

**CITY OF FRESNO  
NOTICE OF INTENT TO ADOPT A  
MITIGATED NEGATIVE DECLARATION**

Filed with the  
FRESNO COUNTY CLERK  
2220 Tulare Street, Fresno, CA 93721

**ENVIRONMENTAL ASSESSMENT FOR DEVELOPMENT  
PERMIT APPLICATION NO. P22-02376 AND PLAN  
AMENDMENT REZONE APPLICATION NO. P22-04389**

**APPLICANT:**

Scott A. Vincent  
The Vincent Company Architects, Inc.  
1500 West Shaw Avenue, Suite 304  
Fresno, CA 93711

**PROJECT LOCATION:**

2594 North Armstrong Avenue; located on east side of North Armstrong Avenue between East Clinton and East Shields Avenues in the City and County of Fresno, California (See Exhibit A - Vicinity Map)

APN: 310-250-13

Site Latitude: 36°45'25.032" N & Site Longitude:  
119°40'18.984" W Mount Diablo Base & Meridian,  
Township T.13S, Range R.21E, Section 27

The full Initial Study and the Fresno General Plan Program Environmental Impact Report (PEIR) are on file in the Planning and Development Department, Fresno City Hall, 3<sup>rd</sup> Floor, Room 3043, 2600 Fresno Street, Fresno, CA 93721.

**PROJECT DESCRIPTION:**

Development Permit Application. P22-02376 was filed by Scott Vincent of The Vincent Company Architects, Inc. and pertains to ±4.39 acres located on 2594 North Armstrong Avenue. The applicant proposes to construct a 64-unit two-story multi-family residential development including community building. The applicant also proposes to up zone from RS-1 (Residential Single-Family, Extremely Low Density) (±4.39 acres) to RM-1 (Residential Multi-Family, Medium High Density) (±4.39 acres) zone district in accordance with the Plan Amendment Application. Related applications Plan Amendment Rezone Application No. P22-04389. In addition, the project consists of on and off-site improvements to be provided including landscaping and trees; three trash enclosures; one drive approach; and curbs, gutters, and sidewalks.

The City of Fresno has prepared an Initial Study of the above-described project and proposes to adopt a Mitigated Negative Declaration. The environmental analysis contained in the Initial Study is tiered from the PEIR State Clearinghouse No. 2019050005 prepared for the Fresno General Plan pursuant to CEQA Guidelines § 15152 and incorporates the PEIR by reference pursuant to CEQA Guidelines § 15150. Pursuant to the California Public Resources Code (PRC) §§ 21093 and 21094 and California

Environmental Quality Act (CEQA) Guidelines §§ 15070 to 15075, 15150, and 15152, this project has been evaluated with respect to each item on the attached Appendix G/Initial Study Checklist to determine whether this project may cause any additional significant effect on the environment, which was not previously examined in the PEIR. After conducting a review of the adequacy of the PEIR pursuant to PRC § 21157.6(b)(1) and CEQA Guidelines §§ 15151 and 15179(b), the Planning and Development Department, as lead agency, finds that no substantial changes have occurred with respect to the circumstances under which the PEIR was certified and that no new information, which was not known and could not have been known at the time that the PEIR was certified as complete, has become available.

The completed Appendix G/Initial Study Checklist, its associated narrative, technical studies, and mitigation measures reflect applicable comments of responsible and trustee agencies and research and analyses conducted to examine the interrelationship between the proposed project and the physical environment. The information contained in the project application and its related environmental assessment application, responses to requests for comment, checklist, Initial Study narrative, and any attachments thereto, combine to form a record indicating that an Initial Study has been completed in compliance with the State CEQA Guidelines and the CEQA.

All new development activity and many non-physical projects contribute directly or indirectly toward cumulative impacts on the physical environment. It has been determined that the incremental effect contributed by this project toward cumulative impacts is not considered substantial or significant in itself and/or that cumulative impacts accruing from this project may be mitigated to less than significant with application of feasible mitigation measures.

With mitigation imposed under the PEIR and project specific mitigation, there is no substantial evidence in the record that this project may have additional significant, direct, indirect, or cumulative effects on the environment that are significant and that were not identified and analyzed in the PEIR. The Planning and Development Department, as lead agency, finds that no substantial changes have occurred with respect to the circumstances under which the PEIR was certified and that no new information, which was not known and could not have been known at the time that the PEIR was certified as complete has become available.

Based upon the evaluation guided by the Appendix G/Initial Study Checklist, it was determined that there are project specific foreseeable impacts which require project level mitigation measures.

The Initial Study has concluded that the proposed project will not result in any adverse effects, which fall within the "Mandatory Findings of Significance" contained in § 15065 of the State CEQA Guidelines. The finding is, therefore, made that the proposed project will not have a significant adverse effect on the environment.

Public notice has been provided regarding staff's finding in the manner prescribed by § 15072 of the CEQA Guidelines and by § 21092 of the PRC Code (CEQA provisions).

Additional information on the proposed project, including the PEIR, proposed environmental finding of a Mitigated Negative Declaration and the Initial Study may be obtained from the Planning and Development Department, Fresno City Hall, 2600 Fresno Street, 3rd Floor, Room 3043, Fresno, California 93721 3604. Please contact Steven Lieng, Planner II at (559) 621-8007 or via email at [Steven.Lieng@fresno.gov](mailto:Steven.Lieng@fresno.gov) for more information.

ANY INTERESTED PERSON may comment on the proposed environmental finding. Comments must

be in writing and must state (1) the commentor's name and address; (2) the commentor's interest in, or relationship to, the project; (3) the environmental determination being commented upon; and (4) the specific reason(s) why the proposed environmental determination should or should not be made. Any comments may be submitted at any time between the publication date of this notice and close of business on October 13, 2022. Please direct comments to Steven Lieng, Planner II, City of Fresno Planning and Development Department, City Hall, 2600 Fresno Street, Room 3043, Fresno, California, 93721-3604; or by email to [Steven.Lieng@fresno.gov](mailto:Steven.Lieng@fresno.gov).

INITIAL STUDY PREPARED BY:

Steven Lieng, Planner II

DATE: June 16, 2023

Attachments:

Exhibit A – Vicinity Map

SUBMITTED BY:



Jose Valenzuela, Supervising Planner

CITY OF FRESNO

PLANNING AND DEVELOPMENT  
DEPARTMENT

CITY OF FRESNO  
MITIGATED NEGATIVE DECLARATION  
FOR  
GENERAL PLAN AMENDMENT/REZONE APPLICATION NO. P22-04389  
DEVELOPMENT PERMIT APPLICATION NO. P22-02376

State Clearinghouse Number: \_\_\_\_\_

City of Fresno  
Planning and Development Department  
2600 Fresno Street, 3rd Floor  
Fresno, CA 93721

Prepared by:

Precision Civil Engineering, Inc.  
1234 O Street  
Fresno, CA 93721

June 16, 2023

Attachments:

Notice of Intent to Adopt a Mitigated Negative Declaration  
Appendix G/Initial Study for a Mitigated Negative Declaration  
Project Specific Mitigation Monitoring Checklist dated June 2023





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## 1 INTRODUCTION

Precision Civil Engineering, Inc. (PCE) has prepared this Initial Study/Mitigated Negative Declaration (IS/MND) on behalf of City of Fresno (City) to address the environmental effects of the proposed Armstrong Apartments, a multi-family residential development (“Project” or “proposed Project”). This document has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code Section 21000 et. seq. The City of Fresno is the Lead Agency for this proposed Project. The site and the proposed Project are described in detail in **SECTION 2 ENVIRONMENTAL CHECKLIST FORM**.

### 1.1 Regulatory Information

An Initial Study (IS) is a document prepared by a lead agency to determine whether a project may have a significant effect on the environment. In accordance with California Code of Regulations Title 14 (Chapter 3, Section 15000, et seq.), also known as the CEQA Guidelines, Section 15064 (a)(1) states that an environmental impact report (EIR) must be prepared if there is substantial evidence in light of the whole record that the proposed Project under review may have a significant effect on the environment and should be further analyzed to determine mitigation measures or project alternatives that might avoid or reduce project impacts to less than significant levels.

A negative declaration (ND) may be prepared instead if the lead agency finds that there is no substantial evidence in light of the whole record that the project may have a significant effect on the environment. An ND is a written statement describing the reasons why a proposed Project, not otherwise exempt from CEQA, would not have a significant effect on the environment and, therefore, why it would not require the preparation of an EIR (CEQA Guidelines Section 15371). According to CEQA Guidelines Section 15070, a ND or mitigated ND shall be prepared for a project subject to CEQA when either:

*a. The IS shows there is no substantial evidence, in light of the whole record before the agency, that the proposed Project may have a significant effect on the environment, or*

*b. The IS identified potentially significant effects, but:*

*1. Revisions in the project plans or proposals made by or agreed to by the applicant before the proposed MND and IS is released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur is prepared, and*

*2. There is no substantial evidence, in light of the whole record before the agency, that the proposed Project as revised may have a significant effect on the environment.*

### 1.2 Document Format

This IS/MND contains five chapters plus appendices. **SECTION 1 INTRODUCTION** provides bases of the IS/MND’s regulatory information and an overview of the proposed Project. **SECTION 2 ENVIRONMENTAL CHECKLIST FORM** provides a detailed description of proposed Project components. **SECTION 3 DETERMINATION** concludes that the Initial Study is a mitigated negative declaration, identifies the environmental factors potentially affected based on the analyses contained in this IS, and includes with the Lead Agency’s determination based upon those analyses. **SECTION 4 EVALUATION OF ENVIRONMENTAL IMPACTS** presents the CEQA checklist and environmental analyses for all impact areas and the mandatory findings of significance. A brief discussion of the reasons why the Project impact is anticipated to be potentially significant, less than significant with mitigation incorporated, less than



significant, or why no impacts are expected is included. **SECTION 5 MITIGATION MONITORING AND REPORTING PROGRAM** presents the mitigation measures recommended in the IS/MND for the Project. The CalEEMod Output Files, Cultural Resource Documents, Acoustical Analysis, and Vehicles Miles Traveled Analysis are provided as **Appendix A, Appendix B, Appendix C,** and **Appendix D** respectively, at the end of this document.





## 2 ENVIRONMENTAL CHECKLIST FORM

This section describes the components of the proposed Project in more detail, including project location, project objectives, and required project approvals.

### 2.1 Project Title

General Plan Amendment (GPA)/Rezone (Application No. P22-04389) and Development Permit (Application No. P22-02376) for Armstrong Apartments Multi-Family Residential Project

### 2.2 Lead Agency Name and Address

City of Fresno  
Planning and Development Department  
2600 Fresno Street  
Fresno, CA 93721

### 2.3 Contact Person and Phone Number

#### Lead Agency

City of Fresno  
Planning and Development Department  
Attn. Steven Lieng, Planner  
[steven.lieng@fresno.gov](mailto:steven.lieng@fresno.gov)  
(559) 621-8007

#### Applicant

Armstrong LLC  
Attn. Bruce Tibbett, Partner  
978 W. Alluvial Avenue  
Fresno, CA 93711  
[btibbett@topangamanagement.com](mailto:btibbett@topangamanagement.com)  
(559) 435-3300

### 2.4 Study Prepared By

Precision Civil Engineering  
1234 O Street  
Fresno, CA 93721  
(559) 449-4500

### 2.5 Project Location

The Project site is in the jurisdiction of the City of Fresno, Fresno County, California (**Figure 2-1**). The site is located on the east side of North Armstrong Avenue between East Shields Avenue and East Clinton Avenue at 2594 N Armstrong Ave Fresno, CA 93727 (**Figure 2-2**). The site consists of one (1) parcel identified by Fresno County Assessor as Assessor's Parcel Number (APN) 310-250-13 totaling approximately 4.38 gross acres and 4.20 net acres. The site is a portion of Section 27, Township 13 South, Range 21 East, Mount Diablo Base and Meridian.

### 2.6 Latitude and Longitude

The centroid of the Project area is 36.77351995575917, -119.67201555020932.

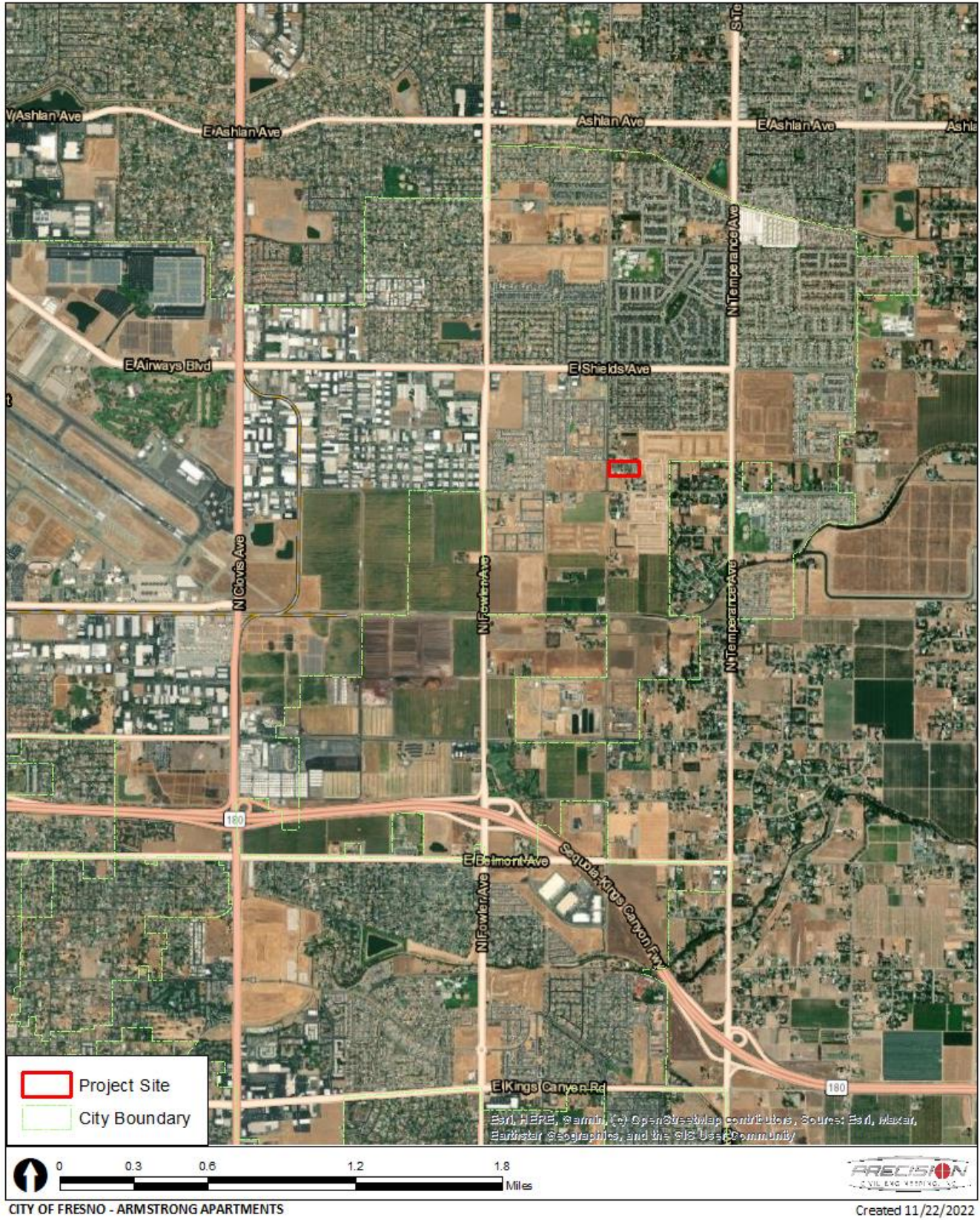


Figure 2-1 Regional Location Map



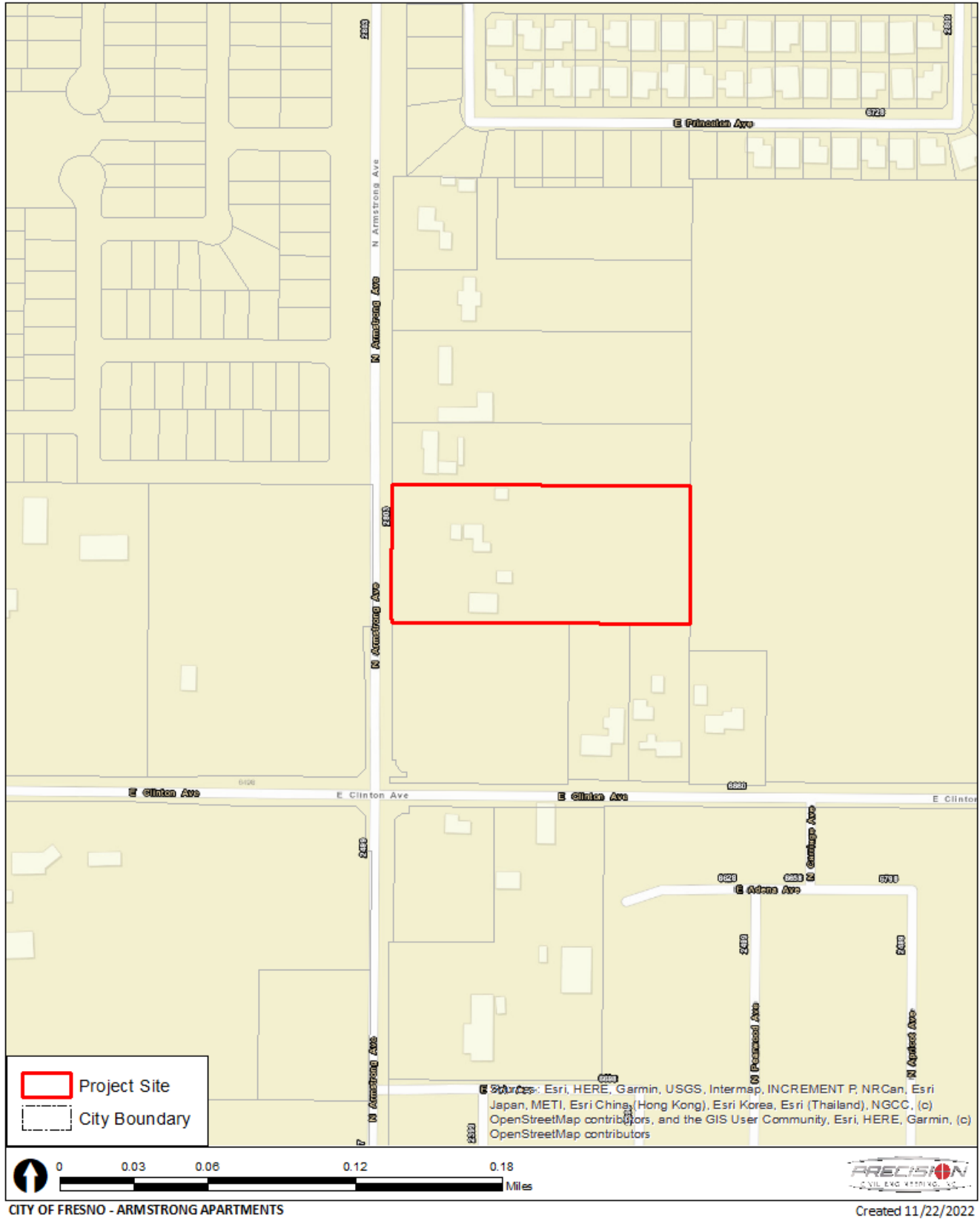


Figure 2-2 Project Vicinity Map



## 2.7 General Plan Designation

The Project site has a City of Fresno General Plan (General Plan) land use designation of Residential - Low Density (**Figure 2-3**). According to the General Plan, the Residential - Low Density land use designation is intended to provide for large lot residential development, such as rural residential, ranchette, or estate homes. The designation allows for one (1) to 3.5 dwelling units per acre. Under this designation, between four (4) and 14 dwelling units would be permitted on the Project site. The Applicant proposes a General Plan Amendment (GPA) to change the land use designation from Residential - Low Density to Residential - Medium High Density (**Figure 2-4**). The GPA is requested in order to develop a higher density, multi-family residential development. According to the General Plan, the Residential - Medium High Density land use designation is *“intended for neighborhoods with a mix of single-family residences, townhomes, garden apartments, and multi-family units intended to support a fine-grain, pedestrian scale.”* This land use designation allows for 12 to 16 dwelling units per acre. Under this designation, between 53 and 70 dwelling units would be permitted on the Project site. The Project proposes 64 dwelling units, which would be within the permitted density range of the proposed land use designation.

## 2.8 Zoning

The Project site is in the RS-1 – Single Family Residential, Extremely Low Density zone district (**Figure 2-5**). According to the Fresno Municipal Code (FMC), the purpose of the Residential Single-Family (RS) District is to *“provide a variety of single-family residences to suit a spectrum of individual lifestyles and needs.”* The RS-1 zone district allows for the development of detached single-family dwellings, second dwelling units, day cares, domestic violence shelters, and group residences, among other uses. The Applicant proposes a Rezone to change the zone district from the RS-1 zone district to the RM-1 – Residential Multi-Family, Medium High Density zone district (**Figure 2-6**). The Rezone is requested in order to develop a higher density, multi-family residential development. According to the FMC, the purpose of the Residential Multi-Family (RM) District is to *“[p]rovide for a variety of multi-family housing types for individual lifestyles and space needs, and to ensure continued availability of a full range of affordable housing opportunities necessary to sustain a diverse labor force, consistent with the City's economic development and housing objectives of the General Plan.”* Permitted uses in the RM-1 zone district include single-family dwellings, duplexes, multi-unit residential, day cares, and domestic violence shelters, among other uses. The proposed zone district would be consistent with the proposed land use designation.

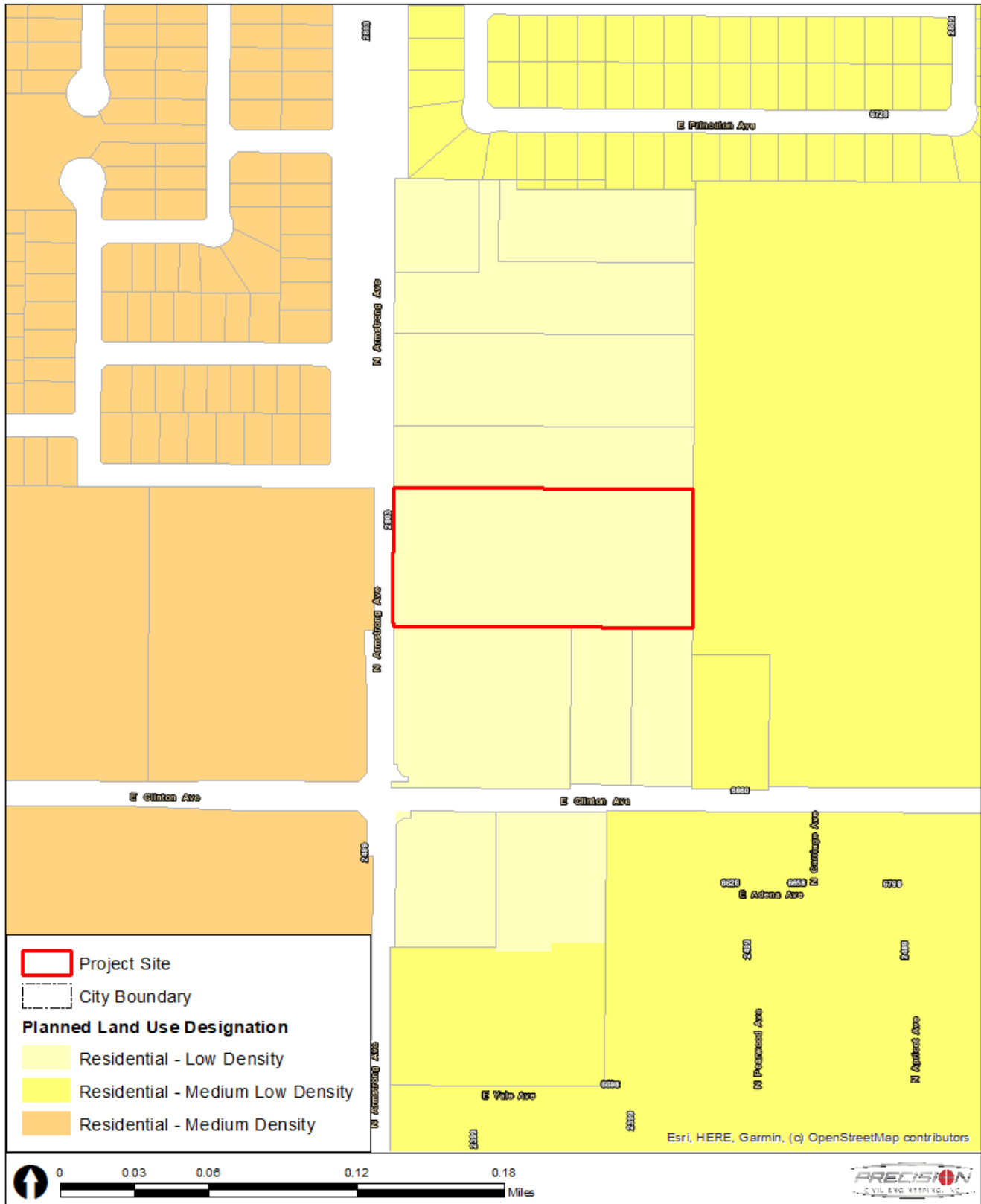


Figure 2-3 City of Fresno General Plan Land Use Designation Map (Existing)

