrial—the screening tables contain an array of design features and control strategies that CEQA projects may incorporate to enhance energy efficiency and reduce GHG emissions. The features are divided into categories including the Building Envelope, Indoor Space Efficiencies, Miscellaneous Commercial/Industrial Building Efficiencies, and the possible reduction measures include On-Site Renewable Energy, Water Conservation, Land Use Based Trips and VMT Reduction, Bicycle Infrastructure, Electric Vehicle Infrastructure, and Employee-Based Trip and VMT Reduction Policy.[31] Specific design features falling under each of the categories listed have corresponding point values based on the level of compliance. The screening methodology states that CEQA projects that are able to accrue a minimum of 45 points based on the implemented design features and reduction measures exceeding parameters outlined in the California Green Building Code are assumed to be consistent with statewide (*California's 2017 Climate Change Scoping Plan*), regional (SCAG *Connect SoCal 2020–2045 RTP/SCS*), and local (*City of Victorville Climate Action Plan*) GHG emissions reduction plans and would not result in significant impacts.

Furthermore, under CEQA, MDAQMD is an expert commenting agency on air quality and related matters within its jurisdiction or impacting on its jurisdiction. The *California Environmental Quality Act (CEQA) and Federal Conformity Guidelines* are intended to assist persons preparing environmental analysis or review documents for any project within the jurisdiction of the MDAQMD by providing background information and guidance on the preferred analysis approach.[32] MDAQMD has established CO_2e significance thresholds of 548,000 pounds per day and 100,000 tons per year. The intensity of daily construction activity would vary substantially throughout the duration of construction, and it is uncertain which specific activities may be occurring simultaneously on a given day. Therefore, it is also appropriate to evaluate total GHG emissions that would be generated by construction and future operations in the context of the MDAQMD annual threshold.

The determination of whether or not the Project would result in a cumulatively considerable contribution to the cumulative impacts of global climate change is based on if the Project would conflict with the regulatory plans and policies to reduce GHG emissions. These plans and policies include the CalGreen and Energy Code, CARB's *Climate Change Scoping Plan*, SCAG's *Connect SoCal* 2020–2045 RTP/SCS, the *SBC GHG Plan*, and the City's 2015 CAP. In accordance with City guidelines, the assessment of potentially significant impacts is streamlined using the screening tables process and emissions are quantified and disclosed for informational purposes.

[31]Department of Development – City of Victorville, *Greenhouse Gas Emissions Screening Table Review*, 2016.
[32]MDAQMD, *California Environmental Quality Act (CEQA) and Federal Conformity Guidelines*, August 2016.

3.5 ENVIRONMENTAL IMPACTS

3.5-1 Would the Proposed generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment? (Less-Than-Significant Impact)

Impact Assessment

Implementation of the Project would generate GHG emissions from short-term, temporary construction activities during 2022 and future operations upon occupancy in 2023. The emission of GHGs by a single project into the atmosphere is not itself necessarily an adverse environmental effect. Rather, it is the increased accumulation of GHG emissions from more than one project and many sources in the atmosphere that may result in global climate change. The consequences of that climate change can cause adverse environmental effects. In accordance with the State CEQA Guidelines, GHG emissions that would be generated during construction and operation of the Project were quantified for informational purposes. CalEEMod was used to prepare estimates of daily and annual GHG emissions that would be generated during construction activities and future operations. **Table 6** presents the estimated emissions of GHGs that would be released to the atmosphere during temporary construction activities in 2022—both maximum daily emissions and total annual emissions—as well as source-specific operational emissions beginning in 2023. Detailed emissions calculations files are provided in the **Appendix A**.

TABLE 6: ESTIMATED PROJECT GREENHOUSE GAS EMISSIONS

Source	Daily Emissions (lbs.-CO_2e)	Annual Emissions (tons-CO_2e)
Area Source Emissions (Direct)	<0.1	<0.1
Energy Source Emissions (Indirect)	2,816.5	514.0
Mobile Source Emissions (Direct)	38,753.1	7,072.4
Waste Disposal Emissions (Indirect)	657.6	120.0
Water Distribution Emissions (Indirect)	245.3	44.8
Total Operational Emissions	**42,472.6**	**7,751.2**
Maximum Construction Emissions (Direct)	**8,843.2**	**668.8**
MDAQMD Threshold	***548,000***	***100,000***

SOURCE: TAHA, 2021.

As shown in **Table 6**, construction of the Project would result in maximum daily emissions of 8,843.2 pounds of CO_2e and approximately 668.8 tons of CO_2e emissions in total. The maximum daily emissions represent less than two percent of the MDAQMD daily threshold and the total construction emissions represent less than one percent of the annual MDAQMD threshold. Future Project operations would generate approximately 42,472.6 pounds of CO_2e daily and would produce no more than 7,751.2 tons of CO_2e annually (less than eight percent of the MDAQMD daily and annual thresholds, respectively). Emissions have been quantified and disclosed for informational purposes in accordance with recommended methodologies within the State CEQA Guidelines; however, the impact determination is based on the City's GHG emissions screening methodology adopted as part of the 2015 CAP.

3.5-2 Would the Project conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs? (Less-Than-Significant Impact)

Impact Assessment

The following consistency analysis describes the extent that the Project complies with or exceeds performance-based standards included in the City's screening table process for GHG emissions reductions. The screening tables are reproduced from the Greenhouse Gas Emissions Screening Table Review document for the Project, which is included as **Appendix B** to this Study. **Table 7** presents the elements of the City's design guidelines with which the Project complies.

TABLE 7: PROJECT COMPLIANCE WITH COMMERCIAL USE SCREENING TABLES

Feature	Description	Point Values
Building Envelope		
Insulation	2008 Baseline (walls R-13, roof/attic R-30)	0 points
	Modestly Enhanced Insulation (walls R-13, roof/attic R-38)	15 points
	Enhanced Insulation (rigid wall insulation R-13, roof/attic R-38)	18 points
	Greatly Enhanced Insulation (spray foam insulated walls R-15 or higher, roof/attic R-38 or higher)	20 points
Windows	2008 Baseline Windows (0.57 U-factor, 0.4 SHGC/1/)	0 points
	Modestly Enhanced Window Insulation (0.4 U-factor, 0.32 SHGC)	7 points
	Enhanced Window Insulation (0.32 U-factor, 0.25 SHGC)	8 points
	Greatly Enhanced Window Insulation (≤0.28 U-factor, ≤0.22 SHGC)	12 points
Cool Roof	Modest Cool Roof (CRRC Rated 0.15 ASR/2/, 0.75 thermal emittance)	12 points
	Enhanced Cool Roof (CRRC Rated 0.2 ASR, 0.75 thermal emittance)	14 points
	Greatly Enhanced Cool Roof (CRRC Rated 0.35 ASR, 0.75 therm. emit.)	16 points
Indoor Space Efficiencies		
Water Heaters	2008 Minimum Efficiency (0.57 Energy Factor)	0 points
	Improved Efficiency Water Heater (0.675 Energy Factor)	14 points
	High Efficiency Water Heater (0.72 Energy factor)	16 points
Daylighting	All peripheral rooms within building have at least one window/skylight	1 points
	All rooms within building have daylight (through windows, skylights, etc.)	5 points
	All rooms fully daylighted	7 points
Artificial Lighting	2008 Minimum (required)	0
	Efficient Lights (equivalent of 25 percent of in-unit fixtures high-efficacy)	9 points
	High Efficiency Lights (50 percent of in-unit fixtures are high-efficacy)	12 points
	Very High Efficiency Lights (100 percent of in-unit fixtures high-efficacy)	14 points
Irrigation and Landscaping		
Water Efficient Landscaping	Eliminate conventional turf from landscaping.	0 points
	Only moderate water using plants.	3 points
	Only low water using plants.	4 points
	Only California Native landscape that requires no or only supplemental irrigation	8 points
Toilets	Water Efficiecnt Toilets/Urinals (1.5 gpm)	3 points
	Waterless Urinals	4 points
	Project Total Points	***69***

SOURCE: TAHA, 2021.
Notes: /a/ SHGC = solar heat gain coefficient; /2/ ASR = aged solar reflectance

As shown in **Table 7**, the Project would implement design features that collectively accrue 69 points based on the City's screening table approach. The point threshold for consistency with the 2015 CAP is 45, and the Project would exceed that value by 24 points. Therefore, the Project would be consistent with AB 32 and SB 375, as well as regional and local GHG emission reduction measures. Impacts would be less than significant, and no mitigation is required.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant, and no mitigation measures are required.

3.6 CUMULATIVE IMPACTS

The emission of GHGs by a single project into the atmosphere is not itself necessarily an adverse environmental effect. Rather, it is the increased accumulation of GHG emissions from more than one project and many sources in the atmosphere that may result in global climate change. The consequences of that climate change can cause adverse environmental effects. A project's GHG emissions typically would be very small in comparison to State or global GHG emissions and, consequently, they would, in isolation, have no significant direct impact on climate change. Pursuant to CEQA Guidelines Section 15064(h)(3) a project's incremental contribution to cumulative impacts can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that would avoid or substantially lessen the cumulative problem with the geographic area of the project. The State has mandated a goal of reducing statewide emissions to 1990 levels by 2020, even though statewide population and commerce is predicted to continue to expand.

AB 32 has acknowledged that GHG emissions are a statewide impact. Emissions generated by the Project in combination with past, present, and reasonably probable future related projects could contribute to this impact. The CEQA Guidelines emphasize that the effects of GHG emissions are cumulative in nature and should be analyzed in the context of CEQA's existing cumulative impacts analysis. The Office of Planning and Research acknowledges that although climate change is cumulative in nature, not every individual Project that emits GHGs must necessarily be found to contribute to a significant cumulative impact on the environment. As discussed above, the Project's incremental contribution to the statewide cumulative impact would not be cumulatively considerable, and annual GHG emissions would remain substantially below the MDAQMD daily and annual quantitative thresholds. Therefore, implementation of the Project would not result in new or exacerbated environmental effects related to GHG emissions, and both project-level and cumulative impacts would be less than significant.

4.0 REFERENCES

California Air Pollution Control Officer's Association, *CEQA & Climate Change – Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act*, January 2008.

California Air Pollution Control Officer's Association, *California Emissions Estimator Model User's Guide (CalEEMod, Version 2020.4.0)*, May 2021, available at http://www.caleemod.com/.

California Air Pollution Control Officer's Association, *Quantifying Greenhouse Gas Mitigation Measures – A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures*, August 2010.

California Air Resources Board, *California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target*, November 2017, available at https://www.arb.ca.gov/cc/scopingplan/scopingplan.htm.

California Air Resources Board, *California Greenhouse Emission Inventory: 2000–2018, 2020 Edition*, available at https://ww2.arb.ca.gov/ghg-inventory-data.

California Air Resources Board, *California's Greenhouse Gas Vehicle Emissions Standards Under Assembly Bill 1493 of 2002 (Pavley)*, available at https://ww2.arb.ca.gov/californias-greenhouse-gas-vehicle-emission-standards-under-assembly-bill-1493-2002-pavley.

California Air Resources Board, *Determination of Total Methane Emissions from the Aliso Canyon Natural Gas Leak Incident*, October 2016.

California Air Resources Board, *First Update to the Climate Change Scoping Plan*, May 2014.

California Air Resources Board (CARB), *GHG Global Warming Potentials*, available at https://ww2.arb.ca.gov/ghg-gwps.

California Air Resources Board, *Proposed Early Action Measures to Mitigate Climate Change in California*, April 20, 2007.

California Building Standards Commission, *2016 California Green Building Standards Code | CALGreen*, available at https://www.ladbs.org/docs/default-source/publications/code-amendments/2016-calgreen_complete.pdf?sfvrsn=6.

California Energy Commission, *California's Energy Efficiency Standards for Residential and Nonresidential Buildings, Title 24, Part 6, of the California Code of Regulations*, information available at http://www.energy.ca.gov/title24.

California Energy Commission, *California's Energy Future – The View to 2050*, May 2011.

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

City of Victorville, Development Department & San Bernardino Association of Governments (SANBAG), *City of Victorville Climate Action Plan*, September 2015.

Federal Register, Executive Order 13783 of March 28, 2017: Promoting Energy Independence and Economic Growth, Vol. 82, No. 61, March 21, 2017.

Federal Register, Executive Order 13795 of April 28, 2017: Implementing an America-First Offshore Energy Strategy, Vol. 82, No. 84, May 3, 2017.

Intergovernmental Panel on Climate Change, *Climate Change 2013: The Physical Science Basis, Fifth Assessment Report*, ISBN 978 1 107 05799-1 Hardback; 978 1 66182-0 Paperback. 2013.

Mojave Desert Air Quality Management District (MDAQMD), *California Environmental Quality Act (CEQA) and Federal Conformity Guidelines*, August 2016.

San Bernardino Council of Governments (SBCOG), *San Bernardino County Regional Greenhouse Gas Reduction Plan*, March 2021.

Southern California Association of Governments, *2016–2040 Regional Transportation Plan/Sustainable Communities Strategy*, 2016.

Southern California Association of Governments, *Connect SoCal: The 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy of the Southern California Association of Governments,* Officially Adopted September 3, 2020.

Southern California Association of Governments, *Draft Program Environmental Impact Report for Connect SoCal*, December 2019.

Southern California Association of Governments, *Regional Greenhouse Gas Emissions Inventory and Reference Case Projections, 1990-2035,* May 2012.

The White House, *President Obama Announces National Fuel Efficiency Policy*, May 19, 2009, https://obamawhitehouse.archives.gov/the-press-office/president-obama-announces-national-fuel-efficiency-policy.

United States Environmental Protection Agency, *Draft Endangerment Finding, 74 Fed. Reg. 18886, 18904*, April 24, 2009.

United States Environmental Protection Agency (USEPA) and National Highway Traffic Safety Administration (NHTSA), *Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule*, March 30, 2020, available at https://www.nhtsa.gov/corporate-average-fuel-economy/safe.

.

APPENDIX A

CALIFORNIA EMISSIONS ESTIMATOR MODEL
DAILY & ANNUAL OUTPUT FILES

Amethyst Crossing Project - San Bernardino-Mojave Desert County, Winter

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

Amethyst Crossing Project

San Bernardino-Mojave Desert County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Bank (with Drive-Through)	4.50	1000sqft	0.10	4,500.00	0
Other Asphalt Surfaces	3.50	Acre	3.50	152,460.00	0
Parking Lot	513.00	Space	4.62	205,200.00	0
Fast Food Restaurant with Drive Thru	10.90	1000sqft	0.25	10,900.00	0
Regional Shopping Center	82.60	1000sqft	1.90	82,600.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Preliminary Project Schedule

Off-road Equipment - Project Inventory

Off-road Equipment - Project Inventory

Off-road Equipment - Project Inventory

Off-road Equipment - Project Inventory

Trips and VMT - Project Trips; Material balanced on site, minimal debris disposed of off-site.

Amethyst Crossing Project - San Bernardino-Mojave Desert County, Winter

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

On-road Fugitive Dust - Dirt Roads on-site

Grading -

Architectural Coating -

Vehicle Trips - Project Trips

Area Coating -

Construction Off-road Equipment Mitigation - Comply with MDAQMD Rule 403/403.2

Mobile Land Use Mitigation -

Water Mitigation -

Fleet Mix - Daily Fleet Mix

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	45.00
tblConstructionPhase	NumDays	300.00	195.00
tblConstructionPhase	NumDays	20.00	45.00
tblConstructionPhase	NumDays	10.00	20.00
tblFleetMix	HHD	0.02	0.00
tblFleetMix	HHD	0.02	0.00
tblFleetMix	HHD	0.02	0.00
tblFleetMix	LDA	0.54	0.60
tblFleetMix	LDA	0.54	0.60
tblFleetMix	LDA	0.54	0.60
tblFleetMix	LDT1	0.06	0.06
tblFleetMix	LDT1	0.06	0.06
tblFleetMix	LDT1	0.06	0.06
tblFleetMix	LDT2	0.17	0.18
tblFleetMix	LDT2	0.17	0.18
tblFleetMix	LDT2	0.17	0.18

Amethyst Crossing Project - San Bernardino-Mojave Desert County, Winter

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

tblFleetMix	LHD1	0.03	0.03
tblFleetMix	LHD1	0.03	0.03
tblFleetMix	LHD1	0.03	0.03
tblFleetMix	LHD2	7.1960e-003	5.0000e-003
tblFleetMix	LHD2	7.1960e-003	5.0000e-003
tblFleetMix	LHD2	7.1960e-003	5.0000e-003
tblFleetMix	MCY	0.03	0.03
tblFleetMix	MCY	0.03	0.03
tblFleetMix	MCY	0.03	0.03
tblFleetMix	MDV	0.14	0.10
tblFleetMix	MDV	0.14	0.10
tblFleetMix	MDV	0.14	0.10
tblFleetMix	MH	5.0710e-003	5.0000e-003
tblFleetMix	MH	5.0710e-003	5.0000e-003
tblFleetMix	MH	5.0710e-003	5.0000e-003
tblFleetMix	MHD	0.01	0.00
tblFleetMix	MHD	0.01	0.00
tblFleetMix	MHD	0.01	0.00
tblFleetMix	OBUS	5.5900e-004	0.00
tblFleetMix	OBUS	5.5900e-004	0.00
tblFleetMix	OBUS	5.5900e-004	0.00
tblFleetMix	SBUS	9.5400e-004	0.00
tblFleetMix	SBUS	9.5400e-004	0.00
tblFleetMix	SBUS	9.5400e-004	0.00
tblFleetMix	UBUS	2.5400e-004	0.00
tblFleetMix	UBUS	2.5400e-004	0.00
tblFleetMix	UBUS	2.5400e-004	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	3.00

Amethyst Crossing Project - San Bernardino-Mojave Desert County, Winter

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

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOnRoadDust	WorkerPercentPave	100.00	99.00
tblOnRoadDust	WorkerPercentPave	100.00	99.00
tblOnRoadDust	WorkerPercentPave	100.00	99.00
tblOnRoadDust	WorkerPercentPave	100.00	99.00
tblTripsAndVMT	HaulingTripNumber	0.00	640.00
tblTripsAndVMT	VendorTripNumber	75.00	80.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	13.00	40.00
tblTripsAndVMT	WorkerTripNumber	183.00	160.00
tblTripsAndVMT	WorkerTripNumber	15.00	40.00
tblTripsAndVMT	WorkerTripNumber	37.00	40.00
tblVehicleTrips	DV_TP	26.00	0.00
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	PB_TP	47.00	32.15
tblVehicleTrips	PB_TP	50.00	24.30
tblVehicleTrips	PB_TP	11.00	12.50
tblVehicleTrips	PR_TP	27.00	67.85
tblVehicleTrips	PR_TP	29.00	75.70
tblVehicleTrips	PR_TP	54.00	87.50
tblVehicleTrips	ST_TR	86.48	100.04
tblVehicleTrips	ST_TR	616.12	541.66
tblVehicleTrips	ST_TR	46.12	37.77
tblVehicleTrips	SU_TR	31.96	100.04
tblVehicleTrips	SU_TR	472.58	541.66
tblVehicleTrips	SU_TR	21.10	37.77
tblVehicleTrips	WD_TR	100.03	100.04