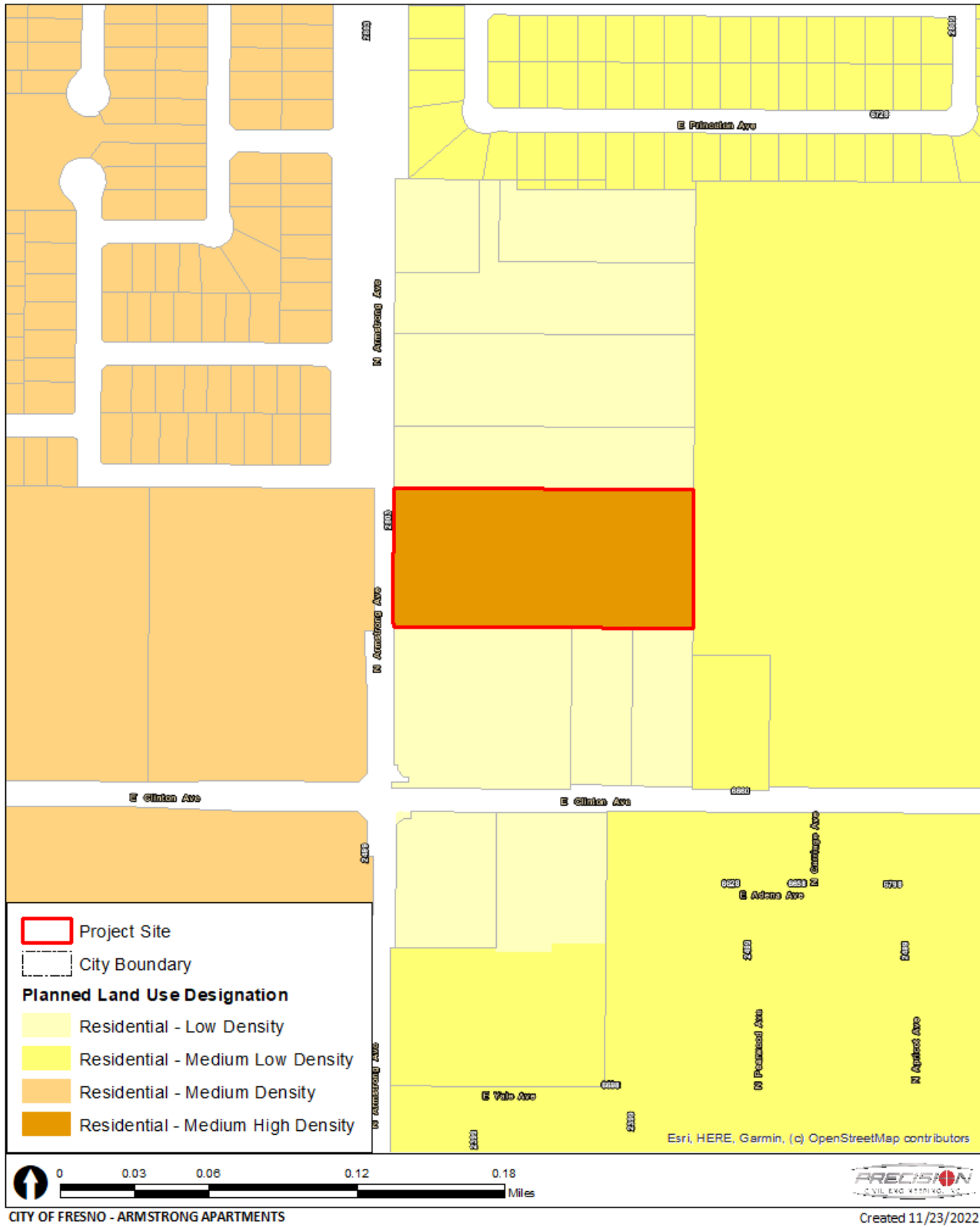


Figure 2-4 City of Fresno General Plan Land Use Designation Map (Proposed)

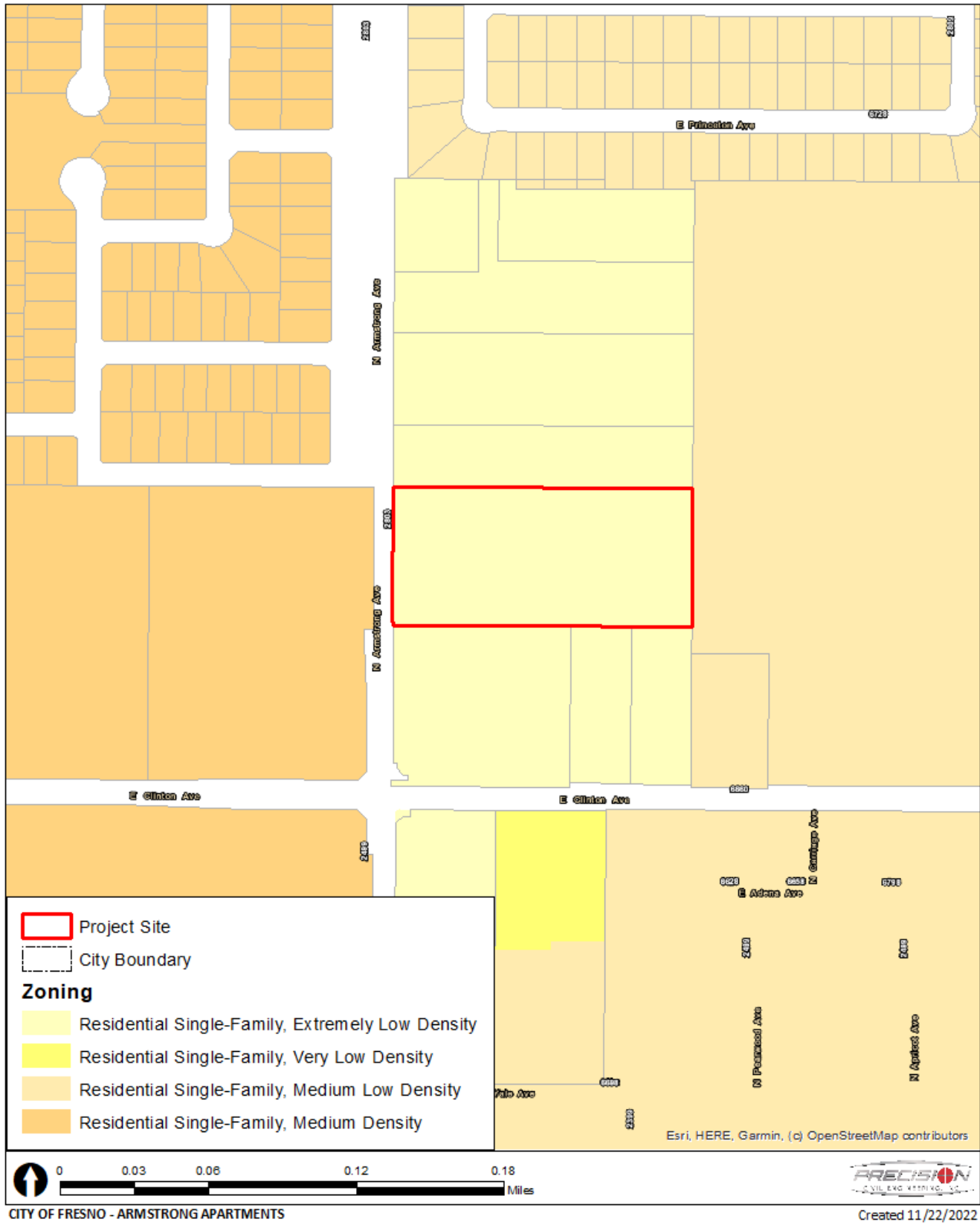


Figure 2-5 City of Fresno Zone District Map (Existing)

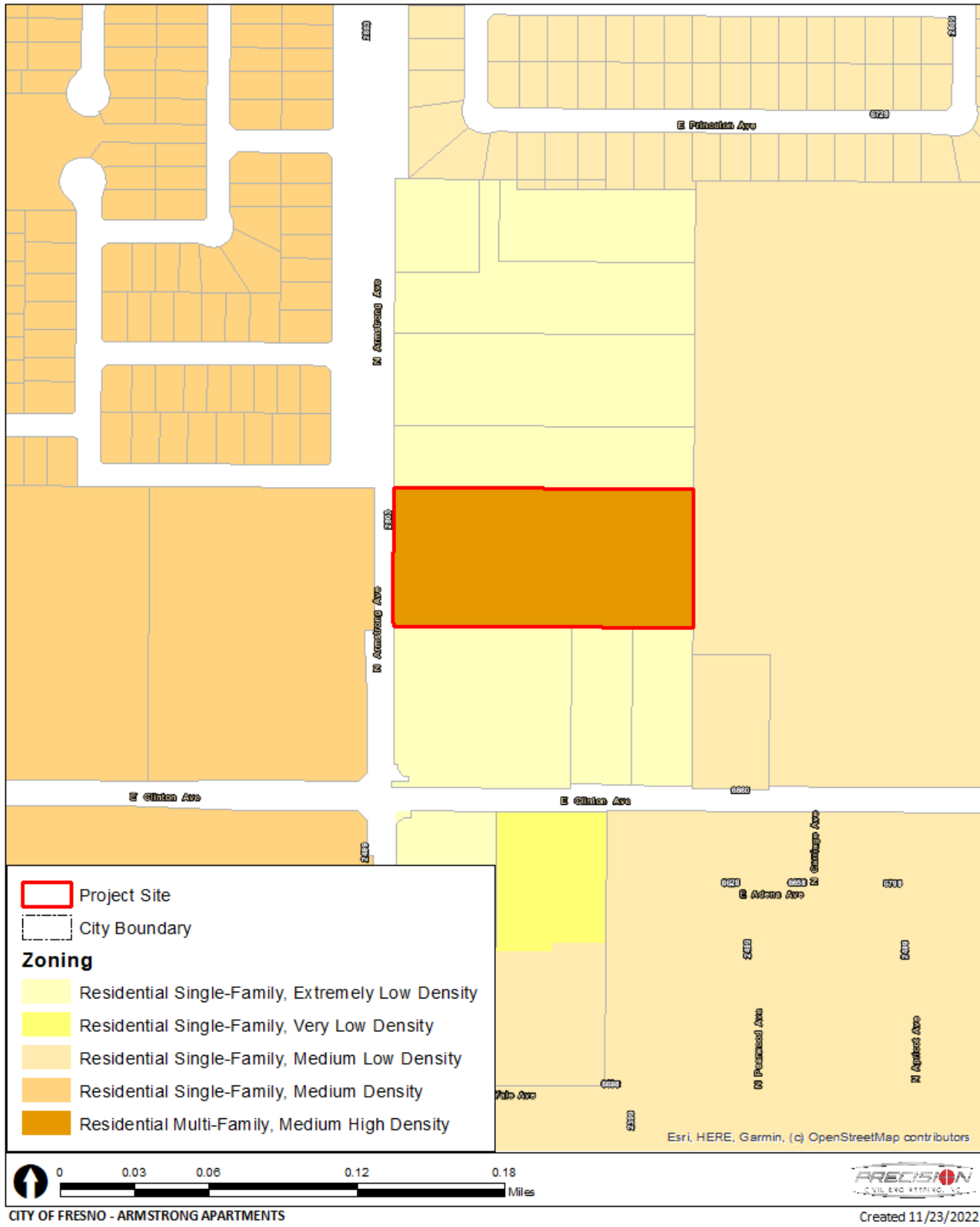


Figure 2-6 City of Fresno Zone District Map (Proposed)





## 2.9 Description of Project

Armstrong LLC (Applicant) requests a General Plan Amendment (GPA)/Rezone (Application No. P22-04389) and Development Permit (Application No. P22-02376) to facilitate the development of a 64-unit multi-family residential development (“Armstrong Apartments”) to occupy one (1) parcel totaling approximately 4.20 net acres (15 dwelling units (du) per acre (ac)) that is located on the east side of North Armstrong Avenue between East Shields Avenue and East Clinton Avenue at 2594 North Armstrong Avenue, Fresno, CA 93727 (APN 310-250-13). The GPA would amend the Fresno General Plan planned land use designation from Residential – Low Density to Residential – Medium High Density. The Rezone would change the zone district from RS-1 – Residential Single-Family, Extremely Low Density to RM-1 – Residential Multi-Family, Medium High Density, consistent with the proposed land use designation. The Development Permit would facilitate the development of 64 market rate dwelling units comprising a mix of 12-one bedroom/one-bathroom units, 32-two-bedroom/two-bathroom units, and 20-three-bedroom/two-bathroom units in addition to 124 parking stalls, bicycle parking, 43,190 square feet of open space (common and private), drive aisles, trash enclosures, landscaping including trees, shrubs, ground cover/annual plants, and lawn, lighting, and an on-site temporary drainage basin providing 43,803 cubic feet of storage that was sized to adequately accommodate stormwater runoff from the site. The Project also proposes a 1,972-square foot recreational center and onsite rental office as well as resident amenities including a swimming pool with arbors and barbecue area.

## 2.10 Project Setting and Surrounding Land Uses

The Project site as it currently exists is developed, containing existing structures and on- and off-site improvements including drive approaches, curb, gutter, and overhead utilities along North Armstrong Avenue. There are approximately five (5) existing structures including a 1,918-square foot single-family residence (built circa 1962), garage, and storage sheds. In recent years, the site has been operated as a retail nursery and contains rows of plants for sale by retail. The topography of the site is generally flat, as the majority of the site was previously graded and paved for the existing structures and previous retail nursery operations.

The existing biotic conditions of the Project site can be defined as urbanized and heavily disturbed. There are trees, shrubs, and herbaceous vegetation surrounding the existing single-family residence and the northern, southern, and eastern site boundary. Grasses that are periodically mowed are located adjacent to the single-family residence. North Armstrong Avenue, a two (2)-lane, north-south collector forms the westerly site boundary. East Clinton Avenue, a two (2)-lane collector, is approximately 350-ft. south of the southern site boundary.

The site is surrounded by existing residential uses (north, east, south, and west), a basin (east of the site), and vacant land (south and west of the site). A single-family residential subdivision on the west side of North Armstrong Avenue is currently under construction. As shown in [Table 2-1](#), surrounding properties are planned and zoned for residential uses. The Project would result in a residential use in a residential area; while the GPA and rezone would introduce a higher density residential development, the Project would not result in any significant environmental impacts to nearby residents as demonstrated in this initial study.



**Table 2-1 Existing Uses, General Plan Designations, and Zone Districts of Surrounding Properties**

Direction from the Project site	Existing Use	General Plan Designation	Zone District
North	Single-Family Residential	Residential - Low Density (1-3.5 du/ac)	RS-1 – Residential Single-Family, Extremely Low Density
East	Single-Family Residential, Basin	Residential – Medium Low Density (3.5-6 du/ac)	RS-4 – Residential Single-Family, Medium Low Density
South	Single-Family Residential, Vacant	Residential - Low Density (1-3.5 du/ac)	RS-1 – Residential Single-Family, Extremely Low Density
West	Single-Family Residential, Vacant	Residential - Medium Density (5-12 du/ac)	RS-5 – Residential Single-Family, Medium Density

**2.11 Site Preparation**

Site preparation would include demolition of existing structures as well as typical grading activities and minor excavation for installation of utility infrastructure for conveyance of water, sewer, stormwater, and irrigation. Demolition, building, grading, encroachment, and site utilities permits would be subject to review and approval by the appropriate agency and/or department to ensure compliance with applicable codes and regulations.

**2.12 Project Construction and Phasing**

The Project would be constructed in one phase. Construction is expected to begin in July 2023 and conclude in August 2024, with operations beginning in September 2024. The projected dates may change, depending upon review and approval of the entitlement and building permits.

**2.13 Project Components**

This section describes the overall components of the Project, such as the proposed buildings, landscaping, vehicle and pedestrian circulation, and utilities.

**Site Layout and Elevations**

As shown in **Figure 2-7**, the Project proposes a 64-unit multi-family residential development that consists of eight residential buildings, one management/resident community center, 124 parking stalls, and associated site amenities. The residential buildings comprise four types that range in size from 7,688 sf. to 11,720 sf. (i.e., “Building B,” “Building C,” “Building D,” and “Building E”) and altogether account for approximately 80,992 sf. The proposed community center (i.e., “Building A”) is approximately 1,972 sf.

Within the residential buildings, there are three unit types, one bedroom/one bathroom (12 total units), two bedroom/two bathroom (21 total units), and three bedroom/two bathroom (20 total units). The one bedroom units total approximately 828 sf.; the two bedroom units total approximately 1,111 sf.; and the three bedroom units total approximately 1,319 sf. Floor plans for each unit type, in addition to the community center are shown in **Figure 2-8**, **Figure 2-9**, and **Figure 2-10**.

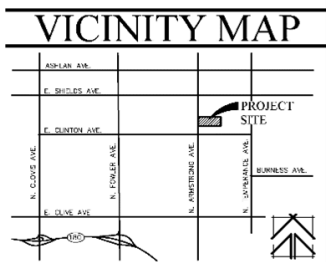
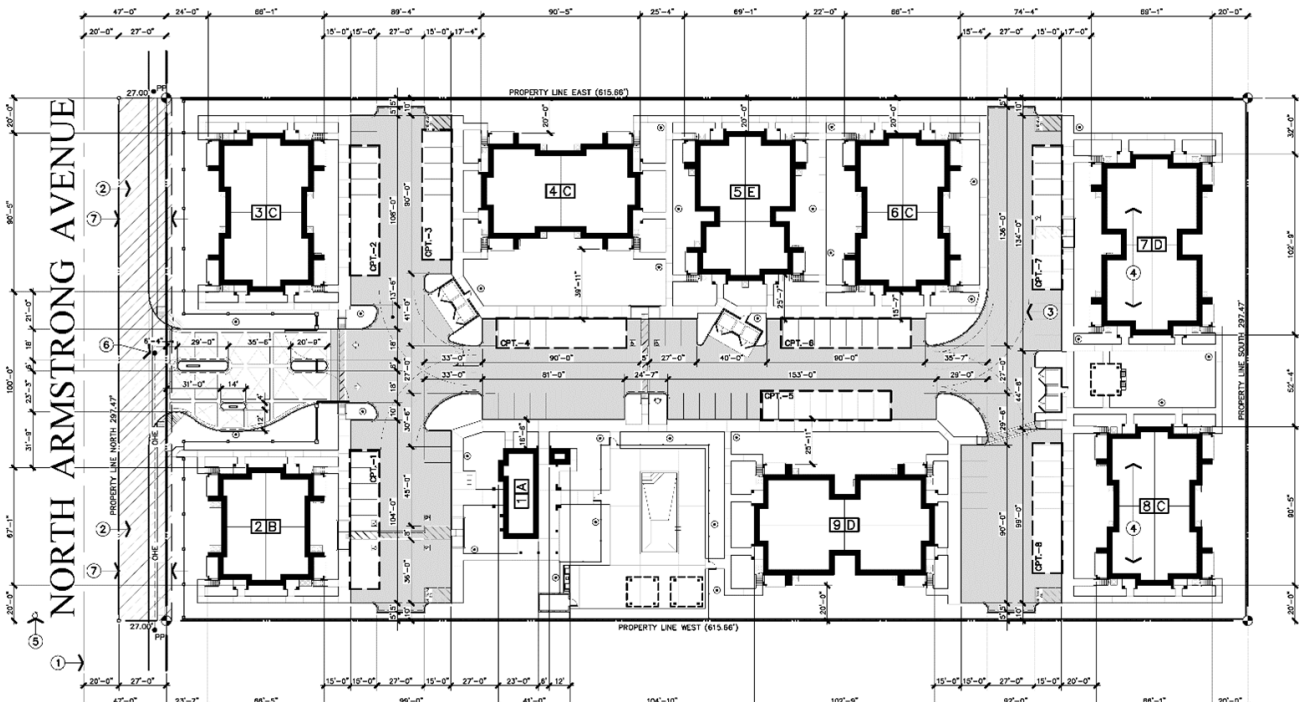
Conceptual elevations for each building type are shown in **Figure 2-11** (Building A), **Figure 2-12** (Building B), **Figure 2-13** (Building C), **Figure 2-14** (Building D), and **Figure 2-15** (Building E). As shown, the proposed residential buildings are two-story buildings that would reach a maximum height of 29-ft., three inches; and the proposed community center is single story and would reach a maximum height of 23-ft., 10 inches. The proposed buildings would integrate an architectural theme intended to blend with recently built projects in the surrounding area, with stucco



exteriors and high-profile composition shingle roofs. Additional accents would be added to the building elevations through the addition of panels utilizing alternate finishes and textures, and the use of accent colors on the elevations to break wall surfaces.

A six-ft. high concrete masonry fence is proposed at the property lines in the interior of the site.

In addition, an on-site temporary drainage basin providing 43,803 cubic feet of storage is proposed (**Figure 2-16**). The basin was sized to adequately accommodate stormwater runoff from the site and would be replaced with proposed Building D once permanent storm drainage services are available.



### STATISTICS

PROJECT ADDRESS:	2004 NORTH ARMSTRONG AVENUE FRESNO, CA 93704
ASSESSORS' PARCEL:	310 250 '3
COMMUNITY PLAN:	MULANI
CURRENT ZONING:	RS-1 SINGLE FAMILY RESIDENTIAL
CURRENT USE:	RETAIL BUSINESS
PROPOSED ZONING:	RM-1 MULTI-FAMILY RESIDENTIAL
PROPOSED PROJECT:	64 UNIT MULTI-FAMILY RESIDENTIAL DEVELOPMENT ON 4.02 ACRES INCLUDING 31 APPLICABLE
SITE AREA:	10,112 S.F. (14.36 ACRES)
REQUIRED DEVELOPMENT AREA:	8,103 S.F. (11.76 ACRES)
NET S.F. AREA:	10,112 S.F. (14.36 ACRES)
SITE DENSITY:	18.00 UNITS PER ACRE
ALLOWED DENSITY:	15.24 UNITS PER NET ACR*
SITE COVERAGE:	
1. BUILDINGS INCLUDING CARPOITS:	52,352 S.F. (1.19 ACS)
2. PARKING INCLUDING CARPOITS:	42,000 S.F. (0.60 ACS)
3. DRIVEWAYS:	10,112 S.F. (0.14 ACS)
4. UNPAVED OPEN SPACE (20%):	20,224 S.F. (0.29 ACS)
5. PAVED OPEN SPACE (20%):	20,224 S.F. (0.29 ACS)
6. TOTAL RESIDENTIAL BUILDINGS AREA:	104,576 S.F. (2.40 ACS)
7. TOTAL RESIDENTIAL BUILDINGS AREA:	104,576 S.F. (2.40 ACS)
8. TOTAL RESIDENTIAL BUILDINGS AREA:	104,576 S.F. (2.40 ACS)
9. TOTAL RESIDENTIAL BUILDINGS AREA:	104,576 S.F. (2.40 ACS)
10. TOTAL RESIDENTIAL BUILDINGS AREA:	104,576 S.F. (2.40 ACS)

## DIMENSIONED SITE PLAN

1" = 30'-0"

### SYMBOLS

### LEGAL DESCRIPTION

**LEGAL DESCRIPTION**  
 THE LAND HEREIN IS S. 1/4 OF S. 14 OF THE S. 14 OF CALIFORNIA, COUNTY OF FRESNO AND IS DESCRIBED AS FOLLOWS:  
 1/4 SECTION 14 OF LOT 7, SUBDIVISION OF SECTION 27, TOWNSHIP 12 SOUTH, RANGE 21 EAST, MAP 144, FILED JUNE 2, 1909, IN BOOK 3, PAGE 14 OF V. 1, AS DESCRIBED AS FOLLOWS.  
 BEGINNING AT THE NORTHWEST CORNER OF SAID LOT 7, HINGE A CORNER IN THE CENTER BAR OF 40 FOOT STREET SHOWN ON SAID MAP; THENCE S09°14'10" E ALONG THE NORTHERLY BOUNDARY OF SAID LOT 7, A DISTANCE OF 862.88 FEET, MORE OR LESS; TO THE NORTHWEST CORNER OF THE WEST ONE HALF OF SAID LOT 7; THENCE S09°14'10" E ALONG THE EAST LINE OF THE WEST ONE HALF OF SAID LOT 7, A DISTANCE OF 862.88 FEET, MORE OR LESS; TO THE POINT BEING THE TRUE POINT OF BEGINNING OF THE DESCRIPTION; THENCE CONTINUING S09°14'10" E ALONG SAID EAST LINE 297.47 FEET, THENCE WEST09°14'10" E ALONG A LINE PARALLEL WITH THE NORTHERLY BOUNDARY OF SAID LOT 7, A DISTANCE OF 492.66 FEET, MORE OR LESS; TO THE WEST LINE OF SAID LOT 7; THENCE A BEARING OF N09°14'10" E ALONG SAID LINE 319.00 FEET, MORE OR LESS; TO THE INTERSECTION OF SAID MAP; THENCE S09°14'10" E TO THE INTERSECTION OF SAID LOT 7, A DISTANCE OF 297.47 FEET, THENCE EAST09°14'10" E TO SAID TRUE POINT OF BEGINNING.  
 EXCEPTING THEREFROM THE WESTERLY 20 FEET THEREOF INCLUDED WITHIN ARMSTRONG AVENUE, AS SHOWN ON SAID MAP.

**BLDG. FOOTPRINT**  
 1. BUILDING TYPE  
 2. STAIRWAYS  
 3. ELECTRICAL METER LOCATION  
 4. GROUND MOUNTED COOLING/HEATING UNITS

**CARPIT LOCATIONS**  
 INDICATES LOCATION OF CARPIT STALLS WITH MINIMUM STALL SIZE = 10' x 6' WITH 2' OVERHANG

**TRASH ENCLOSURE**  
 ACCESSIBLE TRASH ENCLOSURE TO BE INSTALLED PER CITY OF FRESNO PUBLIC WORKS STANDARDS

**POWER POLE LOCATION**  
 INDICATES LOCATION OF EXISTING POWER POLES

**FIRE HYDRANT LOCATION**  
 INDICATES LOCATION OF EXISTING AND PROPOSED FIRE HYDRANTS PER CITY OF FRESNO PUBLIC WORKS STANDARDS

**POLE MOUNTED SITE LIGHT**  
 PER FIRE DEPARTMENT STANDARDS FOR LIGHTS SHALL ACT AS VEHICLE MOUNTED AREA OF VEHICLE OVERHANG AS NOTED IN DETAIL 1, SHEET PA-1

**KEYNOTES**

1. CENTERLINE OF STREET.
2. HATCHING INDICATES THE LOCATION OF DEVELOPMENT PROPOSED FOR STREET PAVING SYSTEM IN AREA OF PROVIDING A SECOND POINT OF ACCESS FOR THE ARMSTRONG OVERCROSSING VEHICLES.
3. INSTALL FIRE HYDRANT ON WEST SIDE OF NORTH ARMSTRONG AVENUE FOR CITY OF FRESNO PUBLIC WORKS STANDARDS.
4. EXISTING POWER POLES TO BE RELOCATED TO CORNER 1 OF WORK WITH LOCAL JILITY PROVIDED.
5. BUILDING TO BE PROVIDED WITH VFA IS CONFORMANCE TYPE AUTOMATIC SPRINKLER SYSTEM IN ORDER OF PROVIDING A SECOND POINT OF ACCESS FOR THE ARMSTRONG OVERCROSSING VEHICLES.
6. INSTALL FIRE HYDRANT ON WEST SIDE OF NORTH ARMSTRONG AVENUE FOR CITY OF FRESNO PUBLIC WORKS STANDARDS.
7. EXISTING POWER POLES TO BE RELOCATED TO CORNER 1 OF WORK WITH LOCAL JILITY PROVIDED.
8. REFER TO SHEET PA-1 FOR ADDITIONAL SITE NOTES AND CONDITIONS.