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

tblVehicleTrips	WD_TR	470.95	541.66
tblVehicleTrips	WD_TR	37.75	37.77

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	60.2636	32.8241	41.8608	0.0901	40.7238	1.4315	42.1553	7.6095	1.3437	8.6717	0.0000	8,968.4695	8,968.4695	1.5192	0.3387	9,107.3811
Maximum	**60.2636**	**32.8241**	**41.8608**	**0.0901**	**40.7238**	**1.4315**	**42.1553**	**7.6095**	**1.3437**	**8.6717**	**0.0000**	**8,968.4695**	**8,968.4695**	**1.5192**	**0.3387**	**9,107.3811**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	60.2636	32.8241	41.8608	0.0901	25.9327	1.4315	27.3642	3.2547	1.3437	4.3693	0.0000	8,968.4695	8,968.4695	1.5192	0.3387	9,107.3811
Maximum	**60.2636**	**32.8241**	**41.8608**	**0.0901**	**25.9327**	**1.4315**	**27.3642**	**3.2547**	**1.3437**	**4.3693**	**0.0000**	**8,968.4695**	**8,968.4695**	**1.5192**	**0.3387**	**9,107.3811**

Amethyst Crossing Project - San Bernardino-Mojave Desert County, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	36.32	0.00	35.09	57.23	0.00	49.61	0.00	0.00	0.00	0.00	0.00	0.00

Amethyst Crossing Project - San Bernardino-Mojave Desert County, Winter

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.9201	5.7000e-004	0.0627	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1345	0.1345	3.5000e-004		0.1433
Energy	0.0975	0.8862	0.7444	5.3200e-003		0.0674	0.0674		0.0674	0.0674		1,063.4002	1,063.4002	0.0204	0.0195	1,069.7194
Mobile	23.1691	20.2827	196.5072	0.3719	42.8462	0.2799	43.1262	11.3803	0.2601	11.6404		38,068.8479	38,068.8479	2.6271	1.6069	38,613.3900
Total	**26.1866**	**21.1694**	**197.3143**	**0.3772**	**42.8462**	**0.3475**	**43.1937**	**11.3803**	**0.3277**	**11.7080**		**39,132.3825**	**39,132.3825**	**2.6478**	**1.6264**	**39,683.2527**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.9201	5.7000e-004	0.0627	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1345	0.1345	3.5000e-004		0.1433
Energy	0.0975	0.8862	0.7444	5.3200e-003		0.0674	0.0674		0.0674	0.0674		1,063.4002	1,063.4002	0.0204	0.0195	1,069.7194
Mobile	23.0854	20.1265	195.0467	0.3683	42.4178	0.2775	42.6953	11.2665	0.2579	11.5244		37,700.3978	37,700.3978	2.6134	1.5965	38,241.4885
Total	**26.1030**	**21.0132**	**195.8538**	**0.3736**	**42.4178**	**0.3451**	**42.7629**	**11.2665**	**0.3255**	**11.5920**		**38,763.9325**	**38,763.9325**	**2.6341**	**1.6160**	**39,311.3512**

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.32	0.74	0.74	0.95	1.00	0.69	1.00	1.00	0.68	0.99	0.00	0.94	0.94	0.52	0.64	0.94

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	3/7/2022	4/1/2022	5	20	
2	Building Construction	Building Construction	4/4/2022	12/30/2022	5	195	
3	Paving	Paving	9/26/2022	11/25/2022	5	45	
4	Architectural Coating	Architectural Coating	10/31/2022	12/30/2022	5	45	

Acres of Grading (Site Preparation Phase): 20

Acres of Grading (Grading Phase): 0

Acres of Paving: 8.12

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 147,000; Non-Residential Outdoor: 49,000; Striped Parking Area: 21,460 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Rough Terrain Forklifts	2	8.00	100	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Paving	Pavers	2	8.00	130	0.42

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

Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	2	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	5	40.00	0.00	640.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	160.00	80.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	40.00	8.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	40.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					13.1047	0.0000	13.1047	6.7350	0.0000	6.7350			0.0000			0.0000
Off-Road	2.1683	22.6142	13.8778	0.0264		1.1051	1.1051		1.0167	1.0167		2,557.7876	2,557.7876	0.8272		2,578.4686
Total	**2.1683**	**22.6142**	**13.8778**	**0.0264**	**13.1047**	**1.1051**	**14.2098**	**6.7350**	**1.0167**	**7.7516**		**2,557.7876**	**2,557.7876**	**0.8272**		**2,578.4686**

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

3.2 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1160	4.5792	1.1636	0.0188	0.5604	0.0459	0.6063	0.1537	0.0439	0.1976		2,051.0185	2,051.0185	0.0875	0.3250	2,150.0625
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1352	0.0888	1.0515	2.7700e-003	6.6834	1.7800e-003	6.6852	0.7209	1.6400e-003	0.7225		281.4607	281.4607	9.5300e-003	8.6200e-003	284.2668
Total	**0.2513**	**4.6680**	**2.2151**	**0.0216**	**7.2438**	**0.0477**	**7.2914**	**0.8745**	**0.0455**	**0.9201**		**2,332.4792**	**2,332.4792**	**0.0970**	**0.3336**	**2,434.3293**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.1108	0.0000	5.1108	2.6266	0.0000	2.6266			0.0000			0.0000
Off-Road	2.1683	22.6142	13.8778	0.0264		1.1051	1.1051		1.0167	1.0167	0.0000	2,557.7876	2,557.7876	0.8272		2,578.4686
Total	**2.1683**	**22.6142**	**13.8778**	**0.0264**	**5.1108**	**1.1051**	**6.2159**	**2.6266**	**1.0167**	**3.6433**	**0.0000**	**2,557.7876**	**2,557.7876**	**0.8272**		**2,578.4686**

Amethyst Crossing Project - San Bernardino-Mojave Desert County, Winter

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

3.2 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1160	4.5792	1.1636	0.0188	0.5604	0.0459	0.6063	0.1537	0.0439	0.1976		2,051.0185	2,051.0185	0.0875	0.3250	2,150.0625
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1352	0.0888	1.0515	2.7700e-003	4.2182	1.7800e-003	4.2200	0.4744	1.6400e-003	0.4760		281.4607	281.4607	9.5300e-003	8.6200e-003	284.2668
Total	**0.2513**	**4.6680**	**2.2151**	**0.0216**	**4.7786**	**0.0477**	**4.8263**	**0.6280**	**0.0455**	**0.6736**		**2,332.4792**	**2,332.4792**	**0.0970**	**0.3336**	**2,434.3293**

3.3 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3125	13.9487	15.7831	0.0267		0.6387	0.6387		0.5994	0.5994		2,570.2723	2,570.2723	0.6594		2,586.7567
Total	**1.3125**	**13.9487**	**15.7831**	**0.0267**		**0.6387**	**0.6387**		**0.5994**	**0.5994**		**2,570.2723**	**2,570.2723**	**0.6594**		**2,586.7567**

Amethyst Crossing Project - San Bernardino-Mojave Desert County, Winter

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

3.3 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1385	3.8271	1.3576	0.0157	0.5421	0.0442	0.5863	0.1561	0.0423	0.1984		1,685.9798	1,685.9798	0.0452	0.2496	1,761.4790
Worker	0.5409	0.3550	4.2059	0.0111	26.7335	7.1100e-003	26.7407	2.8835	6.5500e-003	2.8900		1,125.8427	1,125.8427	0.0381	0.0345	1,137.0672
Total	**0.6794**	**4.1820**	**5.5634**	**0.0268**	**27.2757**	**0.0513**	**27.3270**	**3.0396**	**0.0488**	**3.0884**		**2,811.8225**	**2,811.8225**	**0.0834**	**0.2840**	**2,898.5462**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3125	13.9487	15.7831	0.0267		0.6387	0.6387		0.5994	0.5994	0.0000	2,570.2723	2,570.2723	0.6594		2,586.7567
Total	**1.3125**	**13.9487**	**15.7831**	**0.0267**		**0.6387**	**0.6387**		**0.5994**	**0.5994**	**0.0000**	**2,570.2723**	**2,570.2723**	**0.6594**		**2,586.7567**

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

3.3 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1385	3.8271	1.3576	0.0157	0.5421	0.0442	0.5863	0.1561	0.0423	0.1984		1,685.9798	1,685.9798	0.0452	0.2496	1,761.4790
Worker	0.5409	0.3550	4.2059	0.0111	16.8728	7.1100e-003	16.8799	1.8974	6.5500e-003	1.9040		1,125.8427	1,125.8427	0.0381	0.0345	1,137.0672
Total	**0.6794**	**4.1820**	**5.5634**	**0.0268**	**17.4149**	**0.0513**	**17.4662**	**2.0535**	**0.0488**	**2.1023**		**2,811.8225**	**2,811.8225**	**0.0834**	**0.2840**	**2,898.5462**

3.4 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.4728					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5756**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**		**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

Amethyst Crossing Project - San Bernardino-Mojave Desert County, Winter

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

3.4 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0139	0.3827	0.1358	1.5700e-003	0.0542	4.4200e-003	0.0586	0.0156	4.2300e-003	0.0198		168.5980	168.5980	4.5200e-003	0.0250	176.1479
Worker	0.1352	0.0888	1.0515	2.7700e-003	6.6834	1.7800e-003	6.6852	0.7209	1.6400e-003	0.7225		281.4607	281.4607	9.5300e-003	8.6200e-003	284.2668
Total	**0.1491**	**0.4715**	**1.1872**	**4.3400e-003**	**6.7376**	**6.2000e-003**	**6.7438**	**0.7365**	**5.8700e-003**	**0.7423**		**450.0587**	**450.0587**	**0.0141**	**0.0336**	**460.4147**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.4728					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5756**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**	**0.0000**	**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

Amethyst Crossing Project - San Bernardino-Mojave Desert County, Winter

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

3.4 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0139	0.3827	0.1358	1.5700e-003	0.0542	4.4200e-003	0.0586	0.0156	4.2300e-003	0.0198		168.5980	168.5980	4.5200e-003	0.0250	176.1479
Worker	0.1352	0.0888	1.0515	2.7700e-003	4.2182	1.7800e-003	4.2200	0.4744	1.6400e-003	0.4760		281.4607	281.4607	9.5300e-003	8.6200e-003	284.2668
Total	**0.1491**	**0.4715**	**1.1872**	**4.3400e-003**	**4.2724**	**6.2000e-003**	**4.2786**	**0.4900**	**5.8700e-003**	**0.4958**		**450.0587**	**450.0587**	**0.0141**	**0.0336**	**460.4147**

3.5 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	55.9960					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4091	2.8170	3.6272	5.9400e-003		0.1634	0.1634		0.1634	0.1634		562.8961	562.8961	0.0367		563.8123
Total	**56.4050**	**2.8170**	**3.6272**	**5.9400e-003**		**0.1634**	**0.1634**		**0.1634**	**0.1634**		**562.8961**	**562.8961**	**0.0367**		**563.8123**

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

3.5 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.9200e-003	0.1914	0.0679	7.9000e-004	0.0271	2.2100e-003	0.0293	7.8000e-003	2.1100e-003	9.9200e-003		84.2990	84.2990	2.2600e-003	0.0125	88.0740
Worker	0.1352	0.0888	1.0515	2.7700e-003	6.6834	1.7800e-003	6.6852	0.7209	1.6400e-003	0.7225		281.4607	281.4607	9.5300e-003	8.6200e-003	284.2668
Total	**0.1422**	**0.2801**	**1.1194**	**3.5600e-003**	**6.7105**	**3.9900e-003**	**6.7145**	**0.7287**	**3.7500e-003**	**0.7324**		**365.7597**	**365.7597**	**0.0118**	**0.0211**	**372.3408**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	55.9960					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4091	2.8170	3.6272	5.9400e-003		0.1634	0.1634		0.1634	0.1634	0.0000	562.8961	562.8961	0.0367		563.8123
Total	**56.4050**	**2.8170**	**3.6272**	**5.9400e-003**		**0.1634**	**0.1634**		**0.1634**	**0.1634**	**0.0000**	**562.8961**	**562.8961**	**0.0367**		**563.8123**

3.5 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.9200e-003	0.1914	0.0679	7.9000e-004	0.0271	2.2100e-003	0.0293	7.8000e-003	2.1100e-003	9.9200e-003		84.2990	84.2990	2.2600e-003	0.0125	88.0740
Worker	0.1352	0.0888	1.0515	2.7700e-003	4.2182	1.7800e-003	4.2200	0.4744	1.6400e-003	0.4760		281.4607	281.4607	9.5300e-003	8.6200e-003	284.2668
Total	**0.1422**	**0.2801**	**1.1194**	**3.5600e-003**	**4.2453**	**3.9900e-003**	**4.2493**	**0.4822**	**3.7500e-003**	**0.4859**		**365.7597**	**365.7597**	**0.0118**	**0.0211**	**372.3408**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

Amethyst Crossing Project - San Bernardino-Mojave Desert County, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	23.0854	20.1265	195.0467	0.3683	42.4178	0.2775	42.6953	11.2665	0.2579	11.5244		37,700.3978	37,700.3978	2.6134	1.5965	38,241.4885
Unmitigated	23.1691	20.2827	196.5072	0.3719	42.8462	0.2799	43.1262	11.3803	0.2601	11.6404		38,068.8479	38,068.8479	2.6271	1.6069	38,613.3900

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Bank (with Drive-Through)	450.18	450.18	450.18	833,046	824,716
Fast Food Restaurant with Drive Thru	5,904.09	5,904.09	5904.09	12,007,050	11,886,980
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	3,119.80	3,119.80	3119.80	7,624,216	7,547,974
Total	9,474.08	9,474.08	9,474.08	20,464,313	20,259,670

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Bank (with Drive-Through)	9.50	7.30	7.30	6.60	74.40	19.00	67.85	0	32.15
Fast Food Restaurant with Drive	9.50	7.30	7.30	2.20	78.80	19.00	75.7	0	24.3
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	87.5	0	12.5

4.4 Fleet Mix

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

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Bank (with Drive-Through)	0.600000	0.060000	0.180000	0.100000	0.025000	0.005000	0.000000	0.000000	0.000000	0.000000	0.025000	0.000000	0.005000
Fast Food Restaurant with Drive Thru	0.600000	0.060000	0.180000	0.100000	0.025000	0.005000	0.000000	0.000000	0.000000	0.000000	0.025000	0.000000	0.005000
Other Asphalt Surfaces	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Parking Lot	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Regional Shopping Center	0.600000	0.060000	0.180000	0.100000	0.025000	0.005000	0.000000	0.000000	0.000000	0.000000	0.025000	0.000000	0.005000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0975	0.8862	0.7444	5.3200e-003		0.0674	0.0674		0.0674	0.0674		1,063.4002	1,063.4002	0.0204	0.0195	1,069.7194
NaturalGas Unmitigated	0.0975	0.8862	0.7444	5.3200e-003		0.0674	0.0674		0.0674	0.0674		1,063.4002	1,063.4002	0.0204	0.0195	1,069.7194

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Bank (with Drive-Through)	398.589	4.3000e-003	0.0391	0.0328	2.3000e-004		2.9700e-003	2.9700e-003		2.9700e-003	2.9700e-003		46.8928	46.8928	9.0000e-004	8.6000e-004	47.1715
Fast Food Restaurant with Drive Thru	8142.45	0.0878	0.7983	0.6706	4.7900e-003		0.0607	0.0607		0.0607	0.0607		957.9352	957.9352	0.0184	0.0176	963.6277
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	497.863	5.3700e-003	0.0488	0.0410	2.9000e-004		3.7100e-003	3.7100e-003		3.7100e-003	3.7100e-003		58.5721	58.5721	1.1200e-003	1.0700e-003	58.9202
Total		**0.0975**	**0.8862**	**0.7444**	**5.3100e-003**		**0.0674**	**0.0674**		**0.0674**	**0.0674**		**1,063.4002**	**1,063.4002**	**0.0204**	**0.0195**	**1,069.7194**

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

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Bank (with Drive-Through)	0.398589	4.3000e-003	0.0391	0.0328	2.3000e-004		2.9700e-003	2.9700e-003		2.9700e-003	2.9700e-003		46.8928	46.8928	9.0000e-004	8.6000e-004	47.1715
Fast Food Restaurant with Drive Thru	8.14245	0.0878	0.7983	0.6706	4.7900e-003		0.0607	0.0607		0.0607	0.0607		957.9352	957.9352	0.0184	0.0176	963.6277
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0.497863	5.3700e-003	0.0488	0.0410	2.9000e-004		3.7100e-003	3.7100e-003		3.7100e-003	3.7100e-003		58.5721	58.5721	1.1200e-003	1.0700e-003	58.9202
Total		**0.0975**	**0.8862**	**0.7444**	**5.3100e-003**		**0.0674**	**0.0674**		**0.0674**	**0.0674**		**1,063.4002**	**1,063.4002**	**0.0204**	**0.0195**	**1,069.7194**

6.0 Area Detail

6.1 Mitigation Measures Area

Amethyst Crossing Project - San Bernardino-Mojave Desert County, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.9201	5.7000e-004	0.0627	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1345	0.1345	3.5000e-004		0.1433
Unmitigated	2.9201	5.7000e-004	0.0627	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1345	0.1345	3.5000e-004		0.1433

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6904					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.2239					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.8100e-003	5.7000e-004	0.0627	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1345	0.1345	3.5000e-004		0.1433
Total	**2.9201**	**5.7000e-004**	**0.0627**	**0.0000**		**2.2000e-004**	**2.2000e-004**		**2.2000e-004**	**2.2000e-004**		**0.1345**	**0.1345**	**3.5000e-004**		**0.1433**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6904					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.2239					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.8100e-003	5.7000e-004	0.0627	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1345	0.1345	3.5000e-004		0.1433
Total	**2.9201**	**5.7000e-004**	**0.0627**	**0.0000**		**2.2000e-004**	**2.2000e-004**		**2.2000e-004**	**2.2000e-004**		**0.1345**	**0.1345**	**3.5000e-004**		**0.1433**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Toilet

Use Water Efficient Irrigation System

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Amethyst Crossing Project - San Bernardino-Mojave Desert County, Annual

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

Amethyst Crossing Project

San Bernardino-Mojave Desert County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Bank (with Drive-Through)	4.50	1000sqft	0.10	4,500.00	0
Other Asphalt Surfaces	3.50	Acre	3.50	152,460.00	0
Parking Lot	513.00	Space	4.62	205,200.00	0
Fast Food Restaurant with Drive Thru	10.90	1000sqft	0.25	10,900.00	0
Regional Shopping Center	82.60	1000sqft	1.90	82,600.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Preliminary Project Schedule

Off-road Equipment - Project Inventory

Off-road Equipment - Project Inventory

Off-road Equipment - Project Inventory

Off-road Equipment - Project Inventory

Trips and VMT - Project Trips; Material balanced on site, minimal debris disposed of off-site.