**CONCRETE WALKWAY (ACCESSIBLE PATH-OF-TRAVEL)**  
 PAVING TO FLUSH WITH WALKWAY  
 POLE MOUNTED SIGN-DO NOT LOCATE IN AREA OF VEHICLE OVERHANG

**CONTINUOUS CURB**  
 4" WIDE PAINTED PERIMETER STRIPES, PROVIDE (2) COATS WHITE PAINT  
 POLE MOUNTED SITE LIGHT, BASE SHALL NOT BE LOCATED WITHIN THE AREA OF VEHICLE OVERHANG  
 ALTER WALKWAY FOR PATH-OF-TRAVEL FOR PERSONS WITH PHYSICAL DISABILITIES

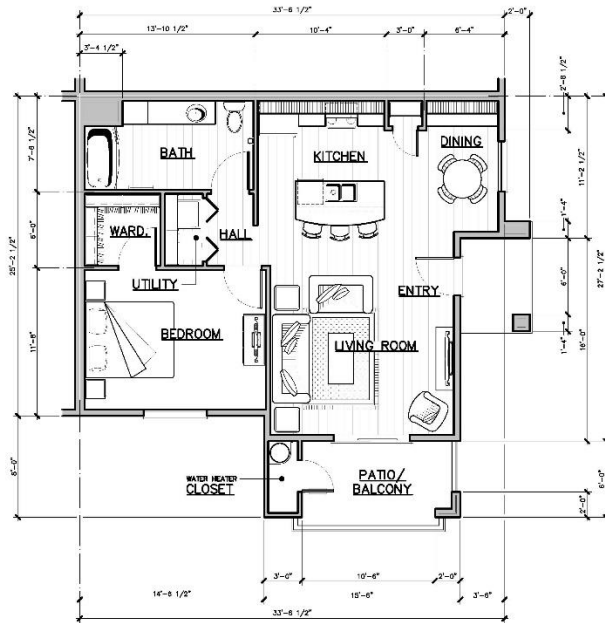
**PAINTED ACCESSIBLE PAVEMENT SYMBOL**  
 NOTE: DRIVE AISLE SERVING STALLS SHALL BE 27'-0" WIDE (MINIMUM)

**AT CURB CONDITION STANDARD PARKING STALL**  
**1. TYPICAL PARKING STALL DIMENSIONS**

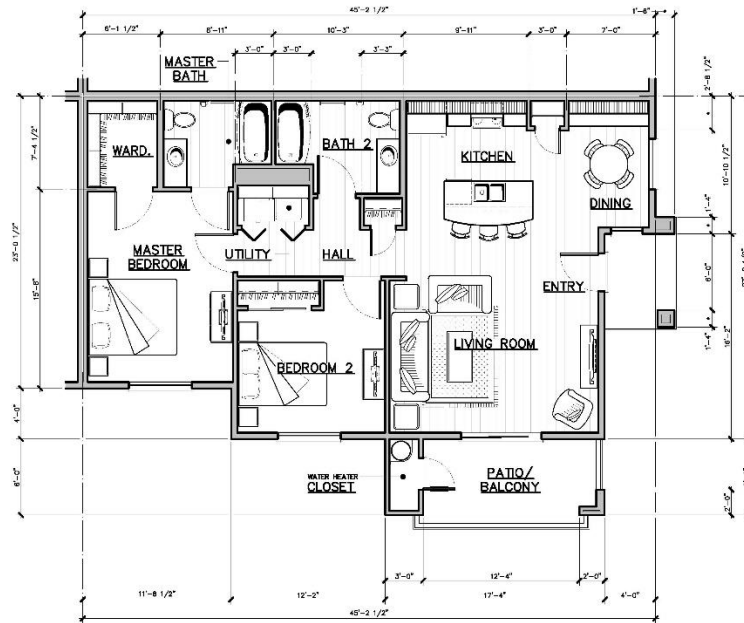
**DOUBLE STALL AT CURB CONDITION ACCESSIBLE PARKING STALL**  
 NOTE: DRIVE AISLE AT ACCESSIBLE STALLS SHALL BE 27'-0" WIDE (MINIMUM)

**WHITE STRIPES AT 36" ON-CENTER**  
 3'-0" MIN. AT TYPICAL ACCESSIBLE PARKING STALL, 8'-0" MIN. AT VAN ACCESSIBLE PARKING STALL

Figure 2-7 Project Site Plan



**TYPE 1**  
 1 BEDROOM 1 BATH  
 828 S.F.



**TYPE 2**  
 2 BEDROOM 2 BATH  
 1,111 S.F.

# UNIT FLOOR PLANS

**THE VINCENT COMPANY ARCHITECTS, INC.**  
 1500 West Shaw, Ste. 304  
 Fresno, California 93711  
 Phone: 550.225.2602

PROPOSED APARTMENTS COMPLEX FOR  
**ARMSTRONG APARTMENTS**  
 2504 NORTH ARMSTRONG AVENUE  
 FRESNO, CALIFORNIA



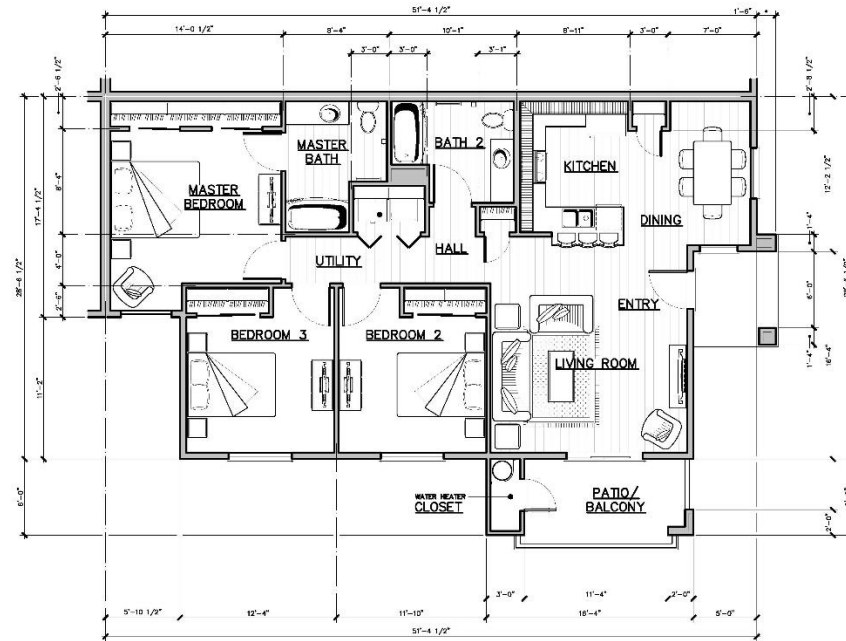
- REVISIONS
- DESIGN REVIEW
  - PLACING LOCK
  - PLAN CHANGE
  - TAKE OFF
  - CONSTRUCTION
  - AS-BUILT

All drawings and written material appearing herein constitute original work of the architect and may not be duplicated, used, or disclosed without written consent of the architect.

Project Name: ARMSTRONG APPTS  
 Project No.: 22-0101  
 Project Address: 2504 N. ARMSTRONG AVE.  
 Date: 02/29/23  
 Scale: 1/4" = 1'-0"

**PA2**

Figure 2-8 Unit Types 1 and 2 Floor Plans



**TYPE 3**  
 3 BEDROOM 2 BATH  
 1,319 S.F.

**UNIT FLOOR PLAN** 1/4" = 1'-0"

**THE VINCENT COMPANY ARCHITECTS, INC.**  
 1500 West Shaw, Ste. 304  
 Fresno, California 93711  
 Phone: 559.225.2602

**ARMSTRONG APARTMENTS**  
 2504 NORTH ARANS RING AVENUE  
 FRESNO, CALIFORNIA



- Revised: \_\_\_\_\_ Date: \_\_\_\_\_
- PREPARED BY ARCHITECT
- BY ARCHITECT
- CHECKED BY ARCHITECT
- PREPARED BY ARCHITECT
- CHECKED BY ARCHITECT
- AS SHOWN

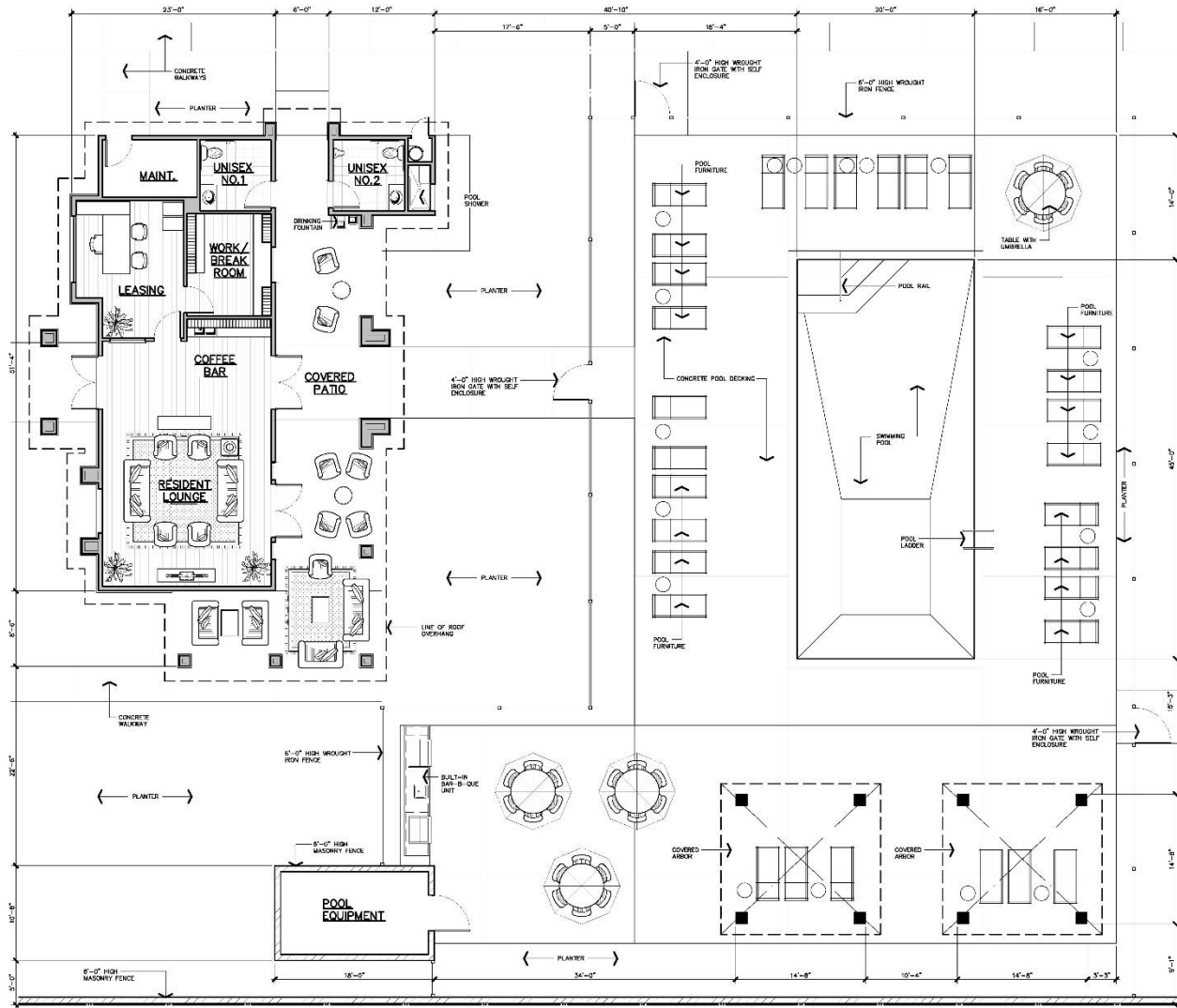
All drawings and written material appearing herein constitute original work of the architect and may not be duplicated, used, or otherwise without written consent of the architect.

Reference Note:  
 Scale: 1/4" = 1'-0"  
 Project Name: ARMSTRONG APTS  
 Project Location: FRESNO, CA  
 Project Number: 052241  
 Sheet Number: \_\_\_\_\_

**PA3**  
 OF \_\_\_\_\_ SHEETS

Figure 2-9 Unit Type 3 Floor Plans





**BUILDING STATISTICS**

PROPOSED USE	AREA CATEGORY / RESIDENT COMMUNITY CENTER
1. OCCUPANCY GROUP	
a. RESIDENT LOUNGE / COFFEE BAR	R
b. LEASING / WORK / STORAGE	R
c. SUITE	R
d. MAIN ENTRANCE	R-2
CONSTRUCTION TYPE	
AREA CALCULATIONS	
1. FLOOR FINISH / CEILING BAR	392 SQ FT
2. LEASING ROOM / STORAGE	214 SQ FT
3. TOILET / BATH AREA	264 SQ FT
4. COMMON / LOBBY AREA	1,080 SQ FT
5. TOTAL BUILDING AREA	1,972 SQ FT
FIRE RESISTANCE REQUIREMENTS	
1. EXTERIOR WALLS	NON-RATED
2. INTERIOR PARTITION WALLS	NON-RATED
3. INTERIOR LOBBY PARTITION WALLS	NON-RATED
4. CEILING / FLOOR JOIST	NON-RATED
5. EXTERIOR OPENINGS	NON-RATED
OCCUPANCY REQUIREMENTS	
1. 2 TO 5 2 OCCUPANCY STORIES	NON REQUIRED FOR THIS SECTION 502.1.2 AND 502.1.3

**THE VINCENT COMPANY**  
 ARCHITECTS, INC.  
 1500 West Shaw, Ste. 304  
 Fresno, California 93711  
 Phone: 559.225.2602

**ARMSTRONG APARTMENTS**  
 2500 NORTH ALVARO AVENUE  
 FRESNO, CALIFORNIA



EXEMPT FROM THE BUILDING DEPARTMENT'S COMPLIANCE CHECKS

- ZONING REGULATORY
- PLANNING CODE
- BACK CHECK
- PERMITS
- CONSTRUCTION
- AS BUILT

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Reference Source:  
 Title Block: 3/18" = 1'-0"  
 Project Name: ARMSTRONG APARTMENTS  
 Project Location: FRESNO, CALIFORNIA  
 Project Number: 221016  
 Date: 06.02.23  
 Sheet Number:

**BUILDING 'A' FLOOR PLAN**  
 3/16" = 1'-0"

Figure 2-10 Building A (Community Center) Floor Plan

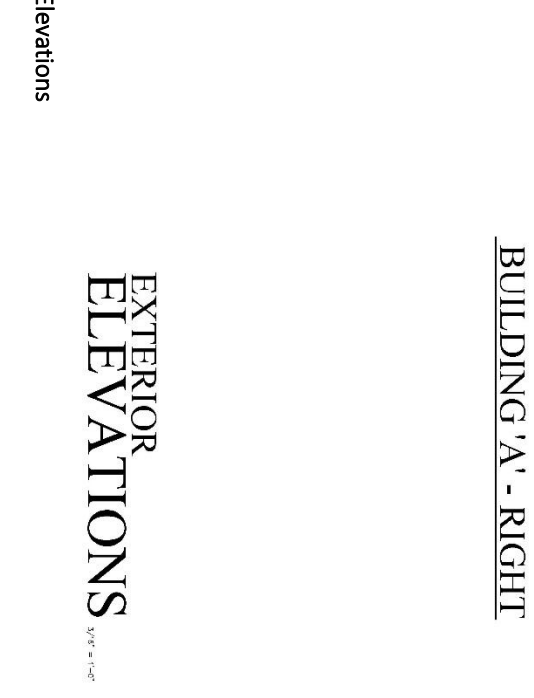
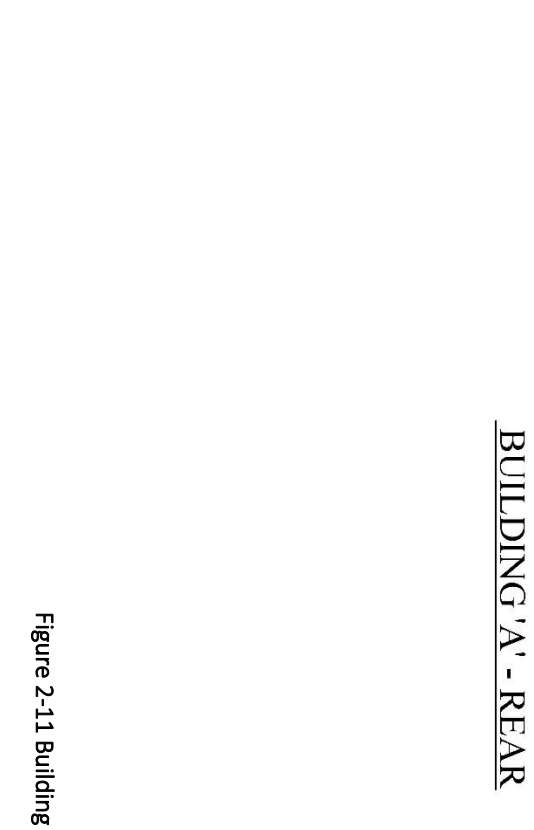
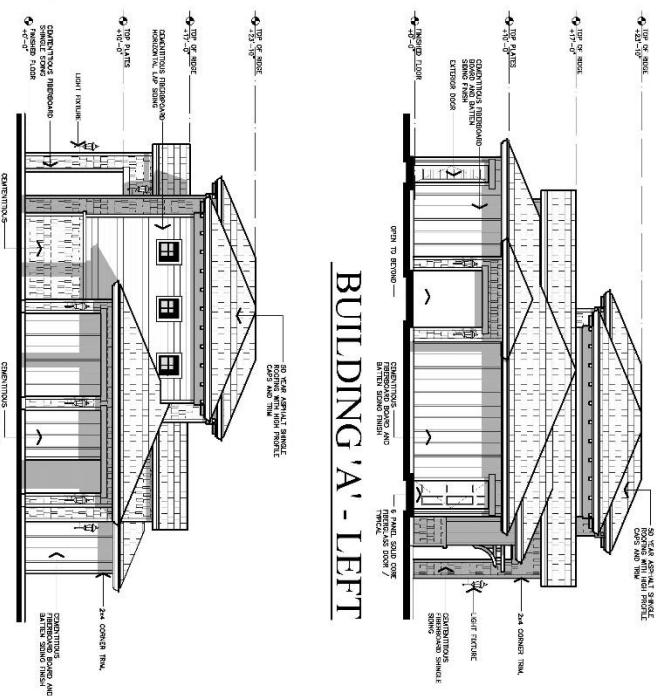
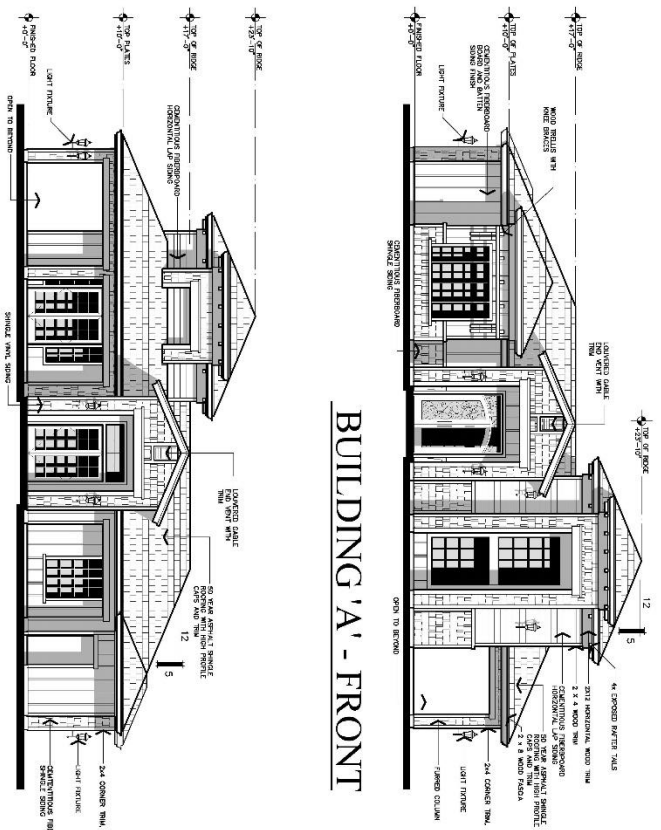


Figure 2-11 Building A Elevations

EXTERIOR  
 ELEVATIONS  
 3/8" = 1'-0"

<p>T. H. F. VINCENT COMPANY</p> <p><b>REGISTERED ARCHITECT</b></p> <p>1500 WESTSHORE, SUITE 200                  FRESNO, CALIFORNIA 93711                  PHONE: 559-252-2802</p>		<p>PROPOSED APARTMENTS COMPLEX FOR</p> <p><b>ARMSTRONG APARTMENTS</b></p> <p>2534 NORTH ARMSTRONG AVENUE                  FRESNO, CALIFORNIA</p>	<p>REGISTERED ARCHITECT</p> <p>DATE: 6/15/23</p> <p>SCALE: 3/8" = 1'-0"</p>
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EXTERIOR  
 ELEVATIONS

Figure 2-12 Building B Elevations

PROPOSED APARTMENTS COMPLEX FOR  
**ARMSTRONG APARTMENTS**  
 2504 NORTH ARMSTRONG AVENUE  
 FRESNO, CALIFORNIA

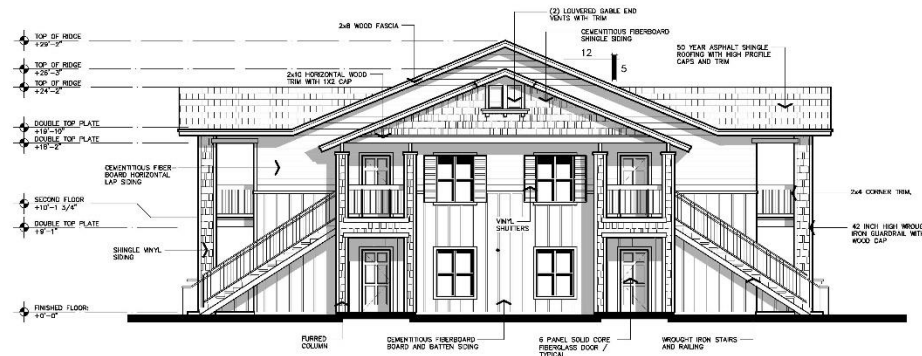


**PA10**

Professional seal and title block for the architect, including the name 'SCOTT A. VINCENT' and the title 'ARCHITECT'.



**BUILDING 'C' - FRONT/ REAR**



**BUILDING 'C' - END**

**EXTERIOR ELEVATIONS** 3/8" = 1'-0"

**THE VINCENT COMPANY**  
**ARCHITECTS, INC.**  
 1500 West Shaw, Ste. 304  
 Fresno, California 93711  
 Phone: 550.225.2602

PROPOSED APARTMENTS COMPLEX FOR  
**ARMSTRONG APARTMENTS**  
 2501 NORTH ARMSTRONG AVENUE  
 FRESNO, CALIFORNIA



- Checklist for review:
- EXTERIOR REVIEW
  - PLAN CHECK
  - CIVIL CHECK
  - ELECTRICAL
  - MECHANICAL
  - ARCHITECT

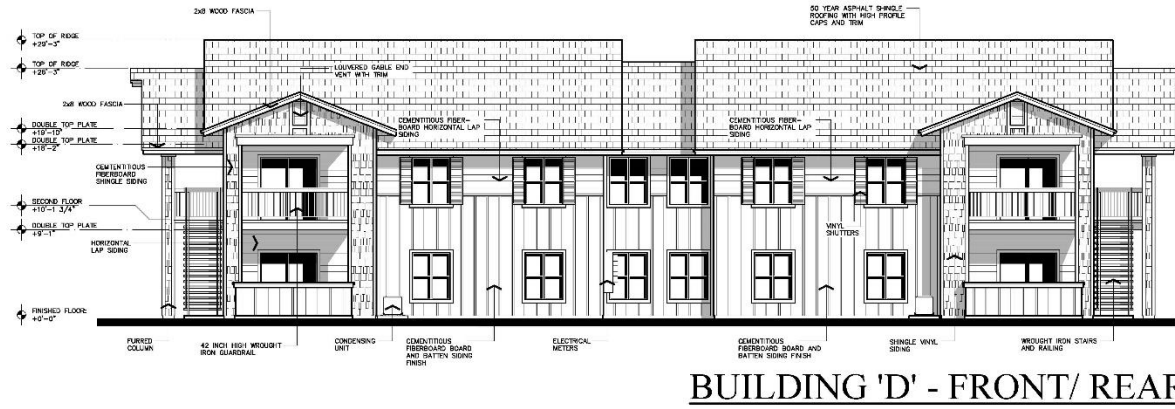
All drawings and written material appearing herein constitute original work of the architect and may not be duplicated, used, or altered without written consent of the architect.