Amethyst Crossing Project - San Bernardino-Mojave Desert County, Annual

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

On-road Fugitive Dust - Dirt Roads on-site

Grading -

Architectural Coating -

Vehicle Trips - Project Trips

Area Coating -

Construction Off-road Equipment Mitigation - Comply with MDAQMD Rule 403/403.2

Mobile Land Use Mitigation -

Water Mitigation -

Fleet Mix - Daily Fleet Mix

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	45.00
tblConstructionPhase	NumDays	300.00	195.00
tblConstructionPhase	NumDays	20.00	45.00
tblConstructionPhase	NumDays	10.00	20.00
tblFleetMix	HHD	0.02	0.00
tblFleetMix	HHD	0.02	0.00
tblFleetMix	HHD	0.02	0.00
tblFleetMix	LDA	0.54	0.60
tblFleetMix	LDA	0.54	0.60
tblFleetMix	LDA	0.54	0.60
tblFleetMix	LDT1	0.06	0.06
tblFleetMix	LDT1	0.06	0.06
tblFleetMix	LDT1	0.06	0.06
tblFleetMix	LDT2	0.17	0.18
tblFleetMix	LDT2	0.17	0.18
tblFleetMix	LDT2	0.17	0.18

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

tblFleetMix	LHD1	0.03	0.03
tblFleetMix	LHD1	0.03	0.03
tblFleetMix	LHD1	0.03	0.03
tblFleetMix	LHD2	7.1960e-003	5.0000e-003
tblFleetMix	LHD2	7.1960e-003	5.0000e-003
tblFleetMix	LHD2	7.1960e-003	5.0000e-003
tblFleetMix	MCY	0.03	0.03
tblFleetMix	MCY	0.03	0.03
tblFleetMix	MCY	0.03	0.03
tblFleetMix	MDV	0.14	0.10
tblFleetMix	MDV	0.14	0.10
tblFleetMix	MDV	0.14	0.10
tblFleetMix	MH	5.0710e-003	5.0000e-003
tblFleetMix	MH	5.0710e-003	5.0000e-003
tblFleetMix	MH	5.0710e-003	5.0000e-003
tblFleetMix	MHD	0.01	0.00
tblFleetMix	MHD	0.01	0.00
tblFleetMix	MHD	0.01	0.00
tblFleetMix	OBUS	5.5900e-004	0.00
tblFleetMix	OBUS	5.5900e-004	0.00
tblFleetMix	OBUS	5.5900e-004	0.00
tblFleetMix	SBUS	9.5400e-004	0.00
tblFleetMix	SBUS	9.5400e-004	0.00
tblFleetMix	SBUS	9.5400e-004	0.00
tblFleetMix	UBUS	2.5400e-004	0.00
tblFleetMix	UBUS	2.5400e-004	0.00
tblFleetMix	UBUS	2.5400e-004	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	3.00

Amethyst Crossing Project - San Bernardino-Mojave Desert County, Annual

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

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOnRoadDust	WorkerPercentPave	100.00	99.00
tblOnRoadDust	WorkerPercentPave	100.00	99.00
tblOnRoadDust	WorkerPercentPave	100.00	99.00
tblOnRoadDust	WorkerPercentPave	100.00	99.00
tblTripsAndVMT	HaulingTripNumber	0.00	640.00
tblTripsAndVMT	VendorTripNumber	75.00	80.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	13.00	40.00
tblTripsAndVMT	WorkerTripNumber	183.00	160.00
tblTripsAndVMT	WorkerTripNumber	15.00	40.00
tblTripsAndVMT	WorkerTripNumber	37.00	40.00
tblVehicleTrips	DV_TP	26.00	0.00
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	PB_TP	47.00	32.15
tblVehicleTrips	PB_TP	50.00	24.30
tblVehicleTrips	PB_TP	11.00	12.50
tblVehicleTrips	PR_TP	27.00	67.85
tblVehicleTrips	PR_TP	29.00	75.70
tblVehicleTrips	PR_TP	54.00	87.50
tblVehicleTrips	ST_TR	86.48	100.04
tblVehicleTrips	ST_TR	616.12	541.66
tblVehicleTrips	ST_TR	46.12	37.77
tblVehicleTrips	SU_TR	31.96	100.04
tblVehicleTrips	SU_TR	472.58	541.66
tblVehicleTrips	SU_TR	21.10	37.77
tblVehicleTrips	WD_TR	100.03	100.04

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

tblVehicleTrips	WD_TR	470.95	541.66
tblVehicleTrips	WD_TR	37.75	37.77

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	1.5257	2.3743	2.7231	6.5400e-003	2.9137	0.0955	3.0092	0.3798	0.0895	0.4692	0.0000	595.7667	595.7667	0.0900	0.0294	606.7658
Maximum	**1.5257**	**2.3743**	**2.7231**	**6.5400e-003**	**2.9137**	**0.0955**	**3.0092**	**0.3798**	**0.0895**	**0.4692**	**0.0000**	**595.7667**	**595.7667**	**0.0900**	**0.0294**	**606.7658**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	1.5257	2.3743	2.7231	6.5400e-003	1.8329	0.0955	1.9284	0.2386	0.0895	0.3281	0.0000	595.7663	595.7663	0.0900	0.0294	606.7654
Maximum	**1.5257**	**2.3743**	**2.7231**	**6.5400e-003**	**1.8329**	**0.0955**	**1.9284**	**0.2386**	**0.0895**	**0.3281**	**0.0000**	**595.7663**	**595.7663**	**0.0900**	**0.0294**	**606.7654**

Amethyst Crossing Project - San Bernardino-Mojave Desert County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**37.09**	**0.00**	**35.92**	**37.17**	**0.00**	**30.08**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**3-7-2022**	**6-6-2022**	0.7321	0.7321
2	**6-7-2022**	**9-6-2022**	0.6560	0.6560
3	**9-7-2022**	**9-30-2022**	0.1949	0.1949
		Highest	0.7321	0.7321

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5324	5.0000e-005	5.6500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0110	0.0110	3.0000e-005	0.0000	0.0117
Energy	0.0178	0.1617	0.1359	9.7000e-004		0.0123	0.0123		0.0123	0.0123	0.0000	463.7776	463.7776	0.0277	6.1700e-003	466.3081
Mobile	4.1567	3.8048	37.2332	0.0688	7.6498	0.0509	7.7007	2.0348	0.0473	2.0821	0.0000	6,386.8505	6,386.8505	0.4386	0.2706	6,478.4563
Waste						0.0000	0.0000		0.0000	0.0000	43.9455	0.0000	43.9455	2.5971	0.0000	108.8732
Water						0.0000	0.0000		0.0000	0.0000	3.0473	30.2006	33.2478	0.3155	7.7000e-003	43.4306
Total	**4.7068**	**3.9666**	**37.3747**	**0.0698**	**7.6498**	**0.0632**	**7.7130**	**2.0348**	**0.0596**	**2.0944**	**46.9928**	**6,880.8396**	**6,927.8324**	**3.3789**	**0.2845**	**7,097.0799**

Amethyst Crossing Project - San Bernardino-Mojave Desert County, Annual

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

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5324	5.0000e-005	5.6500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0110	0.0110	3.0000e-005	0.0000	0.0117
Energy	0.0178	0.1617	0.1359	9.7000e-004		0.0123	0.0123		0.0123	0.0123	0.0000	463.7776	463.7776	0.0277	6.1700e-003	466.3081
Mobile	4.1412	3.7754	36.9543	0.0681	7.5733	0.0505	7.6237	2.0145	0.0469	2.0614	0.0000	6,325.0032	6,325.0032	0.4363	0.2688	6,416.0229
Waste						0.0000	0.0000		0.0000	0.0000	43.9455	0.0000	43.9455	2.5971	0.0000	108.8732
Water						0.0000	0.0000		0.0000	0.0000	2.8462	28.2474	31.0936	0.2947	7.1900e-003	40.6045
Total	**4.6913**	**3.9372**	**37.0958**	**0.0691**	**7.5733**	**0.0628**	**7.6360**	**2.0145**	**0.0592**	**2.0737**	**46.7917**	**6,817.0391**	**6,863.8308**	**3.3558**	**0.2822**	**7,031.8203**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.33**	**0.74**	**0.75**	**0.96**	**1.00**	**0.68**	**1.00**	**1.00**	**0.69**	**0.99**	**0.43**	**0.93**	**0.92**	**0.68**	**0.80**	**0.92**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	3/7/2022	4/1/2022	5	20	
2	Building Construction	Building Construction	4/4/2022	12/30/2022	5	195	
3	Paving	Paving	9/26/2022	11/25/2022	5	45	

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

4	Architectural Coating	Architectural Coating	10/31/2022	12/30/2022	5	45	

Acres of Grading (Site Preparation Phase): 20

Acres of Grading (Grading Phase): 0

Acres of Paving: 8.12

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 147,000; Non-Residential Outdoor: 49,000; Striped Parking Area: 21,460 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Rough Terrain Forklifts	2	8.00	100	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	2	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	5	40.00	0.00	640.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	160.00	80.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	40.00	8.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	40.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

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

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1311	0.0000	0.1311	0.0674	0.0000	0.0674	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0217	0.2261	0.1388	2.6000e-004		0.0111	0.0111		0.0102	0.0102	0.0000	23.2039	23.2039	7.5000e-003	0.0000	23.3915
Total	**0.0217**	**0.2261**	**0.1388**	**2.6000e-004**	**0.1311**	**0.0111**	**0.1421**	**0.0674**	**0.0102**	**0.0775**	**0.0000**	**23.2039**	**23.2039**	**7.5000e-003**	**0.0000**	**23.3915**

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

3.2 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.1900e-003	0.0461	0.0115	1.9000e-004	5.5100e-003	4.6000e-004	5.9700e-003	1.5100e-003	4.4000e-004	1.9500e-003	0.0000	18.5985	18.5985	8.0000e-004	2.9500e-003	19.4966
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2600e-003	9.3000e-004	0.0110	3.0000e-005	0.0612	2.0000e-005	0.0612	6.6400e-003	2.0000e-005	6.6500e-003	0.0000	2.6040	2.6040	9.0000e-005	8.0000e-005	2.6302
Total	**2.4500e-003**	**0.0470**	**0.0225**	**2.2000e-004**	**0.0667**	**4.8000e-004**	**0.0672**	**8.1500e-003**	**4.6000e-004**	**8.6000e-003**	**0.0000**	**21.2024**	**21.2024**	**8.9000e-004**	**3.0300e-003**	**22.1268**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0511	0.0000	0.0511	0.0263	0.0000	0.0263	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0217	0.2261	0.1388	2.6000e-004		0.0111	0.0111		0.0102	0.0102	0.0000	23.2038	23.2038	7.5000e-003	0.0000	23.3915
Total	**0.0217**	**0.2261**	**0.1388**	**2.6000e-004**	**0.0511**	**0.0111**	**0.0622**	**0.0263**	**0.0102**	**0.0364**	**0.0000**	**23.2038**	**23.2038**	**7.5000e-003**	**0.0000**	**23.3915**