DATE: 06/23/23  
 SCALE: 3/8" = 1'-0"  
 PROJECT: 2501 NORTH ARMSTRONG AVENUE  
 FRESNO, CA

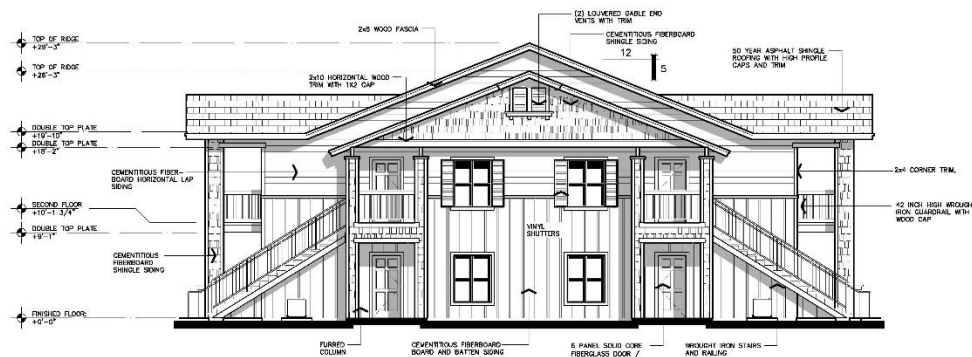
PROJECT NUMBER: 220101  
 REVISION: 02/24/23

**PA11**

Figure 2-13 Building C Elevations



**BUILDING 'D' - FRONT/ REAR**



**BUILDING 'D' - END**

**EXTERIOR ELEVATIONS** 1/16" = 1'-0"

**THE VINCENT COMPANY**  
 ARCHITECTS, INC.  
 1500 West Shaw, Ste. 304  
 Fresno, California 93711  
 Phone: 559.225.2602

Here are  
 ▲  
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PROPOSED APARTMENTS COMPLEX FOR  
**ARMSTRONG APARTMENTS**  
 2504 NORTH ARMSTRONG AVENUE  
 FRESNO, CALIFORNIA



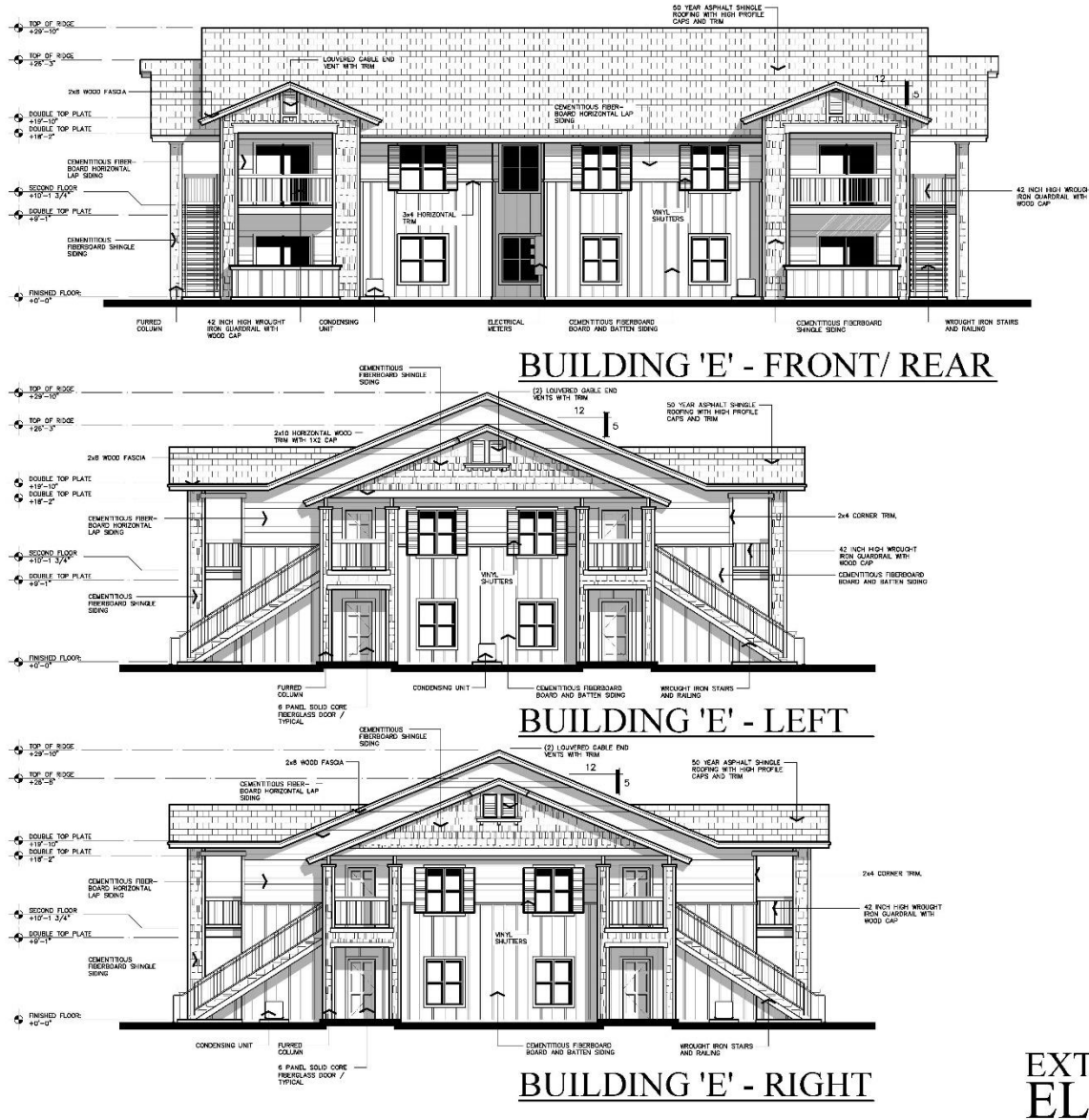
- DESIGN REVIEW
- PERM CHECK
- SPEC CHECK
- PERMITS
- CONSTRUCTION
- AS-BUILT

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Professional Seal  
 Scale: 1/8" = 1'-0"  
 Project Name: ARMSTRONG APTS  
 City: FRESNO, CA  
 Project Number: 0202376  
 Title: ARCHT

**PA12**  
 12' x 18' - 1/2"

Figure 2-14 Building D Elevations



**THE VINCENT COMPANY**  
 ARCHITECTS, INC.  
 1500 West Shaw, Ste. 304  
 Fresno, California 93711  
 Phone: 559.255.2602

**ARMSTRONG APARTMENTS**  
 2904 WEST SHAW, FRESNO, CALIFORNIA



- REVISIONS
- DESIGN REVIEW
  - PLANNING CHECK
  - FIELD CHECK
  - PERMITS
  - CONTRACTOR
  - AS BUILT

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DATE: 12/21/22  
 SCALE: 1/8" = 1'-0"  
 PROJECT: ARMSTRONG APARTMENTS, FRESNO, CA.  
 SHEET NUMBER: 02-01-11  
 SHEET TOTAL: 11

**EXTERIOR ELEVATIONS** 3/16" = 1'-0"  
**PA13**

Figure 2-15 Building E Elevations



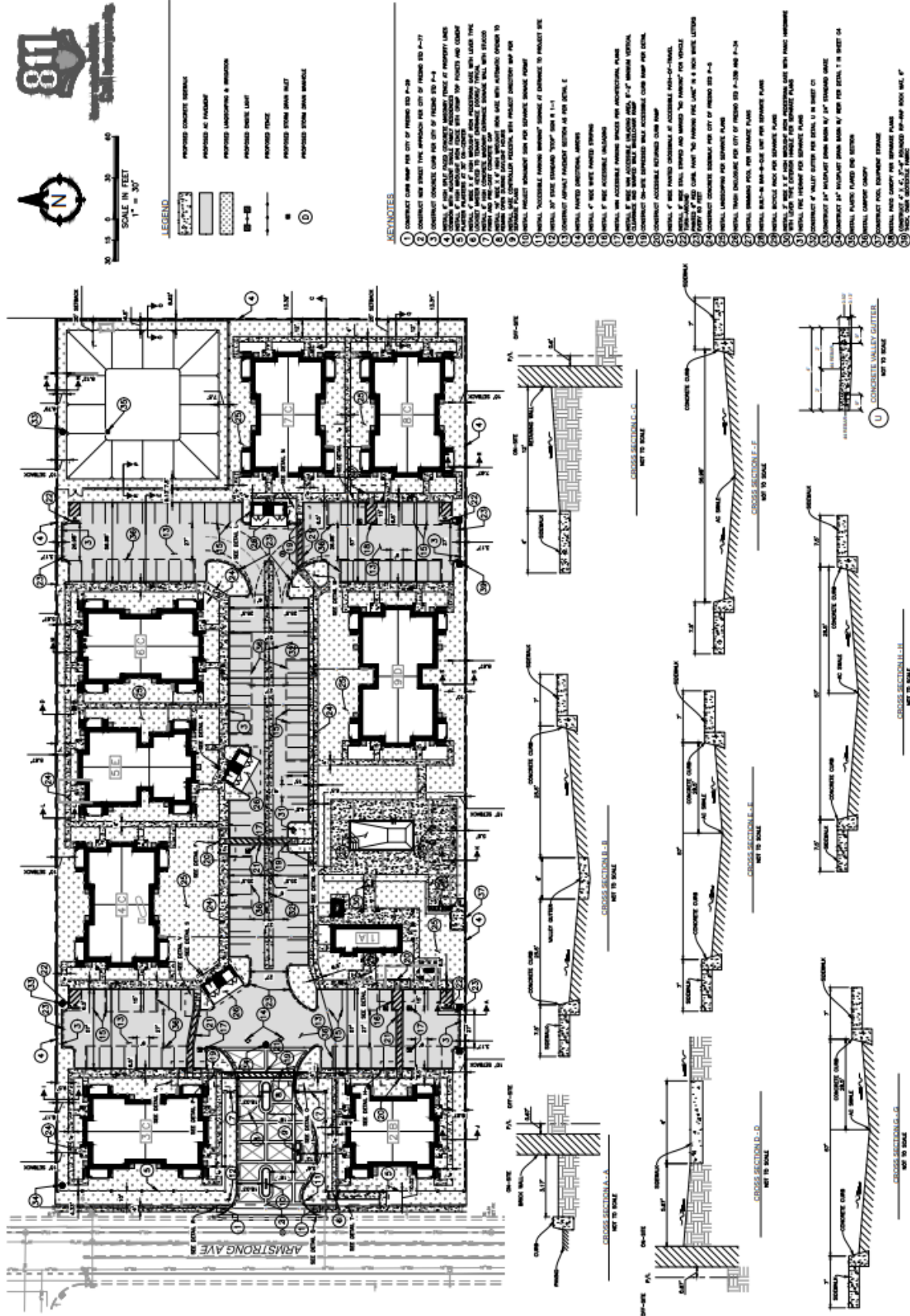


Figure 2-16 Civil Plans for Project Site



### Building and Site Design Features

The Project would exceed all mandatory requirements for multi-family buildings as outlined in the 2022 Energy Code by two to seven percent and verified through the building permit process. Mandatory requirements that would be exceeded include building ventilation and indoor air quality, space conditioning systems, water heating systems, electric power distribution, and electric ready buildings. The Project would not follow any other GreenPoint ratings. Mandatory requirements apply to building ventilation and indoor air quality, space conditioning systems, water heating systems, electric power distribution, and electric ready buildings.

The Project would be built in accordance with all mandatory indoor water use requirements as outlined in the 2022 California Green Building Standards Code, Title 24, Part 11, Section 4.303 – Indoor Water Use and verified through the building permit process. As a residential development that contains plumbing fixtures and fittings, the Project shall comply with water-conserving measures for water closets, urinals, showerheads, and faucets. The Project proposes the use of low-flow plumbing fixtures with flow rates that comply with requirements. In addition, as a multi-family residential development, the Project would be required to install submeters to measure water usage of individual units in accordance with the California Plumbing Code.

The Project would also be built in accordance with all mandatory outdoor water use requirements as outlined in the 2022 California Green Building Standards Code, Title 24, Part 11, Section 4.304 – Outdoor Water Use and verified through the building permit process. As a residential development that contains landscaping including trees, shrubs, ground cover/annual plants, and lawn, the Project shall comply with the updated Model Water Efficient Landscape Ordinance (MWELO) (California Code of Regulations, Title 23, Chapter 2.7, Division 2), as implemented and enforced through the building permit process. As proposed, the Project exceeds the MWELO requirements by eight percent as achieved through the use of drought tolerant plant material and the installation of low water use irrigation (i.e., drop irrigation).

### ***Site Circulation and Parking***

The site would be accessible via one (1) point of ingress/egress on North Armstrong Avenue with a gated entry. The entry would be open during daylight hours (generally from 7:00 am to 7:00 pm). During evening hours, visitors would be able to access the site utilizing a call box connected to the individual residential dwelling units. A pedestrian-accessible gate would be provided adjacent to the gated entry. Internal circulation of the site would include a private drive aisle for automobiles and four-ft. wide concrete sidewalks for pedestrians. The Project proposes 124 parking stalls including 64 carports and 60 open parking stalls, in addition to a bicycle rack with space for six (6) bicycles. Of the 124 parking stalls, 13 stalls would be “EV capable” (i.e., a parking space linked to a listed electrical panel with sufficient capacity to provide at least 110/120 volts and 20 amperes to the parking space) accounting for 10% of the parking spaces in accordance with the 2022 California Green Building Standards Code, Title 24, Part 11. The Project would also install right-of-way improvements along North Armstrong Avenue street frontage (i.e., concrete curb, gutter, sidewalk, and paving per City of Fresno Public Works Standards). An inside/outside turning radius is also proposed per City of Fresno Standards for fire and solid waste vehicle access.

### ***Open Space and Landscaping***

Proposed open space and landscaping is depicted in [Figure 2-17](#). As shown, private open space is proposed for each unit either as a patio or balcony. In addition, the Project includes approximately 43,190 sf. of common open space



throughout the site including indoor and outdoor recreational space (e.g., swimming pool, arbors, and barbecue). Trees, shrubs, ground cover/annuals including Aarons beard, trailing gazania, dwarf periwinkle, and petunias, mums, and dwarf marigolds, and lawn are proposed throughout the interior and perimeter of the site.

### ***Public Services and Utilities***

The Project site is within city limits and thus, would be required to connect to water, wastewater, and stormwater services. Natural gas, electricity, telecommunications, and solid waste services are provided by private companies. In addition, the Project would be subject to fees for the construction, acquisition, and improvements for public services including but not limited to: Fire Protection Services, Police Protection Services, and Schools.

### **2.14 Required Project Approvals**

The City of Fresno requires the following review, permits, and/or approvals for the proposed Project. Other approvals not listed below may be required as identified through the entitlement process.

- Building Permit
- Grading Permit
- Encroachment Permit
- Site Utilities Permit
- Sign Permit

In addition, other agencies may have the authority to issue permits prior to implementation of the Project as listed below.

- Fresno County Department of Public Health
- San Joaquin Valley Air Pollution Control District
- California Regional Water Quality Control Board

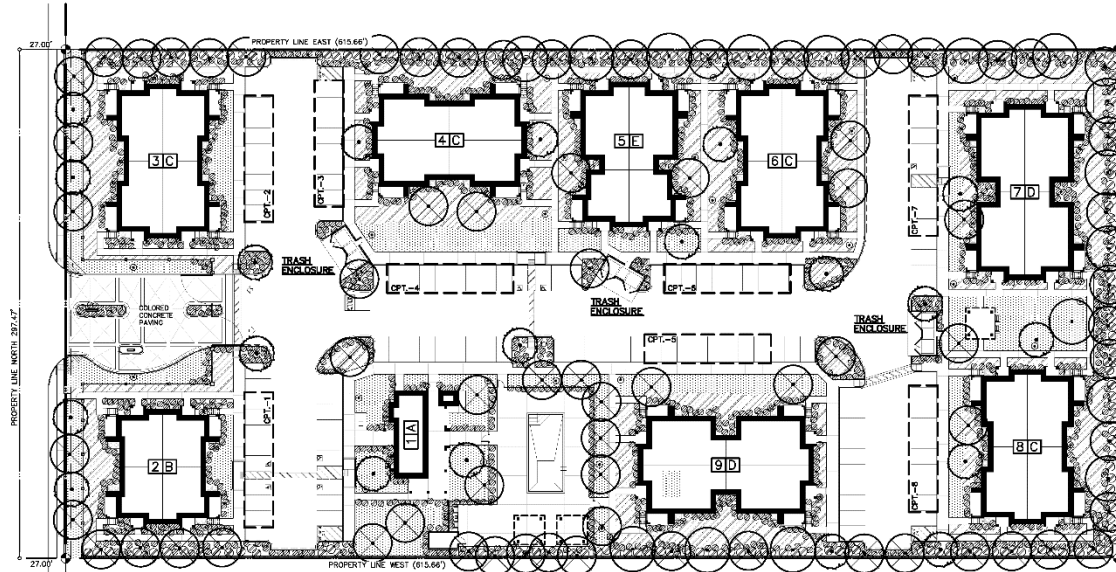
### **2.15 Technical Studies**

The analysis of the Project throughout this Initial Study relied in part on the technical studies listed below prepared for the Project, as well as other sources, including, but not limited to, Fresno General Plan Program Environmental Impact Report (PEIR) SCH No. 2019050005 prepared for the City of Fresno General Plan and Development Code Update in 2020.

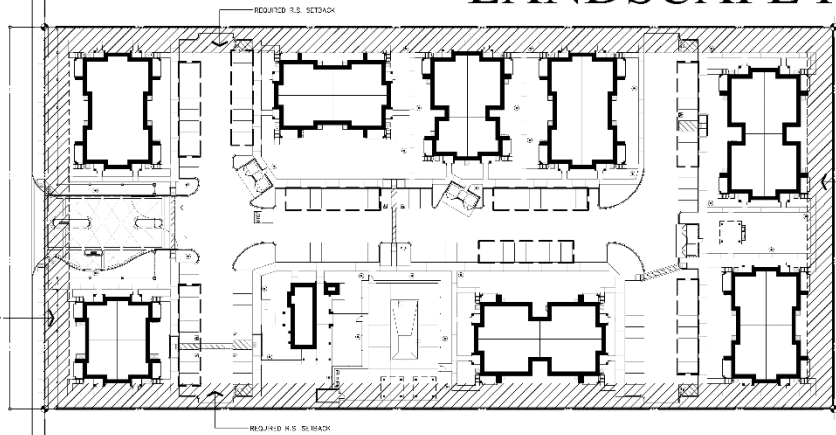
- **Appendix A:** CalEEMod Output Files
- **Appendix B:** CHRIS Record Search Results, NAHC Correspondence, Historic Review Report
- **Appendix C:** Acoustical Analysis
- **Appendix D:** Vehicles Miles Traveled Analysis



NORTH ARMSTRONG AVENUE



### CONCEPT LANDSCAPE PLAN



#### OPEN SPACE REQUIREMENTS

- FOR DEVELOPMENT CODE TABLE 15.0005.008 OF THE KEY SITE AREA SHALL BE PROVIDED WITH OPEN SPACE COMPLYING WITH 15.0044.
- FOR DEVELOPMENT CODE SECTION 15.0042.01.4 (RETRY FOREST) TREES OF MINIMUM DBH (DIA) SHALL BE PROVIDED WITH MINIMUM OPEN SPACE (DIA) AS FOLLOWS:
  - OPEN SPACE CALCULATIONS:
    - 1. UNITS WITH "A" TO "D" BRACKET: 64 UNITS (2000 SF) MINIMUM SPACE
    - 2. UNITS WITH "E" TO "H" BRACKET: 153,740 SF
    - 3. OPEN SPACE REQUIRED (2000): 153,740 SF
    - 4. OPEN SPACE PROVIDED: 43,99 SF

### OPEN SPACE SITE PLAN



### LANDSCAPE NOTES

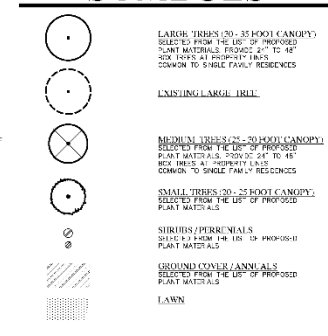
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- ALL TREES, PLANTS AND GRASS PROVIDED UNDER THIS CONTRACT SHALL BE OF GOOD HEALTH AND EXCELLENT CONDITION. THE ARCHITECT SHALL BE RESPONSIBLE FOR THE SUPERVISION OF THE PLANTING WORK. THE ARCHITECT SHALL BE RESPONSIBLE FOR THE SUPERVISION OF THE PLANTING WORK.
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### PLANT MATERIALS

THE FOLLOWING IS A PROPOSED LIST OF PLANT MATERIALS TO BE USED FOR THIS PROJECT. THE ARCHITECT SHALL BE RESPONSIBLE FOR THE SUPERVISION OF THE PLANTING WORK. THE ARCHITECT SHALL BE RESPONSIBLE FOR THE SUPERVISION OF THE PLANTING WORK.

- TREES**
- 1" DBH 15' O.C. CALIFORNIA REDWOOD (SEACALIF)
  - 1" DBH 17' O.C. REDWOOD (SEACALIF)
  - 1" DBH 18' O.C. CALIFORNIA REDWOOD (SEACALIF)
  - 1" DBH 20' O.C. CALIFORNIA REDWOOD (SEACALIF)
  - 1" DBH 22' O.C. CALIFORNIA REDWOOD (SEACALIF)
  - 1" DBH 24' O.C. CALIFORNIA REDWOOD (SEACALIF)
  - 1" DBH 26' O.C. CALIFORNIA REDWOOD (SEACALIF)
  - 1" DBH 28' O.C. CALIFORNIA REDWOOD (SEACALIF)
  - 1" DBH 30' O.C. CALIFORNIA REDWOOD (SEACALIF)
  - 1" DBH 32' O.C. CALIFORNIA REDWOOD (SEACALIF)
  - 1" DBH 34' O.C. CALIFORNIA REDWOOD (SEACALIF)
  - 1" DBH 36' O.C. CALIFORNIA REDWOOD (SEACALIF)
  - 1" DBH 38' O.C. CALIFORNIA REDWOOD (SEACALIF)
  - 1" DBH 40' O.C. CALIFORNIA REDWOOD (SEACALIF)
  - 1" DBH 42' O.C. CALIFORNIA REDWOOD (SEACALIF)
  - 1" DBH 44' O.C. CALIFORNIA REDWOOD (SEACALIF)
  - 1" DBH 46' O.C. CALIFORNIA REDWOOD (SEACALIF)
  - 1" DBH 48' O.C. CALIFORNIA REDWOOD (SEACALIF)
  - 1" DBH 50' O.C. CALIFORNIA REDWOOD (SEACALIF)
- SHRUBS**
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  - 1" DBH 17' O.C. CALIFORNIA REDWOOD (SEACALIF)
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  - 1" DBH 50' O.C. CALIFORNIA REDWOOD (SEACALIF)
- GROUND COVER ANNUALS**
- 1" DBH 15' O.C. CALIFORNIA REDWOOD (SEACALIF)
  - 1" DBH 17' O.C. CALIFORNIA REDWOOD (SEACALIF)
  - 1" DBH 18' O.C. CALIFORNIA REDWOOD (SEACALIF)
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  - 1" DBH 48' O.C. CALIFORNIA REDWOOD (SEACALIF)
  - 1" DBH 50' O.C. CALIFORNIA REDWOOD (SEACALIF)

### SYMBOLS



T H E  
 VINCENT  
 COMPANY  
 ARCHITECTS, INC.  
 1500 West Shaw, Ste. 504  
 Fresno, California 93711  
 Phone: 559.225.5602

PROPOSED APARTMENTS COMPLEX FOR  
**ARMSTRONG APARTMENTS**  
 254 NORTH ARMSTRONG AVENUE  
 FRESNO, CALIFORNIA



Project Name: ARMSTRONG APTS  
 Project Number: 02-23  
 File Path: 11/10/23  
 User Name: [Name]  
**PL1**

Figure 2-17 Landscape and Open Space Plan





## 2.16 Consultation with California Native American Tribes

The State requires lead agencies to consider the potential effects of proposed projects and consult with California Native American tribes during the local planning process for the purpose of protecting Traditional Tribal Cultural Resources through the California Environmental Quality Act (CEQA) Guidelines. Pursuant to PRC Section 21080.3.1, the lead agency shall begin consultation with the California Native American tribe that is traditionally and culturally affiliated with the geographical area of the proposed project. Such significant cultural resources are either sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a tribe which is either on or eligible for inclusion in the California Historic Register or local historic register, or, the lead agency, at its discretion, and support by substantial evidence, choose to treat the resources as a Tribal Cultural Resources (PRC Section 21074(a)(1-2)). According to the most recent census data, California is home to 109 currently recognized Indian tribes. Tribes in California currently have nearly 100 separate reservations or Rancherias. Fresno County has a number of Rancherias such as Table Mountain Rancheria, Millerton Rancheria, Big Sandy Rancheria, Cold Springs Rancheria, and Squaw Valley Rancheria. These Rancherias are not located within the city limits.

Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See PRC Section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per PRC Section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that PRC Section 21082.3(c) contains provisions specific to confidentiality.

The City of Fresno conducted formal tribal consultation pursuant to AB 52 (Chapter 532, Statutes 2014) and SB 18 (Chapter 905, Statutes 2004) on February 24, 2023, to the aforementioned tribes. Consultation for AB 52 ends on March 27, 2023 and consultation for SB 18 ends on May 25, 2023. No responses have been received to-date.



### 3 DETERMINATION

#### 3.1 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.

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Aesthetics              | <input type="checkbox"/> Land Use Planning                        |
| <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Mineral Resources                        |
| <input type="checkbox"/> Air Quality                        | <input checked="" type="checkbox"/> Noise                         |
| <input type="checkbox"/> Biological Resources               | <input type="checkbox"/> Population and Housing                   |
| <input checked="" type="checkbox"/> Cultural Resources      | <input type="checkbox"/> Public Services                          |
| <input type="checkbox"/> Energy                             | <input type="checkbox"/> Recreation                               |
| <input checked="" type="checkbox"/> Geology and Soils       | <input type="checkbox"/> Transportation                           |
| <input type="checkbox"/> Greenhouse Gas Emissions           | <input checked="" type="checkbox"/> Tribal and Cultural Resources |
| <input type="checkbox"/> Hazards and Hazardous Materials    | <input type="checkbox"/> Utilities and Service Systems            |
| <input type="checkbox"/> Hydrology and Water Quality        | <input type="checkbox"/> Wildfire                                 |

For purposes of this Initial Study, the following answers have the corresponding meanings:

**"No Impact"** means the specific impact category does not apply to the project, or that the record sufficiently demonstrates that project specific factors or general standards applicable to the project will result in no impact for the threshold under consideration.

**"Less Than Significant Impact"** means there is an impact related to the threshold under consideration, but that impact is less than significant.

**"Less Than Significant with Mitigation Incorporation"** means there is a potentially significant impact related to the threshold under consideration, however, with the mitigation incorporated into the project, the impact is less than significant. For purposes of this Initial Study "mitigation incorporated into the project" means mitigation originally described in the GP PEIR and applied to an individual project, as well as mitigation developed specifically for an individual project.

**"Potentially Significant Impact"** means there is substantial evidence that an effect may be significant related to the threshold under consideration.

#### 3.2 Determination

On the basis of this initial evaluation (to be completed by the Lead Agency):

- 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 (EIR) is required.



- I find that the proposed project MAY have a “potentially significant impact” 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 EIR 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 EIR 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.

Approved By:

*Steven Lieng*

June 16, 2023

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Steven Lieng, Planner  
City of Fresno, Planning and Development Department

Date



## 4 EVALUATION OF ENVIRONMENTAL IMPACTS

### 4.1 AESTHETICS

Except as provided in Public Resources Code Section 21099, would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?				X
b) Substantially damage scenic resources, including, but not limited to, trees, rock out-croppings, and historic buildings within a state scenic highway?				X
c) In non-urbanized areas, substantially degrade the existing visual character or quality 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?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?		X		

#### 4.1.1 Environmental Setting

The City of Fresno is located within Fresno County in the San Joaquin Valley in central California. The Project site is in the eastern portion of the City of Fresno, situated north of East Clinton Avenue and east of North Armstrong Avenue at 2614 North Armstrong Ave, Fresno, CA 93727. The site is surrounded by existing residential uses (north, east, south, and west), a basin (east), and vacant land (south and west). A single-family residential subdivision on the west side of North Armstrong Avenue is currently under construction. Surrounding properties are planned and zoned for residential uses.

#### Fresno General Plan

The General Plan Parks, Open Space, and Schools Element identifies “vista points,” which are typically defined as a scenic viewpoint, observation point, viewpoint, viewing point, lookout, or scenic overlook that is elevated. Vista points are primarily located near and along the San Joaquin River, which is more than 9.5 miles northwest of the Project site. “Scenic corridors,” which are typically defined as corridors that possess highly scenic and natural features are identified in the Mobility and Transportation Element of the General Plan. The nearest scenic corridor



to the Project site is Armstrong Avenue south of Belmont Avenue, which is approximately 1.6 miles south of the site.

In addition, the General Plan Urban Form, Land Use, and Design Element contains objectives and policies related to the image and design of future development.

**Objective D-4.** *Preserve and strengthen Fresno’s overall image through design review and create a safe, walkable and attractive urban environment for the current and future generations of residents.*

**Policy D-4-c. Appropriate Day and Night Activity.** *Promote new residential, commercial and related forms of development that foster both day and appropriate night time activity; visual presence on the street level; appropriate lighting; and minimally obstructed view areas.*

**Policy D-4-f. Design Compatibility with Residential Uses.** *Strive to ensure that all new non-residential land uses are developed and maintained in a manner complementary to and compatible with adjacent residential land uses, to minimize interface problems with the surrounding environment and to be compatible with public facilities and services.*

### **Fresno Municipal Code**

The Fresno Municipal Code (FMC) contains the following regulations governing scenic quality that would be applicable to the proposed Project. Because the site is adjacent to an RS Zone District, development of the site would be subject to FMC **Section 15-1004** which includes site design development standards and FMC **Section 15-1005** which includes façade design development standards. Requirements are as follows.

#### **Section 15-1004 – Site Design Development Standards**

**A. RS Transition Standards.** *Where an RM district abuts an RS District, the following standards apply:*

*1.Height. The maximum height within 40 feet of an RS District is limited to 30 feet. The maximum height within 50 feet of an RS District is 40 feet.*

*2.Setbacks. The following additional setback requirements shall be applied to all structures, including accessory structures, on parcels which are adjacent to an RS District:*

*a. Front. The minimum front setback requirement of the adjacent RS district shall be applied to all structures within 50 feet of the RS District.*

*b. Interior Side. The interior side setback shall be 10 feet.*

*c. Rear. The rear setback shall be 20 feet.*

*3.Landscape. See Table 15-2305-C.1, Required Landscape Buffers.*

*4.Screening. When a multi-story building is proposed and the second story or above is located within 50 feet of the side or rear yard of a single-family lot, screening measures shall be applied to provide a reasonable degree of privacy.*

*a. Screening measures. Screening measures include, but are not limited to, landscaping, alternate window and balcony placements, placing windows*



*at least six feet from the floor of the interior of the unit, incorporating wing walls or louvers, using glass block or other translucent material, and other such methods.*

*b. Sufficiency of Screening. The Review Authority shall determine the sufficiency of the proposed screening measures and may require additional measures.*

### **Section 15-1005 – Façade Design Development Standards**

*Appropriate façade design shall be provided at the preference of the applicant by either the Flexibility Option or the Certainty Option as follows:*

**A. Flexibility Option.** *The applicant must demonstrate to the satisfaction of the Review Authority that the project meets the following goals:*

- 1. Present an attractive appearance to public streets.*
- 2. Be aesthetically and functionally compatible to the nearby development context.*
- 3. Demonstrate a high level of quality.*
- 4. Support the growth in value of surrounding properties,*

**B. Certainty Option.** *Street-facing façades for buildings adjacent to a public street shall comply to the following standards. Other façades shall not be subject to these standards.*

*1. Building Length Articulation. At least one projection or recess will be provided for every 50 horizontal feet of wall in one of the following manners:*

*a. Projections or recesses for buildings 50 feet wide or less shall be exempted from the building length articulation requirement; projections or recesses for buildings greater than 50 feet in width but less than 100 feet in width shall be no less than 12 inches in depth; or projections or recesses for buildings 100 feet wide or wider shall be no less than 24 inches in depth.*

*b. The depth and width of the projection or recess shall be proportionate to the overall mass of the building.*

*2. Building Materials and Finishes. Materials shall present a durable and attractive appearance through high-quality materials, finishes, and workmanship defined as:*

*a. At least two cladding materials (excluding roof and foundation); and*

*b. At least three exterior colors (each cladding material shall count as a color, trim/accent colors shall each count as a color, and visually significant colors for doors, balconies, and similar elements may count as a color).*

*c. Exception: Buildings which accurately adhere to a recognized architectural style which is appropriately expressed in one cladding material and one color shall be excepted.*



*d. Exception: Buildings with all of the following characteristics shall be allowed to use one cladding material:*

- i. Building height of 3 stories or less;*
- ii. Building width of 100 feet or less; and*
- iii. A façade with a comparable form of visual interest.*

### *3. Window Design.*

*a. Glazing Ratio. Street-facing façades of each floor of the building shall have an overall wall composition of at least 25 percent glazing, but not more than 70 percent glazing.*

*b. Vertical Proportion. On upper stories, the percentage of all window openings, window panes, or distinct window units specified below shall have a vertical proportion, in which their height exceeds their width by 25 percent or more.*

*i. In the Priority Areas (see Figure IM-1: Priority Areas for Development Incentives in the Fresno General Plan, adopted in 2014). At least 50 percent.*

*ii. Outside of the Priority Areas. At least 30 percent*

*c. Window Depth. In the Priority Areas, windows shall create visual interest and the appearance of depth in one of the following manners:*

*i. Trim at least one inch in depth and three inches wide must be provided around all upper story windows and non-commercial ground-floor windows;*

*ii. Windows must be recessed at least two inches from the plane of the surrounding exterior wall {for double-hung and horizontal sliding windows, at least one sash shall achieve the two-inch recess}; or*

*iii. Decorative plaster screed, minimum 2 inches wide;*

*iv. Exception: Buildings with all of the following characteristics shall be allowed to use flush windows without trim:*

- (1) Building height of 3 stories or less;*
- (2) Building width of 100 feet or less; and*
- (3) A façade with a comparable form of prominent surface relief and articulation, such as awnings, canopies, balconies, or massing changes.*

### *4. Façade Alignment.*

*a. In the Priority Areas. Façade alignment shall be as follows;*





*i. Vertical Alignment. With the exception of mansard roofs, cornices, and other such features, façades shall be oriented vertically and shall have no slope,*

*ii. Horizontal Alignment. With the exception of bay windows and similar features, façades shall run parallel or perpendicular to the adjacent street,*

*b. Outside of the Priority Areas. No requirement.*

*5. External Stairs, Corridors, and Hallways. In the Priority Areas, external stairs, corridors, and hallways that are located within 30 feet of a public street must be architecturally integrated into the building design.*

*6. Balconies. If balconies are provided, they shall not be grouped together into a continuous band across the façade. No more than two balconies shall be contiguous. Each balcony or group of two contiguous balconies shall be distinct and shall have at least six feet of horizontal separation from any other balcony,*

*7. Façade Elements. Development shall incorporate façade elements as follows;*

*a. In the Priority Areas. A minimum of one of the following Façade Elements will be incorporated into street-facing building façades:*

*i. Forecourts*

*ii. Bay Windows*

*iii. Balconies*

*iv. Porches*

*v. Stoops*

*vi. Arcades*

*b. Outside of the Priority Areas. No requirement.*

*8. If the project is located within an area with adopted design guidelines, all applicable guidelines which relate to façade design shall also be followed.*

FMC **Section 15-2015** includes requirements for outdoor lighting and illumination that are applicable to the proposed Project for the purpose of minimizing outdoor artificial light that may have a detrimental effect on the environment, astronomical research, amateur astronomy, and enjoyment of the night sky. These provisions are also intended to reduce the unnecessary illumination of adjacent properties and the use of energy.

### ***Section 15-2015 – Outdoor Lighting and Illumination***

#### ***B. Control and Illumination of Outdoor Artificial Light***

##### ***2. General Standards***

*d. Non-Residential Buildings. All exterior doors, during the hours of darkness, shall be illuminated with a minimum of 0.5 foot-candle of light.*



*f. Parking Lots and Garages. All parking lots and garages shall be illuminated with a minimum of 0.5 foot-candle of light.*

*3. Maximum Height. Lighting fixtures shall not exceed the maximum heights specified in the following table (Table 15-2015-B.3: Maximum Height of Lighting Fixtures).*

*Employment Districts: 25 ft. within 100 ft. of any street frontage; 30 in any other location*

*5. Prohibited Lighting. The following types of exterior lighting are prohibited:*

*a. Drop-down lenses;*

*b. Mercury vapor lights; and*

*c. Searchlights, laser lights, or any other lighting that flashes, blinks, alternates, or moves.*

*6. Fixture Types. All lighting fixtures shall be shielded so as not to produce obtrusive glare onto the public right-of-way or adjoining properties. All luminaries shall meet the most recently adopted criteria of the Illuminating Engineering Society of North America (IESNA) for "Cut Off" or "Full Cut Off" luminaries.*

*7. Glare. No use shall be operated such that significant, direct glare, incidental to the operation of the use is visible beyond the boundaries of the property where the use is located.*

*8. Light Trespass. Lights shall be placed to deflect the light away from adjacent properties and public streets, and to prevent adverse interference with the normal operation or enjoyment of surrounding properties.*

*a. Direct or sky-reflected glare from floodlights shall not be directed into any other property or street.*

*b. No light or combination of lights, or activity shall cast light exceed one foot candle onto a public street, with the illumination level measured at the centerline of the street.*

*c. No light, combination of lights, or activity shall cast light exceeded 0.5 foot candle onto a residentially zoned property, or any property containing residential uses.*

Additional performance standards related to lighting and glare are provided in FMC **Section 15-2508**.

***FMC Section 15-2508 – Lighting and Glare***

*Activities, processes, and uses shall be operated in compliance with the following provisions:*

*B. Lighting. Lights shall be placed to deflect light away from adjacent properties and public streets, and to prevent adverse interference with the normal operation or enjoyment of surrounding properties. Direct or sky-reflected glare from floodlights shall not be directed into any other property or street. Except for public street lights and stadium lights, no light, combination of lights, or activity shall cast light onto a residentially zoned property, or any property containing residential uses, exceeding one-half foot-candle.*

*C. Glare*



1. No use shall be operated such that significant, direct glare, incidental to the operation of the use is visible beyond the boundaries of the lot where the use is located.
2. Windows shall not cause glare that may disrupt adjoining properties, traffic on adjacent streets, etc.
3. Glare or heat reflected from building materials shall be mitigated so as to not disrupt surrounding properties.

Lastly, FMC **Section 15-2614** provides specific lighting requirements related to signage:

**FMC Section 15-2614 – Electronic Copy**

*B. Light Intensity. The intensity of the sign lighting shall not exceed 100 foot Lamberts (FT-L) when adjacent to streets which have an average light intensity of less than 2.0 horizontal footcandles and shall not exceed 500 FT-L when adjacent to streets which have an average light intensity of 2.0 horizontal footcandles or greater. No change of lighting intensity may occur during a display or between displays except to respond to a change in ambient lighting conditions.*

**California State Scenic Highways**

The Department of Transportation (Caltrans) manages the State Scenic Highway Program that was established in 1963 by Senate Bill 1467. The purpose of the program is to protect and enhance the state’s natural scenic beauty. According to the State Scenic Highway Map, the nearest eligible State Scenic Highway, State Route (SR)-168 which is approximately 4.2 miles northwest of the Project site.<sup>1</sup>

**4.1.2 Impact Assessment**

**Would the project:**

**a) Have a substantial adverse effect on a scenic vista?**

**No Impact.** The Project site does not contain nor is it near any scenic vistas including but not limited to vista points or scenic corridors. The nearest vista points are located more than 9.5 miles northwest of the Project site and the nearest scenic corridor is located approximately 1.6 miles south of the site. Thus, given the distance from the Project site to vista points and scenic corridors, the Project would have no impact on a scenic vista.

**b) Substantially damage scenic resources, including, but not limited to, trees, rock out-croppings, and historic buildings within a state scenic highway?**

**No Impact.** The closest eligible scenic highway, SR-168, is approximately 4.2 miles north from the Project site. As such, the proposed Project would not damage scenic resources, including trees, rock out-croppings, and historic buildings within a state scenic highway and no impact would occur.

**c) In non-urbanized areas, 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**

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<sup>1</sup> Caltrans. California State Scenic Highway System Map. Accessed on November 29, 2022, <https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aaca>



*the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?*

**Less than Significant Impact.** The Project site is in an urbanized area surrounded by residential development. The Project proposes a GPA to amend the Fresno General Plan planned land use designation from Residential – Low Density to Residential – Medium Density and a Rezone to change the zone district from RS-1 – Residential Single-Family, Extremely Low Density to RM-1 – Residential Multi-Family, Medium High Density in order to develop a 64-unit multi-family residential development that would be subject to applicable zoning and other regulations of the FMC, including FMC **Section 15-1004**, **Section 15-1005**, **Section 15-2015**, **Section 15-2508**, and **Section 15-2614** (See **Environmental Setting**) that govern scenic quality. Compliance with the applicable zoning and other regulations of the FMC would be ensured through the entitlement review process. Therefore, a less than significant impact would occur.

*d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

**Less than Significant with Mitigation Incorporated.** Generally, lighting impacts are associated with artificial lighting in evening hours either through interior lighting from windows or exterior lighting (e.g., street lighting, parking lot lighting, landscape lighting, cars, and trucks). Development of the Project site would incrementally increase the amount of light from streetlights, exterior lighting, and vehicular headlights. Such sources could create adverse effects on day or nighttime views in the area.

Project construction would also introduce light and glare resulting from construction activities such as construction equipment traversing the site that could adversely affect day or nighttime views. Although construction activities are anticipated to occur primarily during daylight hours, it is possible that some activities could occur during dusk or early evening hours (FMC **Section 10-109** permits construction work to take place between 7:00 am and 10:00 pm on any day except Sunday, for work that is accomplished pursuant to a building permit). Construction during these time periods could result in light and glare from construction vehicles or equipment. However, construction would occur primarily during daylight hours and would be temporary in nature. Once construction is completed, any light and glare from these activities would cease to occur.

Once developed, the Project would be required to comply with the applicable General Plan policies and the enforceable requirements and restrictions contained in the FMC intended to prevent light and glare impacts (See **Environmental Setting**) including General Plan **Policy D-4-c** and **D-4-f** and FMC **Section 15-1004**, **Section 15-1005**, **Section 15-2015**, **Section 15-2508**, and **Section 15-2614**. Further, compliance with Title 24 lighting requirements as verified through the Building Permit process would reduce impacts related to nighttime light. The lighting requirements cover outdoor spaces including regulations for mounted luminaires (i.e., high efficacy, motion sensor controlled, time clocks, energy management control systems, etc.). In addition, there are General Plan PEIR Mitigation Measures that would apply to this Project that would further reduce lighting and glare impacts. The Mitigation Measures include **Mitigation Measure AES-1**, **Mitigation Measure AES-2**, and **Mitigation Measure AES-3** as described below. As such, conditions imposed on the Project by the City pursuant to the General Plan, FMC, and Title 24, in addition to compliance with the General Plan PEIR Mitigation Measures would reduce light and glare impacts to a less than significant impact.



*Mitigation Measure AES-1: Lighting for Street and Parking Areas. Lighting systems for street and parking areas shall include shields to direct light to the roadway surfaces and parking areas. Vertical shields on the light fixtures shall also be used to direct light away from adjacent light sensitive land uses such as residences. (PEIR Mitigation Measure AES-4.1)*

*Mitigation Measure AES-2: Signage Lighting. Lighting systems for freestanding signs shall not exceed 100-foot Lamberts (FT-L) when adjacent to streets which have an average light intensity of less than 2.0 horizontal footcandles and shall not exceed 500 FT-L when adjacent to streets that have an average light intensity of 2.0 horizontal footcandles or greater. (PEIR Mitigation Measure AES-4.4)*

*Mitigation Measure AES-3: Use of Non-Reflective Materials. Materials used on building façades shall be non-reflective. (PEIR Mitigation Measure AES-4.5)*

#### **4.1.3 Mitigation Measures**

The proposed Project shall implement and incorporate, as applicable, the aesthetic related mitigation measures as identified in the attached Mitigation Monitoring Checklist dated June 2023.

***Mitigation Measure AES-1: Lighting for Street and Parking Areas. Lighting systems for street and parking areas shall include shields to direct light to the roadway surfaces and parking areas. Vertical shields on the light fixtures shall also be used to direct light away from adjacent light sensitive land uses such as residences. (PEIR Mitigation Measure AES-4.1)***

***Mitigation Measure AES-2: Signage Lighting. Lighting systems for freestanding signs shall not exceed 100-foot Lamberts (FT-L) when adjacent to streets which have an average light intensity of less than 2.0 horizontal footcandles and shall not exceed 500 FT-L when adjacent to streets that have an average light intensity of 2.0 horizontal footcandles or greater. (PEIR Mitigation Measure AES-4.4)***

***Mitigation Measure AES-3: Use of Non-Reflective Materials. Materials used on building façades shall be non-reflective. (PEIR Mitigation Measure AES-4.5)***



## 4.2 AGRICULTURE AND FORESTRY RESOURCES

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farm-land), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?			X	
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?			X	
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))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
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?			X	

### 4.2.1 Environmental Setting

The Project site is located within the Fresno city limits and is planned and zoned for residential uses. The Project site as it currently exists is developed, containing existing structures and on- and off-site improvements including drive approaches, curb, gutter, and overhead utilities along North Armstrong Avenue. There are approximately five existing structures including a 1,918-square foot single-family residence (built circa 1962), garage, and storage sheds. In recent years, the site has been operated as a retail nursery and contains rows of plants for sale by retail. The topography of the site is generally flat, as the majority of the site was previously graded and paved for the existing structures and previous retail nursery operations.

The existing biotic conditions of the Project site can be defined as urbanized and heavily disturbed. There are trees, shrubs, and herbaceous vegetation surrounding the existing single-family residence and the northern, southern,





and eastern site boundary. Grasses that are periodically mowed are located adjacent to the single-family residence. No agricultural operations or forestry resources are present on the site.

### **Farmland Monitoring and Mapping Program**

The California Department of Conservation manages the Farmland Mapping and Monitoring Program (FMMP) that provides maps and data for analyzing land use impacts to farmland. The FMMP produces the Important Farmland Finder as a resource map that shows quality (soils) and land use information. Agricultural land is rated according to soil quality and irrigation status, in addition to many other physical and chemical characteristics. The highest quality land is called “Prime Farmland” which is defined by the FMMP as *“farmland with the best combination of physical and chemical features able to sustain long term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.”*<sup>2</sup> Maps are updated every two years. According to the FMMP, California Important Farmland Finder, the Project site and the properties immediately to the north and south are classified as “Rural Residential Land” as of 2018. Properties immediately east and west of the site are classified as “Farmland of Local Importance” as of 2018.<sup>3</sup>

### **California Land Conservation Act**

The California Land Conservation Act of 1965 (i.e., the Williamson Act) allows local governments to enter contracts with private landowners to restrict parcels of land agricultural or open space uses. In return, property tax assessments of the restricted parcels are lower than full market value. The minimum length of a Williamson Act contract is 10 years and automatically renews upon its anniversary date; as such, the contract length is essentially indefinite. The Project site is not subject to the Williamson Act.

#### **4.2.2 Impact Assessment**

##### **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?*

**Less than Significant Impact.** The Project site is not located on lands or adjacent to lands designated as “Prime Farmland,” “Unique Farmland,” or “Farmland of Statewide Importance.” The nearest lands designated as “Prime Farmland” are located on the southeast corner of North Armstrong Avenue and East Clinton Avenue, approximately 500 feet southeast from the Project site. Despite this designation, the “Prime Farmland” has been converted to non-agricultural uses between 2015 and 2023 as indicated on the City of Fresno GIS Data Viewing Application. The “Prime Farmland” is currently being developed as a residential subdivision unrelated to the Project. Therefore, the Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use and a less than significant impact would occur.

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<sup>2</sup> California Department of Conservation. Important Farmland Categories. Accessed on November 29, 2022, <https://www.conservation.ca.gov/dlrp/fmmp/Pages/Important-Farmland-Categories.aspx>

<sup>3</sup> California Department of Conservation. (2018). California Important Farmland Finder. Accessed on November 29, 2022, <https://maps.conservation.ca.gov/DLRP/CIFF/>



*b) Conflict with existing zoning for agricultural use or a Williamson Act contract?*

**Less than Significant Impact.** The Project site is not zoned for agricultural use nor is it under a Williamson Act contract. Properties surrounding the Project site to the north, south, east, and west are also not zoned for agricultural use nor are they under a Williamson Act contract. Therefore, the Project would not conflict with existing zoning for agricultural use, or a Williamson Act contract and a less than significant impact would occur.

*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))?*

**No Impact.** The Project site is not zoned for forest land (as defined in PRC Section 12220(g)), timberland (as defined in PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g)). In addition, parcels within a quarter mile radius are also not zoned for forest land, timberland, or timberland zoned Timberland Production. As a result, the Project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, forest land, timberland, or timberland zoned Timberland Production and no impact would occur.

*d) Result in the loss of forest land or conversion of forest land to non-forest use?*

**No Impact.** The Project site does not contain forest land. Therefore, implementation of the Project would therefore not result in the loss of forest land or conversion of forest land to non-forest use and no impact would occur.

*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?*

**Less than Significant Impact.** The Project site is located within the city limits of Fresno and is planned for residential uses. The Project site is generally surrounded by existing and planned residential uses. No agricultural or forestry resources are present on the site or surrounding properties within a quarter mile. Development of the site would not involve other changes in the existing environment that could result in conversion of farmland to non-agricultural uses or conversion of forest land to non-forest use. For these reasons, a less than significant impact would occur.

#### **4.2.3 Mitigation Measures**

None required.



### 4.3 AIR QUALITY

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan (e.g., by having potential emissions of regulated criterion pollutants which exceed the San Joaquin Valley Air Pollution Control Districts (SJVAPCD) adopted thresholds for these pollutants)?			X	
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?			X	
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

#### 4.3.1 Environmental Setting

The Project is located within the San Joaquin Valley Air Basin (SJVAB). The San Joaquin Valley Air Pollution Control District (SJVAPCD) regulates air quality in eight counties including: Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare. The SJVAPCD oversees the SJVAB.

Impacts on air quality result from emissions generated during short-term activities (construction) and long-term activities (operations). Construction-related emissions consist mainly of exhaust emissions (NOx and PM) from construction equipment and other mobile sources, and fugitive dust (PM) emissions from earth moving activities. Operational emissions are source specific and consist of permitted equipment and activities and non-permitted equipment and activities.

Air pollution in the SJVAB can be attributed to both human-related (anthropogenic) and natural (non-anthropogenic) activities that produce emissions. Air pollution from significant anthropogenic activities in the SJVAB includes a variety of industrial-based sources as well as on- and off-road mobile sources. Four main sources of air pollutant emissions in the SJVAB are motor vehicles, industrial plants, agricultural activities, and construction activities. All four of the major pollutant sources affect ambient air quality throughout the SJVAB. These sources, coupled with geographical and meteorological conditions unique to the area, stimulate the formation of unhealthy air. Air pollutants can remain in the atmosphere for long periods and can build to unhealthful levels when stagnant



conditions that are common in the San Joaquin Valley occur. Pollutants are transported downwind from urban areas with many emission sources which are also recirculated back to the urban areas.

Further, the SJVAB is in non-attainment for ozone, PM<sub>10</sub>, and PM<sub>2.5</sub>, which means that certain pollutants' exposure levels are often higher than the normal air quality requirements. Air quality standards have been set to protect public health, particularly the health of vulnerable people. Therefore, if the concentration of those contaminants exceeds the norm, some susceptible individuals in the population are likely to experience health effects. Concentration of the pollutant in the air, the length of time exposed and the individual's reaction are factors that affect the extent and nature of the health effects.

### *San Joaquin Valley Air Pollution Control District*

The SJVAPCD is the agency primarily responsible for ensuring that National Ambient Air Quality Standards (NAAQS) (per the U.S. Environmental Protection Agency (EPA)) and California Ambient Air Quality Standards (CAAQS) (per the California Air Resources Board) are not exceeded and that air quality conditions are maintained in the SJVAB, within which the Project is located. Responsibilities of the SJVAPCD include, but are not limited to, preparing plans for the attainment of ambient air quality standards, adopting and enforcing rules and regulations concerning sources of air pollution, issuing permits for stationary sources of air pollution, inspecting stationary sources of air pollution and responding to citizen complaints, monitoring ambient air quality and meteorological conditions, and implementing programs and regulations required by the Federal Clean Air Act (FCAA) and the California Clean Air Act (CCAA).