Amethyst Crossing Project - San Bernardino-Mojave Desert County, Annual

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

3.2 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.1900e-003	0.0461	0.0115	1.9000e-004	5.5100e-003	4.6000e-004	5.9700e-003	1.5100e-003	4.4000e-004	1.9500e-003	0.0000	18.5985	18.5985	8.0000e-004	2.9500e-003	19.4966
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2600e-003	9.3000e-004	0.0110	3.0000e-005	0.0387	2.0000e-005	0.0387	4.3900e-003	2.0000e-005	4.4000e-003	0.0000	2.6040	2.6040	9.0000e-005	8.0000e-005	2.6302
Total	**2.4500e-003**	**0.0470**	**0.0225**	**2.2000e-004**	**0.0442**	**4.8000e-004**	**0.0447**	**5.9000e-003**	**4.6000e-004**	**6.3500e-003**	**0.0000**	**21.2024**	**21.2024**	**8.9000e-004**	**3.0300e-003**	**22.1268**

3.3 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1280	1.3600	1.5389	2.6000e-003		0.0623	0.0623		0.0584	0.0584	0.0000	227.3419	227.3419	0.0583	0.0000	228.8000
Total	**0.1280**	**1.3600**	**1.5389**	**2.6000e-003**		**0.0623**	**0.0623**		**0.0584**	**0.0584**	**0.0000**	**227.3419**	**227.3419**	**0.0583**	**0.0000**	**228.8000**

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

3.3 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0137	0.3741	0.1300	1.5300e-003	0.0520	4.3000e-003	0.0563	0.0150	4.1100e-003	0.0191	0.0000	149.0355	149.0355	4.0200e-003	0.0221	155.7107
Worker	0.0492	0.0362	0.4293	1.1000e-003	2.3867	6.9000e-004	2.3874	0.2589	6.4000e-004	0.2595	0.0000	101.5546	101.5546	3.4200e-003	3.1400e-003	102.5764
Total	**0.0629**	**0.4103**	**0.5593**	**2.6300e-003**	**2.4388**	**4.9900e-003**	**2.4438**	**0.2739**	**4.7500e-003**	**0.2786**	**0.0000**	**250.5901**	**250.5901**	**7.4400e-003**	**0.0252**	**258.2871**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1280	1.3600	1.5389	2.6000e-003		0.0623	0.0623		0.0584	0.0584	0.0000	227.3416	227.3416	0.0583	0.0000	228.7997
Total	**0.1280**	**1.3600**	**1.5389**	**2.6000e-003**		**0.0623**	**0.0623**		**0.0584**	**0.0584**	**0.0000**	**227.3416**	**227.3416**	**0.0583**	**0.0000**	**228.7997**

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

3.3 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0137	0.3741	0.1300	1.5300e-003	0.0520	4.3000e-003	0.0563	0.0150	4.1100e-003	0.0191	0.0000	149.0355	149.0355	4.0200e-003	0.0221	155.7107
Worker	0.0492	0.0362	0.4293	1.1000e-003	1.5096	6.9000e-004	1.5103	0.1711	6.4000e-004	0.1718	0.0000	101.5546	101.5546	3.4200e-003	3.1400e-003	102.5764
Total	**0.0629**	**0.4103**	**0.5593**	**2.6300e-003**	**1.5616**	**4.9900e-003**	**1.5666**	**0.1862**	**4.7500e-003**	**0.1909**	**0.0000**	**250.5901**	**250.5901**	**7.4400e-003**	**0.0252**	**258.2871**

3.4 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0248	0.2503	0.3281	5.1000e-004		0.0128	0.0128		0.0118	0.0118	0.0000	45.0620	45.0620	0.0146	0.0000	45.4264
Paving	0.0106					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0355**	**0.2503**	**0.3281**	**5.1000e-004**		**0.0128**	**0.0128**		**0.0118**	**0.0118**	**0.0000**	**45.0620**	**45.0620**	**0.0146**	**0.0000**	**45.4264**

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

3.4 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.2000e-004	8.6300e-003	3.0000e-003	4.0000e-005	1.2000e-003	1.0000e-004	1.3000e-003	3.5000e-004	9.0000e-005	4.4000e-004	0.0000	3.4393	3.4393	9.0000e-005	5.1000e-004	3.5933
Worker	2.8400e-003	2.0900e-003	0.0248	6.0000e-005	0.1377	4.0000e-005	0.1377	0.0149	4.0000e-005	0.0150	0.0000	5.8589	5.8589	2.0000e-004	1.8000e-004	5.9179
Total	**3.1600e-003**	**0.0107**	**0.0278**	**1.0000e-004**	**0.1389**	**1.4000e-004**	**0.1390**	**0.0153**	**1.3000e-004**	**0.0154**	**0.0000**	**9.2982**	**9.2982**	**2.9000e-004**	**6.9000e-004**	**9.5112**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0248	0.2503	0.3281	5.1000e-004		0.0128	0.0128		0.0118	0.0118	0.0000	45.0620	45.0620	0.0146	0.0000	45.4263
Paving	0.0106					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0355**	**0.2503**	**0.3281**	**5.1000e-004**		**0.0128**	**0.0128**		**0.0118**	**0.0118**	**0.0000**	**45.0620**	**45.0620**	**0.0146**	**0.0000**	**45.4263**

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

3.4 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.2000e-004	8.6300e-003	3.0000e-003	4.0000e-005	1.2000e-003	1.0000e-004	1.3000e-003	3.5000e-004	9.0000e-005	4.4000e-004	0.0000	3.4393	3.4393	9.0000e-005	5.1000e-004	3.5933
Worker	2.8400e-003	2.0900e-003	0.0248	6.0000e-005	0.0871	4.0000e-005	0.0871	9.8700e-003	4.0000e-005	9.9100e-003	0.0000	5.8589	5.8589	2.0000e-004	1.8000e-004	5.9179
Total	**3.1600e-003**	**0.0107**	**0.0278**	**1.0000e-004**	**0.0883**	**1.4000e-004**	**0.0884**	**0.0102**	**1.3000e-004**	**0.0104**	**0.0000**	**9.2982**	**9.2982**	**2.9000e-004**	**6.9000e-004**	**9.5112**

3.5 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.2599					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.2000e-003	0.0634	0.0816	1.3000e-004		3.6800e-003	3.6800e-003		3.6800e-003	3.6800e-003	0.0000	11.4896	11.4896	7.5000e-004	0.0000	11.5083
Total	**1.2691**	**0.0634**	**0.0816**	**1.3000e-004**		**3.6800e-003**	**3.6800e-003**		**3.6800e-003**	**3.6800e-003**	**0.0000**	**11.4896**	**11.4896**	**7.5000e-004**	**0.0000**	**11.5083**

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

3.5 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.6000e-004	4.3200e-003	1.5000e-003	2.0000e-005	6.0000e-004	5.0000e-005	6.5000e-004	1.7000e-004	5.0000e-005	2.2000e-004	0.0000	1.7196	1.7196	5.0000e-005	2.5000e-004	1.7967
Worker	2.8400e-003	2.0900e-003	0.0248	6.0000e-005	0.1377	4.0000e-005	0.1377	0.0149	4.0000e-005	0.0150	0.0000	5.8589	5.8589	2.0000e-004	1.8000e-004	5.9179
Total	**3.0000e-003**	**6.4100e-003**	**0.0263**	**8.0000e-005**	**0.1383**	**9.0000e-005**	**0.1384**	**0.0151**	**9.0000e-005**	**0.0152**	**0.0000**	**7.5786**	**7.5786**	**2.5000e-004**	**4.3000e-004**	**7.7145**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.2599					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.2000e-003	0.0634	0.0816	1.3000e-004		3.6800e-003	3.6800e-003		3.6800e-003	3.6800e-003	0.0000	11.4896	11.4896	7.5000e-004	0.0000	11.5083
Total	**1.2691**	**0.0634**	**0.0816**	**1.3000e-004**		**3.6800e-003**	**3.6800e-003**		**3.6800e-003**	**3.6800e-003**	**0.0000**	**11.4896**	**11.4896**	**7.5000e-004**	**0.0000**	**11.5083**

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

3.5 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.6000e-004	4.3200e-003	1.5000e-003	2.0000e-005	6.0000e-004	5.0000e-005	6.5000e-004	1.7000e-004	5.0000e-005	2.2000e-004	0.0000	1.7196	1.7196	5.0000e-005	2.5000e-004	1.7967
Worker	2.8400e-003	2.0900e-003	0.0248	6.0000e-005	0.0871	4.0000e-005	0.0871	9.8700e-003	4.0000e-005	9.9100e-003	0.0000	5.8589	5.8589	2.0000e-004	1.8000e-004	5.9179
Total	**3.0000e-003**	**6.4100e-003**	**0.0263**	**8.0000e-005**	**0.0877**	**9.0000e-005**	**0.0878**	**0.0100**	**9.0000e-005**	**0.0101**	**0.0000**	**7.5786**	**7.5786**	**2.5000e-004**	**4.3000e-004**	**7.7145**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

Amethyst Crossing Project - San Bernardino-Mojave Desert County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	4.1412	3.7754	36.9543	0.0681	7.5733	0.0505	7.6237	2.0145	0.0469	2.0614	0.0000	6,325.0032	6,325.0032	0.4363	0.2688	6,416.0229
Unmitigated	4.1567	3.8048	37.2332	0.0688	7.6498	0.0509	7.7007	2.0348	0.0473	2.0821	0.0000	6,386.8505	6,386.8505	0.4386	0.2706	6,478.4563

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Bank (with Drive-Through)	450.18	450.18	450.18	833,046	824,716
Fast Food Restaurant with Drive Thru	5,904.09	5,904.09	5904.09	12,007,050	11,886,980
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	3,119.80	3,119.80	3119.80	7,624,216	7,547,974
Total	9,474.08	9,474.08	9,474.08	20,464,313	20,259,670

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Bank (with Drive-Through)	9.50	7.30	7.30	6.60	74.40	19.00	67.85	0	32.15
Fast Food Restaurant with Drive	9.50	7.30	7.30	2.20	78.80	19.00	75.7	0	24.3
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	87.5	0	12.5