The SJVAPCD rules and regulations that may apply to projects that will occur during buildout of the project include but are not limited to the following:

***Rule 2010 – Permits Required.*** *The purpose of this rule is to require any person constructing, altering, replacing or operating any source operation which emits, may emit, or may reduce emissions to obtain an Authority to Construct or a Permit to Operate. This rule also explains the posting requirements for a Permit to Operate and the illegality of a person willfully altering, defacing, forging, counterfeiting or falsifying any Permit to Operate.*

***Rule 2201 – New and Modified Stationary Source Review Rule.*** *The purpose of this rule is to provide for the following:*

*The review of new and modified Stationary Sources of air pollution and to provide mechanisms including emission trade-offs by which Authorities to Construct such sources may be granted, without interfering with the attainment or maintenance of Ambient Air Quality Standards; and*

*No net increase in emissions above specified thresholds from new and modified Stationary Sources of all nonattainment pollutants and their precursors.*

***Rule 4001 – New Source Performance Standards.*** *This rule incorporates the New Source Performance Standards from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR).*

***Rule 4002 – National Emission Standards for Hazardous Air Pollutants.*** *This rule incorporates the National Emission Standards for Hazardous Air Pollutants from Part 61, Chapter I, Subchapter C, Title 40, Code of*



*Federal Regulations (CFR) and the National Emission Standards for Hazardous Air Pollutants for Source Categories from Part 63, Chapter I, Subchapter C, Title 40, Code of Federal Regulations (CFR).*

**Rule 4102 – Nuisance.** *The purpose of this rule is to protect the health and safety of the public and applies to any source operation that emits or may emit air contaminants or other materials.*

**Rule 4601 – Architectural Coatings.** *The purpose of this rule is to limit VOC emissions from architectural coatings. This rule specifies architectural coatings storage, cleanup, and labeling requirements.*

**Rule 4641 – Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations.** *The purpose of this rule is to limit VOC emissions from asphalt paving and maintenance operations. This rule applies to the manufacture and use of cutback asphalt, slow cure asphalt and emulsified asphalt for paving and maintenance operations.*

**Regulation VIII – Fugitive PM10 Prohibitions.** *The purpose of Regulation VIII (Fugitive PM10 Prohibitions) is to reduce ambient concentrations of fine particulate matter (PM10) by requiring actions to prevent, reduce or mitigate anthropogenic fugitive dust emissions.*

**Rule 9510 – Indirect Source Review.** *The purposes of this rule are to:*

- 1. Fulfill the District’s emission reduction commitments in the PM10 and Ozone Attainment Plans.*
- 2. Achieve emission reductions from the construction and use of development projects through design features and on-site measures.*
- 3. Provide a mechanism for reducing emissions from the construction of and use of development projects through off-site measures.*

### **Fresno General Plan**

In regard to local measures and thresholds for air quality impacts, the Fresno General Plan Resource and Conservation Element outlines goals, objectives, and policies for addressing air quality. A sample of applicable goals and policies are as follows:

**Objective RC-4:** *In cooperation with other jurisdictions and agencies in the San Joaquin Valley Air Basin, take necessary actions to achieve and maintain compliance with State and federal air quality standards for criteria pollutants.*

**Policy RC-4-a: Support Regional Efforts.** *Support and lead, where appropriate, regional, State and federal programs and actions for the improvement of air quality, especially the SJVAPCD’s efforts to monitor and control air pollutants from both stationary and mobile sources and implement Reasonably Available Control Measures in the Ozone Attainment Plan.*

**Policy RC-4-b: Conditions of Approval.** *Develop and incorporate air quality maintenance requirements, compatible with Air Quality Attainment and Maintenance Plans, as conditions of approval for General Plan amendments, community plans, Specific Plans, neighborhood plans, Concept Plans, and development proposals.*



**Policy RC-4-c: Evaluate Impacts with Models.** Continue to require the use of computer models used by SJVAPCD to evaluate the air quality impacts of plans and projects that require such environmental review by the City.

### **Threshold of Significance**

To assist local jurisdictions in the evaluation of air quality impacts, the SJVAPCD has published the *Guide for Assessing and Mitigating Air Quality Impacts* (GAMAQI). SJVAPCD recommends a three-tiered approach to air quality analysis based on project size to allow quick screening for CEQA impacts:

1. **Small Project Analysis Level (SPAL):** based on the District’s New Source Review, the District pre-quantified emissions and determined values as thresholds of significance for criteria pollutants. Residential, commercial, retail, industrial, educational, and recreational land uses are eligible to use this for screening. The SPAL was published on November 13, 2020, by the SJVAPCD to determine potential impacts in GAMAQI.<sup>4</sup> SPAL is based on a CalEEMod version 2016.3.2.
2. **Cursory Analysis Level (CAL):** CAL is used to determine significance on projects that exceed the SPAL criteria. Analysis includes using CalEEMod to estimate emissions and air pollutants.
3. **Full Analysis Level (FAL):** this level of analysis is usually required for an EIR. It requires a full air quality report that describes impacts to the public.

GAMAQI also includes recommended thresholds of significance to be used for the evaluation of short-term construction, long-term operational, odor, toxic air contaminant, and cumulative air quality impacts. Accordingly, the SJVAPCD-recommended thresholds of significance are used to determine whether implementation of the proposed Project would result in a significant air quality impact. Projects that exceed these recommended thresholds would be considered to have a potentially significant impact to human health and welfare. The thresholds of significance are summarized, as follows:

### **Criteria Air Pollutants**

SJVAPCD adopted thresholds of significance for criteria air pollutants, as shown in **Table 4-1**. The thresholds of significance are based on a calendar year basis. For construction emissions, the annual emissions are evaluated on a rolling 12-month period. The following summarizes these thresholds:

**Short-Term Emissions of Particulate Matter (PM<sub>10</sub>):** Construction impacts associated with the proposed Project would be considered significant if the feasible control measures for construction in compliance with Regulation VIII as listed in the SJVAPCD guidelines are not incorporated or implemented, or if project-generated emissions would exceed 15 tons per year (TPY).

**Short-Term Emissions of Ozone Precursors (ROG and NOX):** Construction impacts associated with the proposed Project would be considered significant if the project generates emissions of Reactive Organic Gases (ROG) or NO<sub>x</sub> that exceeds 10 TPY.

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<sup>4</sup> San Joaquin Valley Air Pollution Control District. (2020). “Small Project Analysis Levels (SPAL)”. Accessed on February 17, 2023: <https://www.valleyair.org/transportation/CEQA%20Rules/GAMAQI-SPAL.PDF>





**Long-Term Emissions of Particulate Matter (PM<sub>10</sub>):** Operational impacts associated with the proposed Project would be considered significant if the project generates emissions of PM<sub>10</sub> that exceed 15 TPY.

**Long-Term Emissions of Ozone Precursors (ROG and NOX):** Operational impacts associated with the proposed Project would be considered significant if the project generates emissions of ROG or NOX that exceeds 10 TPY.

**Table 4-1 SJVAPCD Recommended Air Quality Thresholds of Significance.<sup>5</sup>**

Pollutant	Significance Threshold	
	Construction Emissions (tons/year)	Operational Emission (tons/year)
CO	100	100
NO <sub>x</sub>	10	10
ROG	10	10
SO <sub>x</sub>	27	27
PM <sub>10</sub>	15	15
PM <sub>2.5</sub>	15	15

**Conflict with or Obstruct Implementation of Applicable Air Quality Plan**

Air Quality Plans (AQPs) are plans for reaching the attainment of air quality standards. The applicable AQP for the SJVAB is the GAMAQI. Due to the region’s nonattainment status for ozone, PM<sub>2.5</sub>, and PM<sub>10</sub>, if the Project-generated emissions of either of the ozone precursor pollutants (i.e., ROG and NO<sub>x</sub>) or PM<sub>10</sub> would exceed the SJVAPCD’s significance thresholds, then the Project would be considered to be conflicting with the AQP. In addition, if the Project would result in a change in land use and corresponding increases in vehicle miles traveled, the Project may result in an increase in vehicle miles traveled that is unaccounted for in regional emissions inventories contained in regional air quality control plans. Vehicle Miles Traveled are analyzed in **Section 4.17**.

**Local Mobile-Source CO Concentrations**

Local mobile source impacts associated with the proposed Project would be considered significant if the project contributes to CO concentrations at receptor locations in excess of the CAAQS (i.e., 9.0 ppm for 8 hours or 20 ppm for 1 hour).

**Toxic Air Contaminants**

Exposure to toxic air contaminants (TAC) would be considered significant if the probability of contracting cancer for the Maximally Exposed Individual (i.e., maximum individual risk) would exceed 10 in 1 million or would result in a Hazard Index greater than one (1).

As recommended by the SJVAPCD, the latest approved California Air Pollution Control Officer’s Association (CAPCOA) methodology was utilized as the TAC screening methodology. According to the CAPCOA Guidance Document titled “Health Risk Assessments for Proposed Land Use Projects,” there are two types of land use project that have the potential to cause long-term public health risk impacts. These project types are as follows:

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<sup>5</sup> SJVAPCD. (2015). Guidance for Assessing and Mitigating Air Quality Impacts. Accessed on November 29, 2022, <https://www.valleyair.org/transportation/GAMAQI-2015/FINAL-DRAFT-GAMAQI.PDF>



- *Type A: Land use projects with toxic emissions that impact receptors, and*
- *Type B: Land use project that will place receptors in the vicinity of existing toxics sources.*

In this Guidance document, Type A projects examples are (project impacts receptors):

- *combustion related power plants,*
- *gasoline dispensing facilities,*
- *asphalt batch plants,*
- *warehouse distribution centers,*
- *quarry operations, and*
- *other stationary sources that emit toxic substances.*

### Odor

The intensity of an odor source's operations and its proximity to sensitive receptors influences the potential significance of odor emissions. Specific land uses that are considered sources of undesirable odors include landfills, transfer stations, composting facilities, sewage treatment plants, wastewater pump stations, asphalt batch plants and rendering plants. The SJVAPCD has identified these common types of facilities that have been known to produce odors in the SJVAB and has prepared screening levels for potential odor sources ranging from one to two miles of distance from the odor-producing facility to sensitive receptors. Odor impacts would be considered significant if the project has the potential to frequently expose members of the public to objectionable odors.

### Ambient Air Quality

The SJVAPCD applies the following guidance in determining whether an ambient air quality analysis should be performed: when assessing the significance of project-related impacts on air quality, it should be noted that the impacts may be significant when on-site emission increases from construction activities or operational activities exceed the 100 pounds per day screening level of any criteria pollutant after implementation of all enforceable mitigation measures. Under such circumstances, the SJVAPCD recommends that an ambient air quality analysis be performed.

### Small Project Analysis Level

The SPAL identifies pre-quantified emissions and determined values related to project type, size, and number of vehicle trips. According to the SPAL, projects that fit specified descriptions are deemed to have a less than significant impact on air quality and as such are excluded from quantifying criteria pollutant emissions for CEQA purposes.

#### **4.3.2 Impact Assessment**

***Would the project:***

- Conflict with or obstruct implementation of the applicable air quality plan (e.g., by having potential emissions of regulated criterion pollutants which exceed the San Joaquin Valley Air Pollution Control Districts (SJVAPCD) adopted thresholds for these pollutants)?***

**Less than Significant Impact.** The Project would not conflict with the applicable air quality plan if the Project does not exceed the adopted quantitative thresholds for criteria pollutant emissions that are established in the GAMAQI, as demonstrated in the **Thresholds of Significance** above. As stated above, the SJVAPCD recommends a three-tiered approach to analyze projects for significant impacts on air quality. The first tier is the Small Project Analysis Level



(SPAL), which adopts a threshold of significance according to the use type, size, and number of vehicle trips of a project. As demonstrated below, the proposed Project would not have any significant effects relating to air quality pursuant to SPAL.

Based on the Project description, the most applicable land use type for the proposed Project is the apartment (low rise, 2-3 floors). The corresponding threshold for this land use compared to the Project is shown in **Table 4-2**. As shown, the Project is below all thresholds and therefore, the Project is assumed to result in air quality impacts that are below the identified thresholds of significance and thus, a less than significant impact would occur.

**Table 4-2 SPAL Significance Thresholds**

	SPAL Threshold	Proposed Project	Below Threshold?
Size/Unit	224 dwelling units	64 dwelling units	<u>Yes</u>
Average Daily One-way Trips for All Fleet Types (Except Heavy-Heavy Duty Trucks (HHDT))	800	431	<u>Yes</u>
Average Daily One-way for HHDT trips only (50-mile trip length)	15	0	<u>Yes</u>
<b>Note:</b> Trip generation is calculated using average rate of vehicle trip generation per dwelling unit, 6.74, as provided in the Trip Generation Manual 11 <sup>th</sup> Edition for ITE 220, Multifamily Housing (Low-Rise) Not Close to Rail Transit. Trip generation and VMT are further described in <b>Section 4.17</b> .			

**b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?**

**Less than Significant Impact.** The SJVAB is in non-attainment for ozone, PM10, and PM2.5, which means that certain pollutants' exposure levels are often higher than the normal air quality requirements. The requirements have been set to protect public health, particularly the health of vulnerable populations. Therefore, if the concentration of those contaminants exceeds the norm, some susceptible individuals in the population are likely to experience health effects. Concentration of the pollutant in the air, the length of time exposed and the individual's reaction are factors that affect the extent and nature of the health effects as analyzed in criterion a) above, the Project would have a less than significant impact on air quality and are excluded from quantifying criteria pollutant emissions for CEQA purposes. Therefore, the Project would not result in significant cumulative health impacts because the emissions are not at a level that would be considered cumulatively significant. As such, the Project would have a less than significant impact.

**c) Expose sensitive receptors to substantial pollutant concentrations?**

**Less than Significant Impact.** Sensitive receptors are defined as people that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptors include schools, parks and playgrounds, day care centers, nursing homes, hospitals, and residential dwelling units. The nearest sensitive receptors to the Project site are single-family residences located approximately 20 feet north of the site, 45 feet east of the site, 90 feet west of the site, and 400 feet south of the site. As stated in **Thresholds of Significance** above, project-related impacts on air quality are considered significant when on-site emission increases from construction activities or operational activities exceed the 100 pounds per day screening level of any criteria pollutant after implementation of all enforceable mitigation measures. Under such circumstances, the SJVAPCD recommends that an ambient air quality



analysis be performed. As described in criterion a), the Project is below all SPAL thresholds and therefore, the Project is assumed to result in air quality impacts that are below the identified thresholds of significance for both operations and construction and thus, a less than significant impact would occur. Since the Project does not exceed the applicable SPAL thresholds, the Project's potential to expose sensitive receptors to substantial pollutant concentrations would be less than significant.

Further, anticipated development that would result from Project implementation would not be uses that would generate toxic emissions (i.e., Type A uses identified by the CAPCOA guidelines). Although emissions would be emitted during construction of the site (i.e., through diesel fuel and exhaust from equipment), emissions would be temporary and last only during construction activities. In addition, construction activities would be required to comply with all rules and regulations administered by the SJVAPCD including but not limited to Rule 9510 (Indirect Source Review), Regulation VIII (Fugitive PM<sub>10</sub> Prohibitions), Rule 2010 (Permits Required), Rule 2201 (New and Modified Stationary Source Review), Rule 4402 (Nuisance), Rule 4601 (Architectural Coatings), and Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations). Impacts would be less than significant.

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

**Less than Significant Impact.** Specific land uses that are considered sources of undesirable odors include landfills, transfer stations, composting facilities, sewage treatment plants, wastewater pump stations, asphalt batch plants and rendering plants. The Project would not consist of such land uses; rather, implementation of the proposed Project would facilitate future residential development, and thus is unlikely to produce odors that would be considered to adversely affect a substantial number of people. Further, there are no major odor-generating sources within one to two miles of the Project (e.g., sanitary landfill, transfer station, composting facility, food processing facility, etc.). Although some odors may be emitted during construction of the site (i.e., through diesel fuel and exhaust from equipment), these odors would be temporary and last only during construction activities. For these reasons, any odor impacts associated with the Project would be less than significant.

**4.3.3 Mitigation Measures**

None required.



**4.4 BIOLOGICAL RESOURCES**

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?		X		
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?		X		
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?				X
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?				X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.				X



#### **4.4.1 Environmental Setting**

The Project site as it currently exists is developed, containing existing structures and on- and off-site improvements including drive approaches, curb, gutter, and overhead utilities along North Armstrong Avenue. There are approximately five existing structures including a 1,918-square foot single-family residence (built circa 1962), garage, and storage sheds. In recent years, the site has been operated as a retail nursery and contains rows of plants for retail sale. The topography of the site is generally flat, as the majority of the site was previously graded and paved for the existing structures and previous retail nursery operations.

The existing biotic conditions of the Project site can be defined as urbanized and heavily disturbed. There are trees, shrubs, and herbaceous vegetation surrounding the existing single-family residence and the northern, southern, and eastern site boundary. Grasses that are periodically mowed are located adjacent to the single-family residence. There are also no water features present, except for water that pools in low spots in gravel areas on the site following storm events.

Precision Civil Engineering conducted a site visit to the Project site on March 4, 2023. Based on the visit, the site is highly disturbed, with the majority of site being developed with structures, paved, or containing gravel ground cover. Photos from the site visit are provided on the following pages.





**Figure 4-1 Southwest Corner of Project Site Looking North**  
*Source: Photo by Precision Civil Engineer, Inc., on March 4, 2023*





**Figure 4-2 Middle of the Project Site Looking East**  
*Source: Photo by Precision Civil Engineer, Inc., on March 4, 2023*





**Figure 4-3 South Side of the Project Site Looking West**  
*Source: Photo by Precision Civil Engineer, Inc., on March 4, 2023*





**Figure 4-4 Middle of the Project Site Looking East**  
*Source: Photo by Precision Civil Engineer, Inc., on March 4, 2023*





**Figure 4-5 Northwest Driveway of the Project Site Looking West**  
*Source: Photo by Precision Civil Engineer, Inc., on March 4, 2023*





### *U.S. Fish and Wildlife – Special-Status Species Database*

The U.S. Fish and Wildlife Service (USFWS) operates an “Information for Planning and Consultation” (IPaC) database, which is a project planning tool for the environmental review process that provides general information on the location of special-status species that are “known” or “expected” to occur (**note:** the database does not provide occurrences; refer to the California Department of Fish and Wildlife – Natural Diversity Database below). Specifically, the database identifies 40 endangered species, 13 critical habitats, and 27 migratory birds that are potentially affected in Fresno County.<sup>6</sup> The database identified 16 endangered species, no critical habitats, and 16 migratory birds in the City of Fresno.

### *U.S. Fish and Wildlife – Critical Habitat Report*

Once a species is listed under the federal Endangered Species Act, NOAA Fisheries is required to determine whether there are areas that meet the definition of Critical Habitat. Per NOAA Fisheries, Critical Habitat is defined as:

- *Specific areas within the geographical area occupied by the species at the time of listing that contain physical or biological features essential to conservation of the species and that may require special management considerations or protection; and*
- *Specific areas outside the geographical area occupied by the species if the agency determines that the area itself is essential for conservation.*<sup>7</sup>

The process of Critical Habitat designation is complex and involves the consideration of scientific data, public and peer review, economic, national security, and other relevant impacts. According to the Critical Habitat for Threatened & Endangered Species Report updated December 10, 2021, the Project site and its immediate vicinity (0.5-mile radius from the site) are not located within a federally designated Critical Habitat.<sup>8</sup> The closest federally designated Critical Habitat is located approximately 5.8 miles northeast of the Project site for fleshy owl’s-clover (*Castilleja campestris* ssp. *succulenta*).

### *U.S. Fish & Wildlife Service – National Wetlands Inventory*

The USFWS provides a National Wetlands Inventory (NWI) with detailed information on the abundance, characteristics, and distribution of U.S. wetlands. A search of the NWI shows no federally protected wetlands (including but not limited to marsh, vernal pool, coastal, etc.) on the Project site or within the immediate vicinity (0.5-mile radius) of the Project site.<sup>9</sup> The NWI does not identify any water features within the Project site. The closest water feature identified is a R5UBFx riverine habitat running along the west side of North Armstrong Avenue, approximately 0.02 miles west of the Project site. R5UBFx indicates

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<sup>6</sup> U.S. fish and Wildlife Service. Information and Planning Consultation Online System. Accessed on February 17, 2023, <https://ecos.fws.gov/ipac/>

<sup>7</sup> NOAA Fisheries. Critical Habitat. Accessed on February 17, 2023, <https://www.fisheries.noaa.gov/national/endangered-species-conservation/critical-habitat#key-regulations>

<sup>8</sup> U.S. Fish & Wildlife. (2021). ECOS Environmental Conservation Online System - USFWS Threatened & Endangered Species Active Critical Habitat Report (updated December 10, 2021). Accessed on November 29, 2022, <https://ecos.fws.gov/ecp/report/table/critical-habitat.html>

<sup>9</sup> U.S. Fish & Wildlife Service. National Wetlands Inventory. Accessed October 12, 2022, <https://www.fws.gov/wetlands/data/Mapper.html>



Riverine System (R) of a unknown perennial (5) with an unconsolidated bottom (UB) that is semi-permanently flooded (F) and has been excavated by humans (x) (i.e., possibly a canal). Additionally, the Project site is not within or adjacent to a riparian area nor does the site contain water features.

**Environmental Protection Agency – WATERS Geoviewer**

The U.S. Environmental Protection Agency (EPA) WATERS GeoViewer provides a GeoPlatform based web mapping application of water features by location. According to the WATERS GeoViewer, there are no surface water features (i.e., streams, canals, waterbodies, coastlines, catchments) within the Project site.<sup>10</sup>

**California Department of Fish and Wildlife – Natural Diversity Database**

The California Department of Fish and Wildlife (CDFW) operates the California Natural Diversity Database (CNDDDB), which is an inventory of the status and locations of rare plants and animals in California in addition to the reported occurrences of such species.<sup>11</sup> According to the CDFW CNDDDB, there are 23 special-status species with a total of 32 occurrences that have been observed and reported to the CDFW in or near the Clovis Quad as designated by the United States Geological Survey (USGS). Of the 23 species, there are nine (9) federally or state-listed species: tricolored blackbird, California tiger salamander, vernal pool fairy shrimp, Swainson’s hawk, California jewelflower, western yellow-billed cuckoo, Greene’s tuctoria, least Bell’s vireo, and crotch bumble bee (state candidate endangered).<sup>12</sup> **Appendix B** lists the CNDDDB-identified animal and plant species within the Salinas Quad, including their habitat and occurrences.

The CNDDDB also provides CNDDDB-known occurrences within a set geographic radius. **Figure 4-6** shows the CNDDDB-identified occurrences of animal and plant species within the five (5)-mile radius of the Project site. **Table 4-3** lists all federally or state-listed special-status species CNDDDB-known occurrences within the five (5)-mile radius of the Project site, organized by distance to the site. As shown, the two (2) occurrences that are not eradicated are the vernal pool fairy shrimp approximately 3.5 miles northeast of the site, dated 1993, and the tricolored blackbird approximately 4.9 miles northwest of the site, dated 1975. Other species that are not federally or state-listed that are near the Project site include burrowing owl, American badger, double-crested cormorant, Sanford's arrowhead, California linderiella. Several occurrences are listed as extirpated or possibly extirpated, meaning that the habitat has been destructed or that the element has been searched but not seen for many years. **Table 4-4** provides an analysis of essential habitats and the potential for the existence of the special-status species to exist on the Project site.

**Table 4-3 Special-Status Species Occurrences within 5-mile radius of Project site**

Species	Date	Rank	Distance to site
vernal pool fairy shrimp	3/12/1993	Unknown	3.5 miles northeast
tricolored blackbird	4/9/1975	Unknown	4.9 miles northwest

*Only federally or state-listed threatened/endangered species are listed in the table.  
 Extirpated or possible extirpated occurrences are not shown in the table.*

<sup>10</sup> U.S. Environmental Protection Agency. WATERS GeoViewer. Accessed October 12, 2022, <https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=074cfede236341b6a1e03779c2bd0692>

<sup>11</sup> California Department of Fish and Wildlife. California Natural Diversity Database. Accessed October 12, 2022, <https://wildlife.ca.gov/Data/CNDDDB>

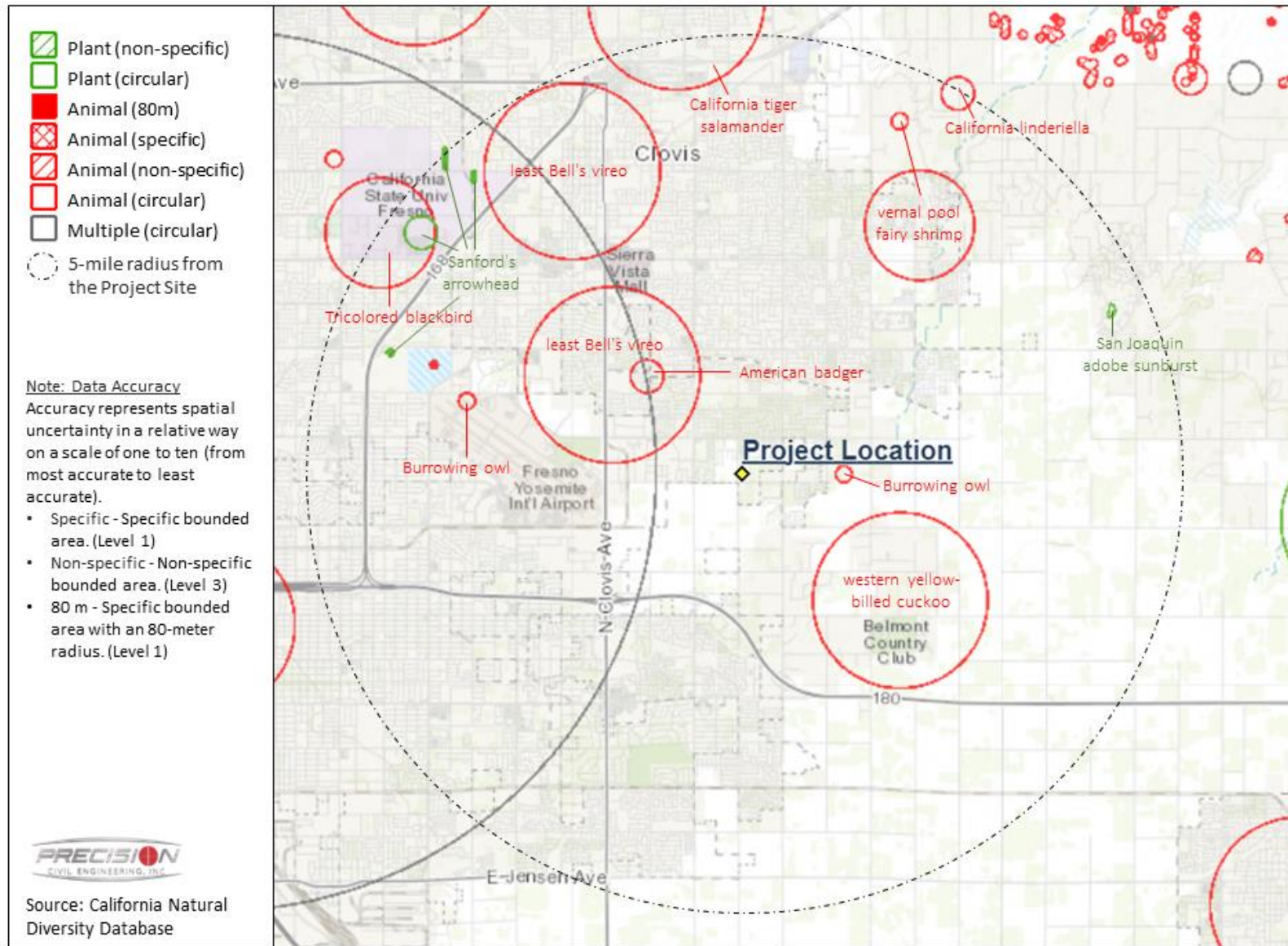
<sup>12</sup> California Department of Fish and Wildlife. Biogeographic Information and Observation System. Accessed January 16, 2023, <https://apps.wildlife.ca.gov/bios/?tool=cnddbQuick>



**Table 4-4 Essential Habitats and Potential Existence of Special-Status Species on Site**

Special-Status Species	General Habitat	Micro Habitat	Assessment
vernal pool fairy shrimp	Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools.	Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	The Project site is fully developed and surrounded by development and graded vacant land. The site does not contain any waterbodies. As such, the site does not provide suitable habitat.
tricolored blackbird	Highly colonial species, most numerous in central valley and vicinity. Largely endemic to California.	Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.	The Project site is fully developed and surrounded by development and graded vacant land. The site does not contain any open water. As such, the site does not provide suitable habitat.





CITY OF FRESNO – General Plan Amendment/Rezone/Development Permit No. P22-02376

Created 1/16/2023

Figure 4-6 CNDDDB Species Occurrences



### *California Fish and Game Code*

Sections 3503, 3503.5, and 3513 of the California Fish and Game Code specifically protect native birds and raptors. Mitigation for avoidance of impacts to nesting birds is typically necessary to comply with these Sections of the Fish and Game Code in CEQA.<sup>13</sup>

**Section 3503:** *It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto.*

**Section 3503.5:** *It is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.*

**Section 3513:** *It is unlawful to take or possess any migratory nongame bird as designated in the Migratory Bird Treaty Act or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Treaty Act.*

### *Recovery Plan for Upland Species of the San Joaquin Valley*

The Recovery Plan for Upland Species of the San Joaquin Valley covers 34 species of plants and animals that occur in the San Joaquin Valley of California including but not limited to blunt-nosed leopard lizard, riparian brush rabbit, Tipton kangaroo rat, San Joaquin Kit Fox, San Joaquin Woolly Threads, etc. . The majority of the species occur in arid grasslands and scrublands of the San Joaquin Valley and adjacent foothills and valleys. The Plan presents an ecosystem approach to recovery and a community-level strategy for recovery for the identified species.

### *PG&E San Joaquin Valley Operation and Maintenance Habitat Conservation Plan*

The PG&E San Joaquin Valley Operation and Maintenance Habitat Conservation Plan covers PG&E's routine operations and maintenance activities and minor new construction, on any PG&E gas and electrical transmission and distribution facilities, easements, private access routes, or lands owned by PG&E.<sup>14</sup> There are no PG&E transmissions, distribution facilities, easements, or private access routes on the Project site, nor does PG&E own any portion of the site. Any development that impacts existing overhead utilities would be subject to review and approval by PG&E.

### *Fresno General Plan*

According to the Fresno General Plan, the Fresno General Plan Planning Area contains 11 vegetation communities, two special-status natural communities, and 29 special-status species (including 12 plant species and 17 wildlife species). The General Plan identifies objectives and policies regarding the preservation and conservation of wildlife species; however, the objectives and policies are applicable to the San Joaquin River Corridor. Since the Project is not located in the San Joaquin River Corridor, the Project would not be subject to the objectives and policies.

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<sup>13</sup> The California Biologist's Handbook. California Fish and Game Code. Accessed on October 12, 2022, <https://biologistshandbook.com/regulations/state-regulations/state-fish-and-game-code/#:~:text=Section%203503,any%20regulation%20made%20pursuant%20thereto.%E2%80%9D>

<sup>14</sup> PG&E. "Habitat Conservation Plans." Accessed September 12, 2022, [https://www.pge.com/en\\_US/about-pge/environment/what-we-are-doing/promoting-stewardship/habitat-conservation-plan.page](https://www.pge.com/en_US/about-pge/environment/what-we-are-doing/promoting-stewardship/habitat-conservation-plan.page)



### *Fresno Municipal Code*

FMC **Article 3 – Street Trees and Parkways** contains specific policies and regulations for the beautification (FMC **Section 13-304**), preservation, and maintenance (**Section 13-305**) of trees in public property. Any development that would result in the planting, preservation, or removal of street trees would be subject to the regulations contained in this Article.

#### **4.4.2 Impact Assessment**

**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 Wildlife or the U.S. Fish and Wildlife Service?*

**Less than Significant Impact.** The Project site is previously developed, has undergone significant disturbance, and is not suitable to support the habitat of special status species. As noted above, the site is highly disturbed, with the majority of site being developed with structures, paved, or containing gravel ground cover. The only trees on the site are ornamental palms and three deciduous trees near the existing house and structures, which are bare. The larger trees on the east side of the property are located on the adjacent property to the east and will not be disturbed. The only other vegetation on the site can be categorized as weeds, and is very limited as most of the ground is paved or contains gravel.

Further, as noted in the **Environmental Setting** above, there are no recorded occurrences of special-status or critical habitats on the Project site or within the immediate vicinity of the Project. In addition to this, based on the site visit, as noted above, the Project site does not contain suitable habitat for any species identified as a candidate, sensitive, or special status species because of the highly disturbed nature of the site. Therefore, the Project would not result in a substantial adverse effect on any candidate, sensitive, or special status species. As a result, a less than significant impact would occur.

- b) *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?*

**Less than Significant Impact.** According to the Fresno General Plan, California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, there are no known riparian habitats or other sensitive natural communities identified on the Project site or within the immediate vicinity. Further, the site is heavily impacted and does not provide suitable habitat. For these reasons, the Project would not result in substantial effect on any riparian habitat or other sensitive natural community and a less than significant impact would occur.

- 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?*

**No Impact.** A search of the National Wetlands Inventory shows no federally protected wetlands (including but not limited to marsh, vernal pool, coastal, etc.) on or immediately adjacent to the Project site. Typically, the primary wetland indicators include hydrophytic vegetation, hydric soils, and surface hydrology. The on-site topography consists of previously developed land with no water features, including ponds or standing water. The site comprises the following soil types, which are subject to low frequency of flooding and ponding: *Rc – Ramona loam (no flooding,*



*no ponding*) and *Re – Ramona loam, hard substratum (no flooding, no ponding)*.<sup>15</sup> Lastly, the site is designated as Zone X on the most recent FEMA Flood Insurance Rate Map (FIRM) No. 06019C1595H dated 2/18/2009.<sup>16</sup> Zone X is an area of minimal flood hazards with a 0.2 percent-annual-chance of flood (i.e., 500-year flood). Therefore, the Project would not result in a substantial effect on state- or federally protected wetlands. No impact would occur.

*d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

**No Impact.** As previously discussed in criterion a), the Project site does not contain habitat that could support wildlife species in nesting, foraging, or escaping from predators due to the site’s heavy alteration and lack of cover, vegetation, or water features. Therefore, the Project would not interfere with wildlife movement and no impact would occur.

*e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

**Less than Significant Impact.** Since the Project is not located in the San Joaquin River Corridor, the Project would not be subject to the preservation and conservation objectives and policies contained in the Fresno General Plan. If the Project would result in the planting, preservation, or removal of street trees along North Armstrong Avenue, it would be subject to FMC **Section 13-304** and FMC **Section 13-305**. The entitlement review process would ensure compliance with the City’s tree preservation policy. Through required compliance, the Project would not conflict with any local policies or ordinances protecting biological resources and a less than significant impact would occur.

*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?*

**No Impact.** The Project site is within the PG&E San Joaquin Valley Operation and Maintenance HCP Area. There are no PG&E transmissions, distribution facilities, easements, or private access routes on the Project site, nor does PG&E own any portion of the site. Therefore, the Project would not conflict or interfere with the HCP. The Project is also located in the planning area of the Recovery Plan for Upland Species of the San Joaquin Valley. The Project would not conflict with the Recovery Plan since the site does not provide suitable habitat for the upland species identified in the Recovery Plan because the Project does not contain grasslands or scrublands and is not adjacent to foothills. There are no other applicable local, regional, or state habitat or natural community conservation plans. Therefore, the Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. No impact would occur.

#### **4.4.3 Mitigation Measures**

None required.

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<sup>15</sup> United States Department of Agriculture Natural Resources Conservation Service. Web Soil Survey. Accessed on February 17, 2023, <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>

<sup>16</sup> FEMA. FEMA Flood Map Service Center. Accessed February 17, 2023, <https://msc.fema.gov/portal/home>



#### 4.5 CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?		X		
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?		X		
c) Disturb any human remains, including those interred outside of formal cemeteries?		X		

##### 4.5.1 Environmental Setting

Generally, the term ‘cultural resources’ describes property types such as prehistoric and historical archaeological sites, buildings, bridges, roadways, and tribal cultural resources. As defined by CEQA, historical resources include sites, structures, objects, or districts that may have historical, prehistoric, architectural, archaeological, cultural, or scientific importance.

The city of Fresno has one (1) National Historical Landmark and 31 individual properties listed on the National Register of Historic Places as of 2019, including the Fresno Memorial Auditorium, Old Fresno Water Tower, Thomas R. Meux Home, Tower Theatre, etc. There are 31 properties listed in the California Register of Historic Resources.

The City of Fresno adopted the Historic Preservation Ordinance in 1979 and maintains a Local Register of Historic Resources that includes places in the National Register, buildings, structures, objects, sites, and districts that have sufficient integrity and are significant in Fresno’s history. There are currently 277 individual properties listed on the Local Register of Historic Resources, including Fresno Buddhist Temple, Fresno Memorial Auditorium, and Helm Building.<sup>17</sup> In addition, Fresno also designates four official local historic districts: the Porter Tract, the Wilson Island, Chandler Airfield/Fresno Municipal Airport, and Huntington Boulevard. There are also six districts in Downtown and four districts in the Tower District that have been proposed as historic districts.<sup>18</sup>

##### California Native American Heritage Commission (NAHC)

A consultation list of tribes with traditional lands or cultural places located within Fresno County was requested and received from the California Native American Heritage Commission (NAHC) on February 16, 2023. The listed tribes include Big Sandy Rancheria of Western Mono Indians, Cold Springs Rancheria of Mono Indians, Dumna Wo-Wah

<sup>17</sup> City of Fresno. Historic Preservation Database. Accessed on February 17, 2023, <https://cityoffresno.maps.arcgis.com/apps/webappviewer/index.html?id=80d8d181234a46a6a102460db2e9a57a>

<sup>18</sup> City of Fresno. A Guide to Historic Architecture in Fresno, California. Accessed on February 17, 2023, <http://www.historicfresno.org/districts/index.htm>





Tribal Government, Kings River Choinumni Farm Tribe, North Fork Mono Tribe, North Valley Yokuts Tribe, Picayune Rancheria of Chukchansi Indians, Table Mountain Rancheria, Traditional Choinumni Tribe, Tule River Indian Tribe, and Wuksache Indian Tribe/Eshom Valley Band. The NAHC also conducted a Sacred Lands File (SFL) check which received negative results. NAHC correspondence letters are provided in [Appendix B](#).

### *AB 52 and SB 18 Tribal Consultation*

The City of Fresno conducted formal tribal consultation pursuant to AB 52 (Chapter 532, Statutes 2014) and SB 18 (Chapter 905, Statutes 2004) on February 24, 2023, to the aforementioned tribes. Consultation for AB 52 ends on March 27, 2023 and consultation for SB 18 ends on May 25, 2023. No responses have been received to-date.

### *California Historical Resource Information System Record Search*

The Southern San Joaquin Information Center (SSJIC) was requested to conduct a California Historical Resources Information System (CHRIS) Record Search for the Project site and surrounding “Project Area” (i.e., 1/2-mile radius from perimeter of Project site). Results of the CHRIS Record Search were provided on January 10, 2023 (Record Search File Number 22-481). Full results are provided in [Appendix B](#).

The CHRIS Record Searches generally review file information based on results of Class III pedestrian reconnaissance surveys of project sites conducted by qualified individuals or consultant firms which are required to be submitted, along with official state forms properly completed for each identified resource, to the Regional Archaeological Information Center. Guidelines for the format and content of all types of archaeological reports have been developed by the California Office of Historic Preservation, and reports will be reviewed by the regional information centers to determine whether they meet those requirements.

The results of the SJJIC CHRIS Record Search indicate:

- (1) There have been no previous cultural resource studies conducted within the Project Area. There have been four cultural resource studies conducted within the 1/2-mile radius: FR-01130, 03013, 03014, and 3016.
- (2) There are no recorded resources within the Project Area or 1/2-half mile radius, and it is not known if any exist there.
- (3) There are no recorded cultural resources within the Project Area or 1/2-mile radius that are listed in the National Register of Historic Places, the California Register of Historical Resources, the California Points of Historical Interest, California Inventory of Historic Resources, or the California State Historic Landmarks.

Further, the SJJIC provided the following comments and recommendations:

- (1) Prior to alternation or demolition of the existing structures, the structures should first be recorded and evaluated for historical significance by a qualified, professional consultant;
- (2) If any cultural resources were unearthed during ground disturbance activities, all work must halt in the area of the find and a qualified, professional consultant should be called out to assess the finding and make the appropriate mitigation recommendations;



- (3) Contact the NAHC for a list of Native American individuals/organizations that can assist with information regarding cultural resources, and consult the SLF.

### **Historic Evaluation**

The existing buildings that are slated for demolition were reviewed by Karana Hattersley-Drayton, M.A. A site visit was performed on February 4, 2023 by Ms. Drayton and a history research, including an interview with the current owner, was conducted on February 8, 2023. Results are provided in a Historic Review Report dated February 12, 2023 (See **Appendix B**) summarized below and incorporated herein. Overall, the Report concludes that the demolition of the existing buildings would not create a substantial adverse change to a historic resource.

- *There is no evidence that the existing structures are associated with significant historic events.*
- *There is no evidence that the existing structures are associated with persons of importance in local or regional history.*
- *All existing structures are typical mid-century rural buildings.*
- *There is no evidence that the buildings may yield information important in prehistory.*

#### **4.5.2 Impact Assessment**

**Would the project:**

- a) ***Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?***

**Less than Significant with Mitigation Incorporated.** Based on the CHRIS Records Search conducted on January 10, 2023, and Historic Review Report dated February 12, 2023, there are no known local, state, or federal designated historical resources on the Project site or within a 1/2-mile radius of the site. While there is no evidence that historical resources exist on the Project site, there is some possibility that hidden and buried resources may exist on the Project site with no surface evidence which would be potentially significant. Thus, to further assure construction activities do not result in significant impacts to any potential cultural resources discovered below ground surface, the Project shall incorporate *Mitigation Measure CUL-1*. If such resources were discovered, then implementation of the required mitigation measure would reduce the impact to less than significant. As a result, the Project would have a less than significant impact with mitigation incorporated.

***Mitigation Measure CUL-1:*** *If previously unknown resources are encountered before or during grading activities, construction shall stop in the immediate vicinity of the find and a qualified historical resources specialist shall be consulted to determine whether the resource requires further study. The qualified historical resources specialist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines and the City's Historic Preservation Ordinance. If the resources are determined to be unique historical resources as defined under Section 15064.5 of the CEQA Guidelines, measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds.*

*No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any historical artifacts recovered as a result of mitigation shall be provided to a City-*





*approved institution or person who is capable of providing long-term preservation to allow future scientific study. (PEIR Mitigation Measure CUL-1.1)*

**b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?**

**Less than Significant with Mitigation Incorporated.** Based on the CHRIS Records Search conducted on January 10, 2023, and Historic Review Report dated February 12, 2023, there is no evidence that cultural resources of any type (including historical, archaeological, paleontological, or unique geologic features) exist on the Project site. Nevertheless, there is some possibility that a non-visible, buried archeological resource may exist and may be uncovered during ground disturbing construction activities which would be potentially significant. To mitigate the event of the accidental discovery and recognition of previously unknown resources before or during grading activities, the Project incorporates *Mitigation Measure CUL-1* to reduce any potentially significant impacts to a less than significant impact.

**c) Disturb any human remains, including those interred outside of formal cemeteries?**

**Less than Significant with Mitigation Incorporated.** There is no evidence that human remains exist on the Project site. Nevertheless, there is some possibility that a non-visible buried site may exist and may be uncovered during ground disturbing construction activities which would constitute a significant impact. If any human remains are discovered during construction, CCR *Section 15064.5(e)*, PRC *Section 5097.98*, and California Health and Safety Code *Section 7050.5* will mitigate for the impacts. To further assure future construction activities do not result in significant impacts to any potential resources or human remains discovered below ground surface, the Project shall incorporate *Mitigation Measure CUL-2*. Therefore, if any human remains were discovered, implementation of this mitigation and referenced regulations would reduce the Project's impact to less than significant.

***Mitigation Measure CUL-2:*** *In the event that human remains are unearthed during excavation and grading activities of any future development project, all activity shall cease immediately. Pursuant to Health and Safety Code (HSC) Section 7050.5, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98(a). If the remains are determined to be of Native American descent, the coroner shall within 24 hours notify the Native American Heritage Commission (NAHC). The NAHC shall then contact the most likely descendent of the deceased Native American, who shall then serve as the consultant on how to proceed with the remains. Pursuant to PRC Section 5097.98(b), upon the discovery of Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendants regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment. (General Plan PEIR Mitigation Measures CUL-3)*

#### **4.5.3 Mitigation Measures**

The proposed project shall implement and incorporate, as applicable, the cultural resources related mitigation measures as identified in the attached Project Specific Mitigation Monitoring Checklist dated June 2023.



**Mitigation Measure CUL-1:** *If previously unknown resources are encountered before or during grading activities, construction shall stop in the immediate vicinity of the find and a qualified historical resources specialist shall be consulted to determine whether the resource requires further study. The qualified historical resources specialist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines and the City's Historic Preservation Ordinance. If the resources are determined to be unique historical resources as defined under Section 15064.5 of the CEQA Guidelines, measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds.*

*No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any historical artifacts recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study. (PEIR Mitigation Measure CUL-1.1)*

**Mitigation Measure CUL-2:** *In the event that human remains are unearthed during excavation and grading activities of any future development project, all activity shall cease immediately. Pursuant to Health and Safety Code (HSC) Section 7050.5, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98(a). If the remains are determined to be of Native American descent, the coroner shall within 24 hours notify the Native American Heritage Commission (NAHC). The NAHC shall then contact the most likely descendent of the deceased Native American, who shall then serve as the consultant on how to proceed with the remains. Pursuant to PRC Section 5097.98(b), upon the discovery of Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendants regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment. (General Plan PEIR Mitigation Measures CUL-3)*



## 4.6 ENERGY

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			X	

### 4.6.1 Environmental Setting

Appendix F of the CEQA Guidelines provides guidance in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy. According to Appendix F of the CEQA Guidelines, the goal of energy conservation implies the “wise and efficient use” of energy through 1) decreasing overall per capita energy consumption, 2) decreasing reliance on fossil fuels such as coal, natural gas, and oil, and 3) increasing reliance on renewable energy sources.

Per Appendix F, a project would be considered inefficient, wasteful, and unnecessary if it violated existing energy standards, had a negative effect on local and regional energy supplies and requirements for additional capacity, had a negative effect on peak and base period demands for electricity and other energy forms, and effected energy resources. Appendix F includes the following criteria to determine whether a threshold of significance is met:

1. *The project energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance and/or removal. If appropriate, the energy intensiveness of materials may be discussed.*
2. *The effects of the project on local and regional energy supplies and on requirements for additional capacity.*
3. *The effects of the project on peak and base period demands for electricity and other forms of energy.*
4. *The degree to which the project complies with existing energy standards.*
5. *The effects of the project on energy resources.*
6. *The project’s projected transportation energy use requirements and its overall use of efficient transportation alternatives.*

### **Building Energy Efficiency Standards – Title 24**

California’s energy code is designed to reduce wasteful and unnecessary energy consumption in newly constructed and existing buildings. The Building Energy Efficiency Standards (Title 24, Parts 6 and 11 of the California Code of Regulations) are updated by the California Energy Commission every three years. The Standards relate to various



energy efficiency measures including but not limited to ventilation, air conditioning, and lighting.<sup>19</sup> The 2022 Building Energy Efficiency Standards became effective in January 2023. The state’s “green building code” (i.e., CALGreen) is contained within the Building Energy Efficiency Standards, Title 24, Part 11. The CALGreen standards address environmental and sustainable practices during building construction including energy efficiency. CALGreen applies to the planning, design, operation, construction, use and occupancy of every newly constructed building or structure and additions and alterations on a statewide basis. Compliance with these energy efficiency regulations and programs reduces wasteful, inefficient, or unnecessary consumption of energy sources.

### **Fresno General Plan**

Energy resources and conservation are discussed in the Resource Conservation and Resilience Section of the Fresno General Plan. The following objectives and policies of the Fresno General Plan relate to energy resources and conservation of development in order to reduce community-wide energy consumption:

**Policy RC-2** *Promote land uses that conserve resources.*

**Policy RC-2-a Link Land Use to Transportation.** *Promote mixed-use, higher density infill development in multi-modal corridors. Support land use patterns that make more efficient use of the transportation system and plan future transportation investments in areas of higher-intensity development. Discourage investment in infrastructure that would not meet these criteria.*

**Policy RC-2-b Provide Infrastructure for Mixed-Use and Infill.** *Promote investment in the public infrastructure needed to allow mixed-use and denser infill development to occur in targeted locations, such as expanded water and wastewater conveyance systems, complete streetscapes, parks and open space amenities, and trails. Discourage investment in infrastructure that would not meet these criteria.*

**Objective RC-8** *Reduce the consumption of non-renewable energy resources by requiring and encouraging conservation measures and the use of alternative energy sources.*

**Policy RC-8-a Existing Standards and Programs.** *Continue existing beneficial energy conservation programs, including adhering to the California Energy Code in new construction and major renovations.*

**Policy RC-8-b Energy Reduction Targets.** *Strive to reduce per capita residential electricity use to 1,800 kWh per year and non-residential electricity use to 2,700 kWh per year per capita by developing and implementing incentives, design and operation standards, promoting alternative energy sources, and cost-effective savings.*

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<sup>19</sup> California Energy Commission. 2019 Building Energy Efficiency Standards. Accessed on December 9, 2022, <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency>



#### 4.6.2 Impact Assessment

##### 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?

**Less than Significant Impact.** The Project proposes the development of a 64-unit multi-family residential development. Energy would be consumed through Project construction and operations. Energy outputs for short-term construction and long-term operations were estimated using CalEEMod (**Appendix A**). Traffic impacts related to vehicle trips were considered through a Vehicle Miles Traveled (VMT) analysis contained in **Section 4.17**. Results are summarized as follows. Based on these data, the energy demand associated with the proposed Project would be less than one percent of Fresno County’s total demand (*Criterion 1*).

**Table 4-5 Project Energy Consumption**

Energy Type <sup>1</sup>	Project Annual Energy Consumption	Fresno County Annual Energy Consumption	Project Percentage of County Consumption
Electricity <sup>2</sup>	0.264 GWh	8,378 GWh	0.003
Natural Gas <sup>2</sup>	873.409 MMBTu	31,889,051 MMBTu	0.003
Fuel (Operations) <sup>3</sup>	6,870 gallons	532,000,000 gallons	<0.00001
<b>Notes:</b>			
1. Pacific Gas and Electric Company (PG&E) would serve the site for both electricity and natural gas. 2. Energy consumption data for Fresno County is provided by the California Energy Commission, “Electricity Consumption by County” accessed on December 9, 2022, <a href="http://ecdms.energy.ca.gov/elecbycounty.aspx">http://ecdms.energy.ca.gov/elecbycounty.aspx</a> and “Gas Consumption by County” accessed on December 9, 2022, <a href="https://ecdms.energy.ca.gov/gasbycounty.aspx">https://ecdms.energy.ca.gov/gasbycounty.aspx</a> 3. Fuel consumption accounts for the 22.9 miles per gallon Average Fuel Efficiency of U.S. Light Duty Vehicles as estimated by the U.S. Department of Transportation, Bureau of Transportation Statistics, accessed on February 24, 2023, <a href="https://www.bts.gov/content/average-fuel-efficiency-us-light-duty-vehicles">https://www.bts.gov/content/average-fuel-efficiency-us-light-duty-vehicles</a> . County fuel consumption was obtained from EMFAC2021.			

##### Construction

The primary source of energy for construction activities include fuel consumption from construction vehicles and equipment. The Project would be constructed in one phase. Construction is expected to begin in April 2023 and conclude in May 2024, with operations beginning in June 2024. Construction vehicles and equipment would be used during construction activities including demolition of existing structures, typical site preparation, grading, paving, architectural coating, and trenching. Fuel energy consumed during construction would be temporary and would not represent a significant demand on energy resources. Energy conservation would occur through compliance with current emissions standards and fuel efficiencies including CARB regulations (Airborne Toxic Control Measure) and CCR Title 13, Motor Vehicles. Regulations limit idling and require efficient combustion systems that reduce unnecessary fuel consumption. Compliance with existing regulations would ensure that the short-term, temporary construction activities would not result in wasteful, inefficient, or unnecessary consumption of energy resources consistent with *Criterion 4*.