4.4 Fleet Mix

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

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Bank (with Drive-Through)	0.600000	0.060000	0.180000	0.100000	0.025000	0.005000	0.000000	0.000000	0.000000	0.000000	0.025000	0.000000	0.005000
Fast Food Restaurant with Drive Thru	0.600000	0.060000	0.180000	0.100000	0.025000	0.005000	0.000000	0.000000	0.000000	0.000000	0.025000	0.000000	0.005000
Other Asphalt Surfaces	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Parking Lot	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Regional Shopping Center	0.600000	0.060000	0.180000	0.100000	0.025000	0.005000	0.000000	0.000000	0.000000	0.000000	0.025000	0.000000	0.005000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	287.7197	287.7197	0.0243	2.9400e-003	289.2040
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	287.7197	287.7197	0.0243	2.9400e-003	289.2040
NaturalGas Mitigated	0.0178	0.1617	0.1359	9.7000e-004		0.0123	0.0123		0.0123	0.0123	0.0000	176.0578	176.0578	3.3700e-003	3.2300e-003	177.1041
NaturalGas Unmitigated	0.0178	0.1617	0.1359	9.7000e-004		0.0123	0.0123		0.0123	0.0123	0.0000	176.0578	176.0578	3.3700e-003	3.2300e-003	177.1041

Amethyst Crossing Project - San Bernardino-Mojave Desert County, Annual

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Bank (with Drive-Through)	145485	7.8000e-004	7.1300e-003	5.9900e-003	4.0000e-005		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004	0.0000	7.7636	7.7636	1.5000e-004	1.4000e-004	7.8098
Fast Food Restaurant with Drive Thru	2.97199e+006	0.0160	0.1457	0.1224	8.7000e-004		0.0111	0.0111		0.0111	0.0111	0.0000	158.5969	158.5969	3.0400e-003	2.9100e-003	159.5394
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	181720	9.8000e-004	8.9100e-003	7.4800e-003	5.0000e-005		6.8000e-004	6.8000e-004		6.8000e-004	6.8000e-004	0.0000	9.6973	9.6973	1.9000e-004	1.8000e-004	9.7549
Total		**0.0178**	**0.1617**	**0.1359**	**9.6000e-004**		**0.0123**	**0.0123**		**0.0123**	**0.0123**	**0.0000**	**176.0578**	**176.0578**	**3.3800e-003**	**3.2300e-003**	**177.1041**

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

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Bank (with Drive-Through)	145485	7.8000e-004	7.1300e-003	5.9900e-003	4.0000e-005		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004	0.0000	7.7636	7.7636	1.5000e-004	1.4000e-004	7.8098
Fast Food Restaurant with Drive Thru	2.97199e+006	0.0160	0.1457	0.1224	8.7000e-004		0.0111	0.0111		0.0111	0.0111	0.0000	158.5969	158.5969	3.0400e-003	2.9100e-003	159.5394
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	181720	9.8000e-004	8.9100e-003	7.4800e-003	5.0000e-005		6.8000e-004	6.8000e-004		6.8000e-004	6.8000e-004	0.0000	9.6973	9.6973	1.9000e-004	1.8000e-004	9.7549
Total		**0.0178**	**0.1617**	**0.1359**	**9.6000e-004**		**0.0123**	**0.0123**		**0.0123**	**0.0123**	**0.0000**	**176.0578**	**176.0578**	**3.3800e-003**	**3.2300e-003**	**177.1041**

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Bank (with Drive-Through)	44640	7.9167	6.7000e-004	8.0000e-005	7.9576
Fast Food Restaurant with Drive Thru	503144	89.2304	7.5300e-003	9.1000e-004	89.6907
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	71820	12.7370	1.0800e-003	1.3000e-004	12.8027
Regional Shopping Center	1.00276e+006	177.8357	0.0150	1.8200e-003	178.7532
Total		**287.7198**	**0.0243**	**2.9400e-003**	**289.2040**

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

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Bank (with Drive-Through)	44640	7.9167	6.7000e-004	8.0000e-005	7.9576
Fast Food Restaurant with Drive Thru	503144	89.2304	7.5300e-003	9.1000e-004	89.6907
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	71820	12.7370	1.0800e-003	1.3000e-004	12.8027
Regional Shopping Center	1.00276e+006	177.8357	0.0150	1.8200e-003	178.7532
Total		**287.7198**	**0.0243**	**2.9400e-003**	**289.2040**

6.0 Area Detail

6.1 Mitigation Measures Area

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5324	5.0000e-005	5.6500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0110	0.0110	3.0000e-005	0.0000	0.0117
Unmitigated	0.5324	5.0000e-005	5.6500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0110	0.0110	3.0000e-005	0.0000	0.0117

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1260					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4059					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.2000e-004	5.0000e-005	5.6500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0110	0.0110	3.0000e-005	0.0000	0.0117
Total	**0.5324**	**5.0000e-005**	**5.6500e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0110**	**0.0110**	**3.0000e-005**	**0.0000**	**0.0117**

Amethyst Crossing Project - San Bernardino-Mojave Desert County, Annual

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

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1260					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4059					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.2000e-004	5.0000e-005	5.6500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0110	0.0110	3.0000e-005	0.0000	0.0117
Total	**0.5324**	**5.0000e-005**	**5.6500e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0110**	**0.0110**	**3.0000e-005**	**0.0000**	**0.0117**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Toilet

Use Water Efficient Irrigation System

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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	31.0936	0.2947	7.1900e-003	40.6045
Unmitigated	33.2478	0.3155	7.7000e-003	43.4306

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Bank (with Drive-Through)	0.178303 / 0.109283	0.6836	5.8600e-003	1.4000e-004	0.8730
Fast Food Restaurant with Drive Thru	3.30852 / 0.211182	9.1058	0.1085	2.6300e-003	12.6012
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	6.11839 / 3.74998	23.4584	0.2012	4.9300e-003	29.9564
Total		**33.2478**	**0.3155**	**7.7000e-003**	**43.4306**

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

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Bank (with Drive-Through)	0.166535 / 0.102616	0.6396	5.4800e-003	1.3000e-004	0.8165
Fast Food Restaurant with Drive Thru	3.09016 / 0.1983	8.5069	0.1013	2.4500e-003	11.7716
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	5.71458 / 3.52123	21.9471	0.1879	4.6000e-003	28.0164
Total		**31.0936**	**0.2947**	**7.1800e-003**	**40.6045**

8.0 Waste Detail

8.1 Mitigation Measures Waste

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

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	43.9455	2.5971	0.0000	108.8732
Unmitigated	43.9455	2.5971	0.0000	108.8732

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Bank (with Drive-Through)	4.2	0.8526	0.0504	0.0000	2.1122
Fast Food Restaurant with Drive Thru	125.56	25.4876	1.5063	0.0000	63.1443
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	86.73	17.6054	1.0405	0.0000	43.6167
Total		**43.9455**	**2.5971**	**0.0000**	**108.8732**

Amethyst Crossing Project - San Bernardino-Mojave Desert County, Annual

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

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Bank (with Drive-Through)	4.2	0.8526	0.0504	0.0000	2.1122
Fast Food Restaurant with Drive Thru	125.56	25.4876	1.5063	0.0000	63.1443
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	86.73	17.6054	1.0405	0.0000	43.6167
Total		**43.9455**	**2.5971**	**0.0000**	**108.8732**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX B

GREENHOUSE GAS EMISSIONS
SCREENING TABLE REVIEW

City of Victorville

Department of Development

Planning ◆ Building ◆ Code Enforcement

14343 Civic Drive
PO Box 5001
Victorville, CA 92393-5001
(760) 955-5135
Fax (760) 269-0070
planning@victorvilleca.gov

Greenhouse Gas Emissions Screening Table Review

Note: This form is to be used only for projects which are subject to CEQA and not exempt from CEQA (i.e. Negative Declaration, Mitigated Negative Declaration or Environmental Impact Report).

GENERAL INFORMATION

Applicant: _____ Contact Name: _____

_____

Address: _____

_____

Telephone No.: _____ Email Address: _____

TYPE OF PROJECT

☐ Residential (Single-Family or Multi-Family) ☐ Commercial or Industrial

PROJECT LOCATION

General Location/Address of Project: SEC Bear Valley Rd and Amethyst Rd

Name of Business (if applicable): Amethyst Crossing

Assessor's Parcel No(s): 3072-211-13 &16

Existing Zoning: C-2 General Commercial District

PROJECT DESCRIPTION:

Shopping center w/98,000sf gross building area. Grocer major tenant 43,000sf, additional retail and office is 44,100sf, 3 food service buildings 10,900sf

Instructions

1. Fill out the appropriate section below for either Residential or Commercial/Industrial.
2. Choose items which the proposed project will incorporate into the development to reach a minimum of 45 points.
3. Do not chose items which are independently required by other laws, codes or the VVMC, such as the California Building Green Code, the Civic Center Sustainability Plan or required infrastructure improvements.
4. For those items listed with a TBD point value, please provide specific information and background studies (i.e. traffic study) for Staff to determine an assigned point value.
5. Submit the Screening Table along with the Planning Commission Review Application.

Commercial/Industrial Section

Feature	Description	Assigned Point Values	Project Points
Reduction Measure PS E3: Commercial/Industrial Energy Efficiency Development			
Building Envelope			
Insulation	2008 baseline (walls R-13; roof/attic R-30)	0 points	15
	Modestly Enhanced Insulation (walls R-13, roof/attic R-38))	15 points	
	Enhanced Insulation (rigid wall insulation R-13, roof/attic R-38)	18 points	
	Greatly Enhanced Insulation (spray foam insulated walls R-15 or higher, roof/attic R-38 or higher)	20 points	
Windows	2008 Baseline Windows (0.57 U-factor, 0.4 solar heat gain coefficient [SHGC})	0 points	7
	Modestly Enhanced Window Insulation (0.4 U-factor, 0.32 SHGC)	7 points	
	Enhanced Window Insulation (0.32 U-factor, 0.25 SHGC)	8 points	
	Greatly Enhanced Window Insulation (0.28 or less U-factor, 0.22 or less SHGC)	12 points	
Cool Roof	Modest Cool Roof (CRRC Rated 0.15 aged solar reflectance, 0.75 thermal emittance)	12 points	12
	Enhanced Cool Roof (CRRC Rated 0.2 aged solar reflectance, 0.75 thermal emittance)	14 points	
	Greatly Enhanced Cool Roof (CRRC Rated 0.35 aged solar reflectance, 0.75 thermal emittance)	16 points	
Air Infiltration	Minimizing leaks in the building envelope is as important as the insulation properties of the building. Insulation does not work effectively if there is excess air leakage.		-
	Air barrier applied to exterior walls, calking, and visual inspection such as the HERS Verified Quality Insulation Installation (QII or equivalent)	12 points	-
	Blower Door HERS Verified Envelope Leakage or equivalent	10 points	
Thermal Storage of Building	Thermal storage is a design characteristic that helps keep a constant temperature in the building. Common thermal storage devices include strategically placed water filled columns, water storage tanks, and thick masonry walls.		-
	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)	4 points	
	Enhanced Thermal Mass (20% of floor or 20% of walls 12” or more thick	6 points	

Feature	Description	Assigned Point Values	Project Points
	exposed concrete or masonry with no permanently installed floor covering such as carpet, linoleum, wood or other insulating materials) 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)	24 points	-
Indoor Space Efficiencies			
Heating/ Cooling Distribution System	Minimum Duct Insulation (R-4.2 required) Modest Duct insulation (R-6) Enhanced Duct Insulation (R-8) Distribution loss reduction with inspection (HERS Verified Duct Leakage or equivalent)	0 points 8 points 10 points 14 points	-
Space Heating/ Cooling Equipment	2008 Minimum HVAC Efficiency (EER 13/75% AFUE or 7.7 HSPF) Improved Efficiency HVAC (EER 14/78% AFUE or 8 HSPF) High Efficiency HVAC (EER 15/80% AFUE or 8.5 HSPF) Very High Efficiency HVAC (EER 16/82% AFUE or 9 HSPF)	0 points 7 points 8 points 12 points	-
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	2008 Minimum Efficiency (0.57 Energy Factor) Improved Efficiency Water Heater (0.675 Energy Factor) High Efficiency Water Heater (0.72 Energy Factor)	0 points 14 points 16 points	14
	Very High Efficiency Water Heater (0.92 Energy Factor) Solar Pre-heat System (0.2 Net Solar Fraction) Enhanced Solar Pre-heat System (0.35 Net Solar Fraction)	19 points 4 points 8 points	-
Daylighting	Daylighting is the ability of each room within the building to provide outside light during the day reducing the need for artificial lighting during daylight hours. All peripheral rooms within building have at least one window or skylight All rooms within building have daylight (through use of windows, solar tubes, skylights, etc.) All rooms daylighted	 1 points 5 points 7 points	5

Feature	Description	Assigned Point Values	Project Points
Artificial Lighting	2008 Minimum (required) 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) High Efficiency Lights (50% of in-unit fixtures are high efficacy) Very High Efficiency Lights (100% of in-unit fixtures are high efficacy)	0 points 9 points 12 points 14 points	9
Appliances	Star Commercial Refrigerator (new) Energy Star Commercial Dish Washer (new) Energy Star Commercial Cloths Washing	4 points 4 points 4 points	-
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.	6 point	-
Shading	At least 90% of south-facing glazing will be shaded by vegetation or overhangs at noon on Jun 21st.	6 Points	-
Other	This allows innovation by the applicant to provide design features that increases 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	-
Existing Commercial building Retrofits	The applicant may wish to provide energy efficiency retrofit projects to existing commercial buildings to further the point value of their project. Retrofitting existing commercial buildings within the City is a key reduction measure that is needed to reach the reduction goal. The potential for an applicant to take advantage of this program will be decided on a case by case basis and must have the approval of the City Planning Department. The decision to allow applicants to ability to participate in this program will be evaluated based upon, but not limited to the following: Will the energy efficiency retrofit project benefit low income or disadvantaged communities? Does the energy efficiency retrofit project fit within the overall assumptions in the reduction measure associated with commercial building energy efficiency retrofits?	TBD	-

Feature	Description	Assigned Point Values	Project Points
	Does the energy efficiency retrofit project provide co-benefits important to the City? Point value will be determined based upon engineering and design criteria of the energy efficiency retrofit project.		
Reduction Measure PS E4: Commercial/Industrial Renewable Energy			
Photovoltaic	Solar Photovoltaic panels installed on commercial buildings or in collective arrangements within a commercial development such that the total power provided augments:		
	Solar Ready Roofs (sturdy roof and electric hookups)	2 points	
	10 percent of the power needs of the project	8 points	
	20 percent of the power needs of the project	14 points	
	30 percent of the power needs of the project	20 points	
	40 percent of the power needs of the project	26 points	-
	50 percent of the power needs of the project	32 points	
	60 percent of the power needs of the project	38 points	
	70 percent of the power needs of the project	44 points	
	80 percent of the power needs of the project	50 points	
	90 percent of the power needs of the project	56 points	
	100 percent of the power needs of the project	60 points	
Wind turbines	Some areas of the City lend themselves to wind turbine applications. Analysis of the areas capability to support wind turbines should be evaluated prior to choosing this feature. Wind turbines as part of the commercial development such that the total power provided augments:		
	10 percent of the power needs of the project	8 points	
	20 percent of the power needs of the project	14 points	
	30 percent of the power needs of the project	20 points	
	40 percent of the power needs of the project	26 points	
	50 percent of the power needs of the project	32 points	-
	60 percent of the power needs of the project	38 points	
	70 percent of the power needs of the project	44 points	
	80 percent of the power needs of the project	50 points	
	90 percent of the power needs of the project	56 points	
	100 percent of the power needs of the project	60 points	

Feature	Description	Assigned Point Values	Project Points
Off-site renewable energy project	The applicant may submit a proposal to supply an off-site renewable energy project such as renewable energy retrofits of existing commercial/industrial that will help implement reduction measures associated with existing buildings. These off-site renewable energy retrofit project proposals will be determined on a case by case basis accompanied by a detailed plan documenting the quantity of renewable energy the proposal will generate. Point values will be based upon the energy generated by the proposal.	TBD	
Other Renewable Energy Generation	The applicant may have innovative designs or unique site circumstances (such as geothermal) that allow the project to generate electricity from renewable energy not provided in the table. The ability to supply other renewable energy and the point values allowed will be decided based upon engineering data documenting the ability to generate electricity.	TBD	-
Reduction Measure PS W2: Commercial/Industrial Water Conservation			
Irrigation and Landscaping			
Water Efficient Landscaping	Eliminate conventional turf from landscaping Only moderate water using plants Only low water using plants Only California Native landscape that requires no or only supplemental irrigation	0 points 3 points 4 points 8 points	4
Trees	Increase tree planting in parking areas 50% beyond City Code requirements	TBD	-
Water Efficient irrigation systems	Low precipitation spray heads< .75”/hr or drip irrigation Weather based irrigation control systems combined with drip irrigation (demonstrate 20 reduced water use)	1 point 5 points	-
Recycled Water	Recycled water connection (purple pipe)to irrigation system on site	5 points	-
Storm water 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	-

Feature	Description	Assigned Point Values	Project Points
Potable Water			
Showers	Water Efficient Showerheads (2.0 gpm)	3 points	-
Toilets	Water Efficient Toilets/Urinals (1.5gpm) Waterless Urinals (note that commercial buildings having both waterless urinals and high efficiency toilets will have a combined point value of 6 points)	3 points 4 points	3
Faucets	Water Efficient faucets (1.28gpm)	3 points	-
Commercial Dishwashers	Water Efficient dishwashers (20% water savings)	4 points	-
Commercial Laundry Washers	Water Efficient laundry (15% water savings) High Efficiency laundry Equipment that captures and reuses rinse water (30% water savings)	3 points 6 points	-
Commercial Water Operations Program	Establish an operational program to reduce water loss from pools, water features, etc., by covering pools, adjusting fountain operational hours, and using water treatment to reduce draw down and replacement of water. Point values for these types of plans will be determined based upon design and engineering data documenting the water savings.	TBD	-
Reduction Measure PS T1: Land Use Based Trips and VMT Reduction			
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	-
Reduction Measure PS T2: Bicycle Infrastructure			
Bicycle Infrastructure	Provide bicycle paths within project boundaries. Provide bicycle path linkages between project site and other land uses. Provide bicycle path linkages between project site and transit.	TBD 2 points 5 points	-
Reduction Measure PS T3: Electric Vehicle Infrastructure			
Electric Vehicles	Provide public charging station for use by an electric vehicle (ten points for each charging station within the facility).	10 points	-

Feature	Description	Assigned Point Values	Project Points
Reduction Measure PS T4: Employee Based Trip &VMT Reduction Policy			
Compressed Work Week	Reduce the number of days per week that employees need to be on site will reduce the number of vehicle trips associated with commercial/industrial development. Compressed work week such that full time employees are on site: 5 days per week 4 days per week on site 3 days per week on site	TBD	-
Car/Vanpools	Car/vanpool program Car/vanpool program with preferred parking Car/vanpool with guaranteed ride home program Subsidized employee incentive car/vanpool program Combination of all the above	TBD	-
Employee Bicycle/ Pedestrian Programs	Complete sidewalk to residential within ½ mile Complete bike path to residential within 3 miles Bike lockers and secure racks Showers and changing facilities Subsidized employee walk/bike program (Note combine all applicable points for total value)	TBD	-
Shuttle/Transit Programs	Local transit within ¼ mile Light rail transit within ½ mile Shuttle service to light rail transit station Guaranteed ride home program Subsidized Transit passes Note combine all applicable points for total value	TBD	-
CRT	Employer based Commute Trip Reduction (CRT). CRTs 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 CRT Programs (1-8 points) Mandatory CRT programs (5-20 points)	TBD	-
Other Trip Reductions	Other trip or VMT reduction measures not listed above with TIA and/or other traffic data supporting the trip and/or VMT for the project.	TBD	-

Feature	Description	Assigned Point Values	Project Points
Total Points from Commercial/Industrial Project:			66

-Commercial/Industrial Section Ends-