##### Operations

Operations would involve heating, cooling, equipment, and vehicle trips. Energy consumption related to operations would be associated with building energy demand and fuel consumption as described further below.



As new construction, the Project would be required to meet all mandatory requirements for multi-family buildings as outlined in the 2022 Energy Code. Mandatory requirements apply to building envelopes, ventilation and indoor air quality, space conditioning systems, water heating systems, outdoor and indoor lighting, electric power distribution, covered process for pools, solar ready buildings, and electric ready buildings. As designed, the Project would exceed these requirements by two to seven percent; these Project design features are accounted for in **Table 4-5**. Compliance would be verified through the building permit process. Therefore, the Project would meet and exceed mandatory state building energy codes, which are designed to reduce wasteful, inefficient, or unnecessary consumption of energy sources, consistent with *Criterion 4*.

Energy consumption and peak demand for the state are forecasted in Volume IV – California Energy Demand Forecast of the CEC’s Integrated Energy Policy Report.<sup>20</sup> As shown in Figure 10 and Figure 4 of the Volume IV Report, the CEC forecasts a 1.3 to 2.3 percent annual average growth rate for electricity and a 0.1 to 0.9 percent annual average growth rate for natural gas between 2021 and 2030. The Project’s anticipated operational energy consumption for electricity and natural gas are shown in **Table 4-5**. The anticipated consumption would represent 0.003 percent based on Countywide usage, which would be significantly below CEC’s forecast. Therefore, the Project would not require additional energy capacity or supplies in accordance with *Criterion 2*. In addition, as a residential development the energy consumption can be expected to peak in the evening hours similar to other residential developments. Through compliance with energy conservation requirements under the 2022 Energy Code, the Project would not result in unique or more intensive peak or base period electricity demand in accordance with *Criterion 3*.

Furthermore, PG&E is subject to the state’s Renewable Portfolio Standard (RPS) which requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable resources to 33 percent of total procurement by 2020 to 60 percent of total procurement by 2030. The increase in reliance of renewable resources further ensures that the Project would not result in wasteful, inefficient, or unnecessary consumption of energy sources, consistent with *Criterion 5*.

Development of the Project site would also result in fuel consumption through vehicle trips. As summarized in **Table 4-5**, the Project would generate an estimated 157,315 trips per year (431 daily trips multiplied by 365 days), which would consume approximately 6,870 gallons of fuel per year (157,315 trips divided by 22.9 miles per gallon). This would account for less than one percent of diesel and gasoline consumed from vehicle trips in Fresno County. Therefore, energy usage associated with vehicle trips for the proposed Project would be minimal in comparison to the gasoline and diesel fuel consumption for the County. In addition, the Project does not propose any unusual features that would result in excessive long-term operational fuel consumption (*Criterion 2*). Further, annual energy use related to vehicles is expected to decrease over time as a result of vehicle fuel efficiency standards. In addition, the Project site would facilitate the redevelopment of a site within an urbanized area that is surrounded by existing urban uses, which has the potential to further reduce vehicle miles traveled due to the proximity to employment, shopping services, and transportation (See **Section 4.11**) in accordance with *Criterion 6*.

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<sup>20</sup> California Energy Commission. (2022). 2021 Integrated Energy Policy Report – Volume IV – California Energy Demand Forecast. Accessed on February 27, 2023, <https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2021-integrated-energy-policy-report>





Therefore, the Project would not cause wasteful, inefficient, and unnecessary consumption of building energy during project operation, or preempt future energy development or future energy conservation. A less than significant impact would occur.

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

**Less than Significant Impact.** As discussed above, the construction and operations of the Project would be subject to compliance with applicable energy efficiency regulations. As shown in **Table 4-6**, the Project is consistent with the applicable General Plan policies related to energy resources and conservation. Thus, applicable state and local regulations and programs would be implemented to reduce energy waste from construction and operations. Therefore, through compliance, the Project would not conflict with or obstruct any state or local plan for energy efficiency and a less than significant impact would occur.

**Table 4-6 Consistency with General Plan Energy Conservation Policies**

General Plan Energy Conservation Policies	Consistency/Applicability Determination
<p><b>Policy RC-2-a Link Land Use to Transportation.</b> Promote mixed-use, higher density infill development in multi-modal corridors. Support land use patterns that make more efficient use of the transportation system and plan future transportation investments in areas of higher-intensity development. Discourage investment in infrastructure that would not meet these criteria.</p>	<p><b>Consistent.</b> The Project proposes residential development at a higher density within the city limits. The Project is also developed in an infill site since the land was previously developed and the site is mostly surrounded by developed lands. Consequently, the site has existing infrastructure to serve the proposed development. In addition, there are five bus stops within a one-mile radius of the Project site.</p>
<p><b>Policy RC-2-b Provide Infrastructure for Mixed-Use and Infill.</b> Promote investment in the public infrastructure needed to allow mixed-use and denser infill development to occur in targeted locations, such as expanded water and wastewater conveyance systems, complete streetscapes, parks and open space amenities, and trails. Discourage investment in infrastructure that would not meet these criteria.</p>	<p><b>Consistent.</b> The proposed Project would develop an infill site with a 64-unit residential development. Since the site was previously developed with other uses, the site contains existing utility infrastructure including water, sewer, natural gas, and electricity. Therefore, the Project would not necessitate the expansion of infrastructure including water and wastewater conveyance systems. The Project Area also contains existing roadway infrastructure and would not require additional lanes. The Project would install improvements along North Armstrong Avenue including concrete curb, gutter, sidewalk, and paving per City of Fresno Public Works Standards. In addition, the Project would install landscaping along North Armstrong Avenue, which would enhance the streetscape consistent with the policy.</p>
<p><b>Policy RC-8-a Existing Standards and Programs.</b> Continue existing beneficial energy conservation programs, including adhering to the California Energy Code in new construction and major renovations.</p>	<p><b>Consistent.</b> The Project proposes the demolition of existing buildings and proposes new construction, which would be subject to adhering to the California Energy Code. Title 24 includes mandatory requirements for various building components including but not limited to: ventilation and indoor air quality, space-conditioning systems, pipe insulation, air distribution system, lighting systems and equipment, etc. Buildings whose permit applications are applied for on or after January 1, 2023, must comply with the 2022 Energy Code. Compliance with the 2022 Energy Code would be ensured through the Building Permit process. Therefore, development of</p>



	<p>the site would continue energy conservation programs that adhere to the California Energy Code and would be consistent with the policy.</p>
<p><b>Policy RC-8-b Energy Reduction Targets.</b> <i>Strive to reduce per capita residential electricity use to 1,800 kWh per year and non-residential electricity use to 2,700 kWh per year per capita by developing and implementing incentives, design and operation standards, promoting alternative energy sources, and cost-effective savings.</i></p>	<p><b>Consistent.</b> Estimated electricity was estimated for buildout of the Project using CalEEMod. It is estimated that the Project would lead to consumption of 0.264 GWh of electricity per year which is less than one percent of energy consumption for the County of Fresno Further, energy use would be limited to the greatest extent feasible through compliance with energy conservation policies and regulations including the California Building Code and Title 24. Through compliance, it is expected that annual energy use would decrease over time.</p>

**4.6.3 Mitigation Measures**

None required.



**4.7 GEOLOGY AND SOILS**

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Directly or Indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: <ul style="list-style-type: none"> <li>i. <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.</i></li> </ul>				X
<ul style="list-style-type: none"> <li>ii. <i>Strong seismic ground shaking?</i></li> </ul>			X	
<ul style="list-style-type: none"> <li>iii. <i>Seismic-related ground failure, including liquefaction?</i></li> </ul>			X	
<ul style="list-style-type: none"> <li>iv. <i>Landslides?</i></li> </ul>				X
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?				X



f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X	
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**4.7.1 Environmental Setting**

The Project site is in the San Joaquin Valley which is one of the two large valleys comprising the Great Valley Geomorphic Province. The San Joaquin Valley is surrounded by Sierra Nevada (east), Coast Ranges (west), Tehachapi (south), and the Sacramento Valley (north). The Fresno area is set on gently southwest-sloping alluvial fans and plans formed by the San Joaquin and Kings Rivers. A brief discussion of the likelihood of seismic activities to occur in or affect Fresno is provided below.

**Faulting**

There are no active faults mapped within the City of Fresno. The Project site is not located in an Alquist-Priolo Earthquake Fault Zone as established by the Alquist-Priolo Fault Zoning Act (Section 2622 of Chapter 7.5, Division 2 of the California Public Resources Code). The nearest fault to the Project site is the Clovis Fault, which is approximately 6.5 miles northeast of the site, which is a non-active fault. The nearest active faults include San Joaquin Fault (approximately 63 miles west), Round Valley Fault (approximately 69 miles northeast), Kings Canyon Fault (approximately 74 miles southeast), and the San Andreas Fault (approximately 74 miles southwest).<sup>21</sup>

**Subsurface Soils**

According to the Geologic Hazards Investigation for the 2025 Fresno General Plan, the uppermost soils in the Fresno area (i.e., 6-12 inches) comprise very loose silty sand, silty sand with trace clay, sandy silt, clayey sand, or clayey gravel. These soil types are disturbed, have low strength, and are highly compressible when saturated. Area soils between two to four feet below ground surface (bgs) range from loose/soft to very dense/hard clays, silts, sands, and gravels with the characteristics of moderately strong and moderately compressible. Three to five feet bgs soils are clays, silts, sands, and gravels that are moderately strong and slightly compressible. A search of the Web Soil Survey by the USDA Natural Resources Conservation Service indicates that the following soils comprise the Project site (Figure 4-7):<sup>22</sup>

*Rc: Ramona loam, 0 to 3 percent slopes, well drained, low runoff, with no potential of flooding or ponding. The depth to water table is more than 80 inches. The Rc soils account for 84.8% of the Project site.*

*Re: Ramona sandy loam, hard substratum, 0 to 2 percent slopes, well drained, low runoff, with no potential of flooding or ponding. The depth to water table is more than 80 inches. The Re soils account for 15.2% of the Project site.*

**Strong Ground Shaking**

According to Fresno General Plan Update PEIR (Appendix F: Geology and Soils), the Fresno area is subject to low to moderate ground shaking. In addition, the Fresno area is classified by FEMA Earthquake Hazard Maps as being in a

<sup>21</sup> California Department of Conservation. Fault Activity Map of California. Accessed on December 9, 2022, <https://maps.conservation.ca.gov/cgs/fam/>

<sup>22</sup> United States Department of Agriculture Natural Resources Conservation Service. “Web Soil Survey.” Accessed on December 9, 2022, <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>



moderate seismic risk zone, Category “C” or “D,” depending on the soils underlying the specific location being categorized and that location’s proximity to the nearest known fault lines.<sup>23</sup> The Owens Valley Earthquake of 1872 and the Coalinga Earthquake of 1982 generated ground shaking of intensity VII of the 12-point Modified Mercalli Intensity (MMI) scale. Intensity VII earthquakes result in negligible damage to buildings, slight to moderate in well-built structures, considerable damage in poorly built or badly designed structures, and some broken chimneys.<sup>24</sup> All new development is required to conform to current seismic protection standards in the California Building Code (CBC), which are intended to minimize potential risks.

### *Liquefaction*

Liquefaction is a seismic phenomenon in which loose, saturated, fine-grained granular soils behave similarly to a fluid when subjected to high-intensity ground shaking. The potential for liquefaction in the City of Fresno is low to moderate, per the Fresno County Multi-Hazard Mitigation Plan. There has been no observed liquefaction from any historic earthquake. Additionally, ground shaking, seismic settlement, and lateral spreading are not considered to be significant hazards due to the stable area soils as observed in the Geologic Hazards Investigation for the Fresno General Plan.

### *Erosion*

Wind and flowing water are the primary agents of erosion in the San Joaquin Valley. Two (2) types of areas with moderate to high erosion potential are identified by the Fresno County Multi-Hazard Mitigation Plan: soils in the Sierra Nevada and foothills on slopes over 30 percent and soils in the western San Joaquin Valley and Coast Ranges. According to the Fresno General Plan, the City of Fresno is not susceptible to soil erosion except for land within 300 feet of the toe of the San Joaquin River bluffs. However, the Project site is not a bluff area and is therefore not subject to the potential for moderate to high erosion.

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<sup>23</sup> Federal Emergency Management Agency. (2023). Earthquake Hazards Map. Accessed on May 3, 2023, <https://www.fema.gov/emergency-managers/risk-management/earthquake/hazard-maps>

<sup>24</sup> US Geological Survey (USGS), 2017. The Modified Mercalli Intensity Scale, Accessed on February 17, 2023, <https://www.usgs.gov/programs/earthquake-hazards/modified-mercalli-intensity-scale>



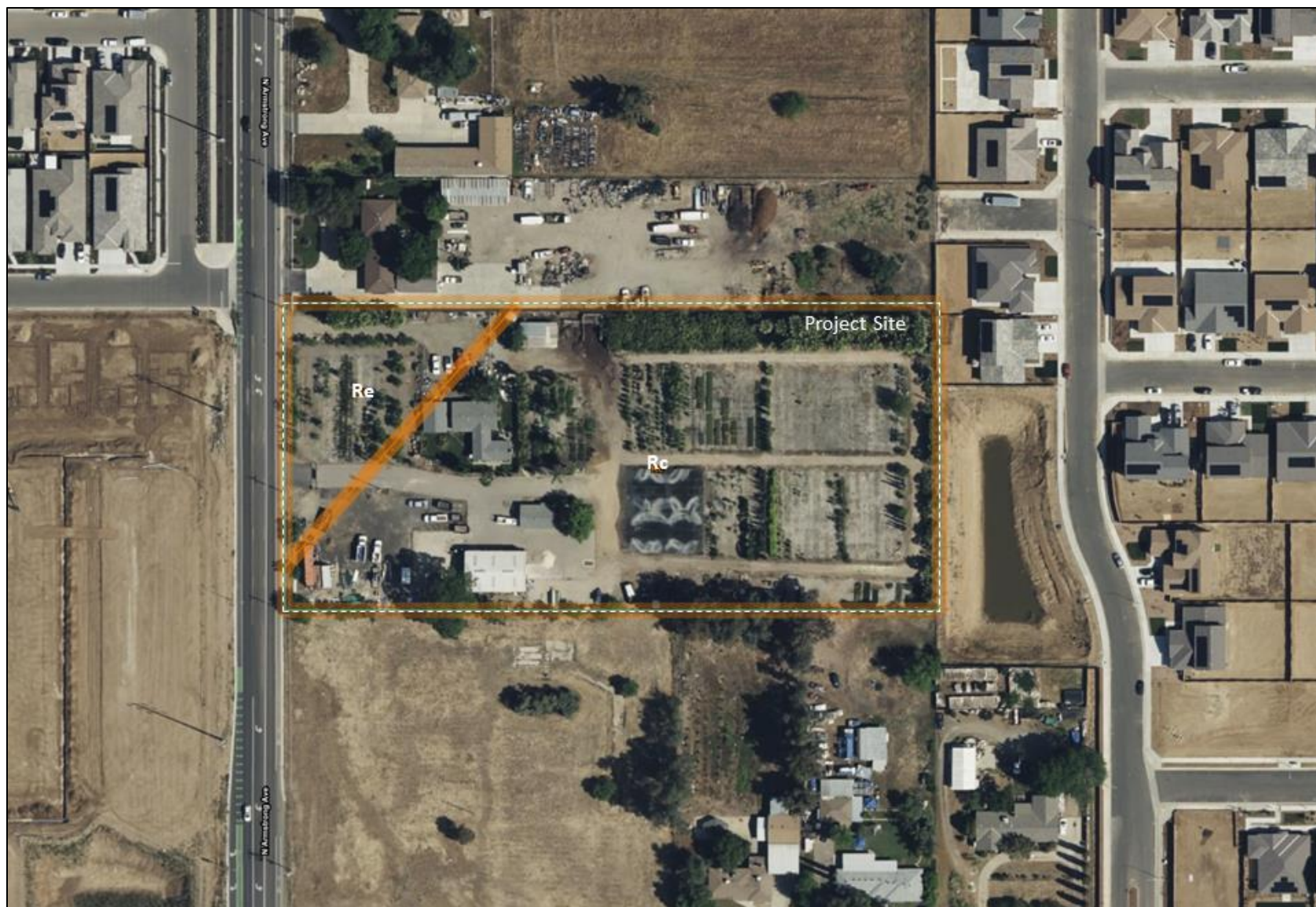


Figure 4-7 Soil Distribution Map

*Source: United States Department of Agriculture Natural Resources Conservation Service. "Web Soil Survey." Accessed on December 9, 2022*





### **Ground Subsidence**

Ground subsidence is the settling or sinking of surface soil deposits with little or no horizontal motion. Soils with high silt or clay content are subject to subsidence. While the County of Fresno identifies a significant hazard significance for subsidence due to heavy groundwater withdrawal, the City of Fresno is not known to be subject to subsidence hazards. Areas with potential for subsidence hazards are in western Fresno County as mapped in the Fresno County Multi-Hazard Mitigation Plan.

### **Fresno General Plan**

Geology and soils are discussed in the Noise and Safety Chapter of the Fresno General Plan. The following relevant policies of the Fresno General Plan:

**Policy NS-2** *Minimize risks of property damage and personal injury posed by geologic and seismic risks.*

**Policy NS-2-a Seismic Protection.** *Ensure seismic protection is incorporated into new and existing construction, consistent with the Fresno Municipal Code.*

**Policy NS-2-b Soil Analysis Requirement.** *Identify areas with potential geologic and/or soils hazards, and require development in these areas to conduct a soil analysis and mitigation plan by a registered civil engineer (or engineering geologist specializing in soil geology) prior to allowing on-site drainage or disposal for wastewater, stormwater runoff, or swimming pool/spa water.*

#### **4.7.2 Impact Assessment**

**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.*

**No Impact.** There are no known active earthquake faults in Fresno, inclusive of the Project site, nor is Fresno within an Alquist-Priolo earthquake fault zone as established by the Alquist-Priolo Fault Zoning Act. Thus, the Project would not cause rupture of a known earthquake fault and no impact would occur.

- ii. **Strong seismic ground shaking?**

**Less than Significant Impact.** The Project site is relatively flat and has stable, native soil and is not in proximity to any fault lines. In addition, the Project would be required to conform to current seismic construction standards in the CBC which are intended to minimize potential risks (e.g., the building code requires specific tests and inspections for masonry, wall anchors, and wall bolts to ensure that structures can adequately resist seismic forces during earthquakes). Therefore, because of the Project's stable soils and distance from active fault lines, and because of the Project's conformance to CBC seismic construction standards, the Project would have a less than significant impact.

- iii. **Seismic-related ground failure, including liquefaction?**



**Less than Significant Impact.** There are also no geologic hazards or unstable soil conditions known to exist on the Project site. The site is relatively flat with stable soils and no apparent unique or significant landforms. For this reason, liquefaction or seismically induced settlement or bearing loss is considered unlikely, even if there should be a substantial increase in ground water level. Further, development of the site would require compliance with the grading and drainage plans as reviewed and approved by the City. In addition, the Project does not have any component that could result in seismic-related ground failure, including liquefaction. For these reasons, the Project would have no impact.

**iv. Landslides?**

**No Impact.** The topography of the Project site is relatively flat with stable, native soils, and the site is not susceptible to seismic activities, geologic instability, or landslides. Furthermore, the site is not in the immediate vicinity of rivers or creeks that would be more susceptible to landslides. In addition, the Project does not have any component that could result in landslides. Therefore, the Project would have no impact.

**b) Result in substantial soil erosion or the loss of topsoil?**

**Less Than Significant Impact.** Development of the Project site would require typical site preparation activities such as grading and trenching which may result in the potential for short-term soil disturbance or erosion impacts. Construction would also involve the use of water which may cause further soil disturbance. Such impacts would be addressed through compliance with regulations set by the State Water Resources Control Board (SWRCB). Namely, because the site is greater than one-acre in size, the Applicant is required to prepare a Stormwater Pollution Prevention Plan (SWPPP) in compliance with the National Pollution Discharge Elimination System (NPDES) stormwater program. The SWPPP estimates the sediment risk associated with construction activities and includes BMPs to control erosion. BMPs specific to erosion control cover erosion, sediment, tracking, and waste management controls. Implementation of the SWPPP minimizes the potential for the Project to result in substantial soil erosion or loss of topsoil and impacts would be less than significant.

**c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?**

**Less than Significant Impact.** The site is relatively flat with stable soils and no apparent unique or significant landforms. Furthermore, the Project site is in an area of infrequent and low historic seismic activity of nearby faults. Such factors minimize the potential for other geologic hazards such as landslides, lateral spreading, subsidence, liquefaction, or collapse. Therefore, any development on the native, stable soils is unlikely to become unstable and result in geologic hazards. In addition, the Project does not have any aspect that could result in a landslide, lateral spreading, subsidence, liquefaction, or collapse. As such, the Project would have no impact.

**d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?**

**No Impact.** The Project site is relatively flat and stable, native soils of loam and sandy loam. Loam and sandy loam soils are not classified as expansive soil, as defined in Table 18-1-B of the Uniform Building Code and would not create substantial direct or indirect risks to life or property. Thus, no impact would occur.

**e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?**



**No Impact.** The Project site is within city limits and would be required to connect to City wastewater services. Therefore, no septic tanks or alternative wastewater disposal systems would be installed, and no impact would occur.

*f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

**Less than Significant Impact with Mitigation Incorporated.** There are no known paleontological resources or unique geological features known to the city on this site. In addition, the Project site is heavily disturbed as it has been previously developed. Nevertheless, there is some possibility that a non-visible, buried resource, site, or feature may exist and may be uncovered during ground disturbing construction activities which would constitute a significant impact. To further assure future development does not result in significant impacts to any potential resources, the Project shall incorporate *Mitigation Measure CUL-1* as described in **Section 4.5** to mitigate for potential paleontological resources or unique geologic features that may be discovered during ground-disturbing activities. Therefore, if any paleontological resources or geologic features were discovered, implementation *Mitigation Measure CUL-1* would reduce the Project's impact to less than significant.

### **4.7.3 Mitigation Measures**

The proposed project shall implement and incorporate, as applicable, the cultural resources related mitigation measures as identified in the attached Project Specific Mitigation Monitoring Checklist dated June 2023.

***Mitigation Measure CUL-1:** If previously unknown resources are encountered before or during grading activities, construction shall stop in the immediate vicinity of the find and a qualified historical resources specialist shall be consulted to determine whether the resource requires further study. The qualified historical resources specialist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines and the City's Historic Preservation Ordinance. If the resources are determined to be unique historical resources as defined under Section 15064.5 of the CEQA Guidelines, measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds.*

*No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any historical artifacts recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study. (PEIR Mitigation Measure CUL-1.1)*



## 4.8 GREENHOUSE GAS EMISSIONS

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

### 4.8.1 Environmental Setting

In assessing the significance of impacts from GHG emissions, Section 15064.4(b) of the CEQA Guidelines states that a lead agency may consider the following:

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

#### *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA*

As part of the SJVAPCD *Climate Change Action Plan (CCAP)*, SJVAPCD adopted its *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA* and the policy *District Policy - Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency* in 2009.<sup>25, 26</sup> Through this guidance document, SJVAPCD recognized that project-specific emissions are cumulative and could be considered cumulatively considerable without mitigation.

SJVAPCD suggests that the requirement to reduce GHG emissions for all projects is the best method to address this cumulative impact. In addition, this guidance provides screening criteria for climate change analyses, as well as draft guidance for the determination of significance. As shown in **Figure 4-8**, these

<sup>25</sup> San Joaquin Valley Air Pollution Control District. (2009). *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA*. Accessed December 9, 2022, <http://www.valleyair.org/Programs/CCAP/12-17-09/3%20CCAP%20-%20FINAL%20LU%20Guidance%20-%20Dec%2017%202009.pdf>.

<sup>26</sup> San Joaquin Valley Air Pollution Control District. (2000). *Environmental Review Guidelines: Procedures for Implementing the California Environmental Quality Act*. Accessed December 9, 2022, [http://www.valleyair.org/transportation/CEQA%20Rules/ERG%20Adopted%20August%202000\\_.pdf](http://www.valleyair.org/transportation/CEQA%20Rules/ERG%20Adopted%20August%202000_.pdf)



criteria are used to evaluate whether a project would result in a significant climate change impact. Projects that meet one of these criteria would have less than significant impact on the global climate.

1. *Exempt from CEQA;*
2. *Complies with an approved GHG emission reduction plan or GHG mitigation program;*
3. *Achieves 29 percent GHG reductions by using approved Best Performance Standards; or*
4. *Achieves AB 32 targeted 29 percent GHG reductions compared with “business as usual.”*

The significance thresholds are based on the target established by CARB’s Assembly Bill (AB) 32. AB 32 requires CARB to develop regulations to reduce the state’s GHG emissions to their 1990 levels by 2020. AB 32 resulted in the AB 32 Scoping Plan, first approved in 2008. The 2017 Scoping Plan is the second update, reflecting targets established by Executive Order B-30-15 and codified in Senate Bill (SB) 32. SB 32 codifies reduction targets of at least 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050. CARB adopted the 2022 Scoping Plan on December 16, 2022 that addresses long-term GHG goals set forth by AB 1279.<sup>27</sup> The 2022 Scoping Plan outlines the State’s pathway to achieve carbon neutrality and an 85 percent reduction in 1990 emissions goal by 2045. In the 2022 Scoping Plan, CARB advocates for compliance with a local GHG reduction strategy consistent with CEQA Guidelines section 15183.5.

Further, the SJVAPCD requires quantification of GHG emissions for all projects which the lead agency has determined that an EIR is required. Although an EIR is not required for the Project, the GHG emissions are quantified below. Short-term construction and long-term operational GHG emissions for project buildout were estimated using CalEEMod™ (v.2020.4.0). (Appendix A). CalEEMod is a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify GHG emissions from land use projects. The model quantifies direct GHG emissions from construction and operation (including vehicle use), as well as indirect GHG emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. Emissions are expressed in annual metric tons of CO<sub>2</sub> equivalent units of mindividualMTCO<sub>2</sub>e), based on the global warming potential of the individual pollutants.

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<sup>27</sup> The Final 2022 Scoping Plan was released on November 16, 2022 and adopted by ARB on December 16, 2022.



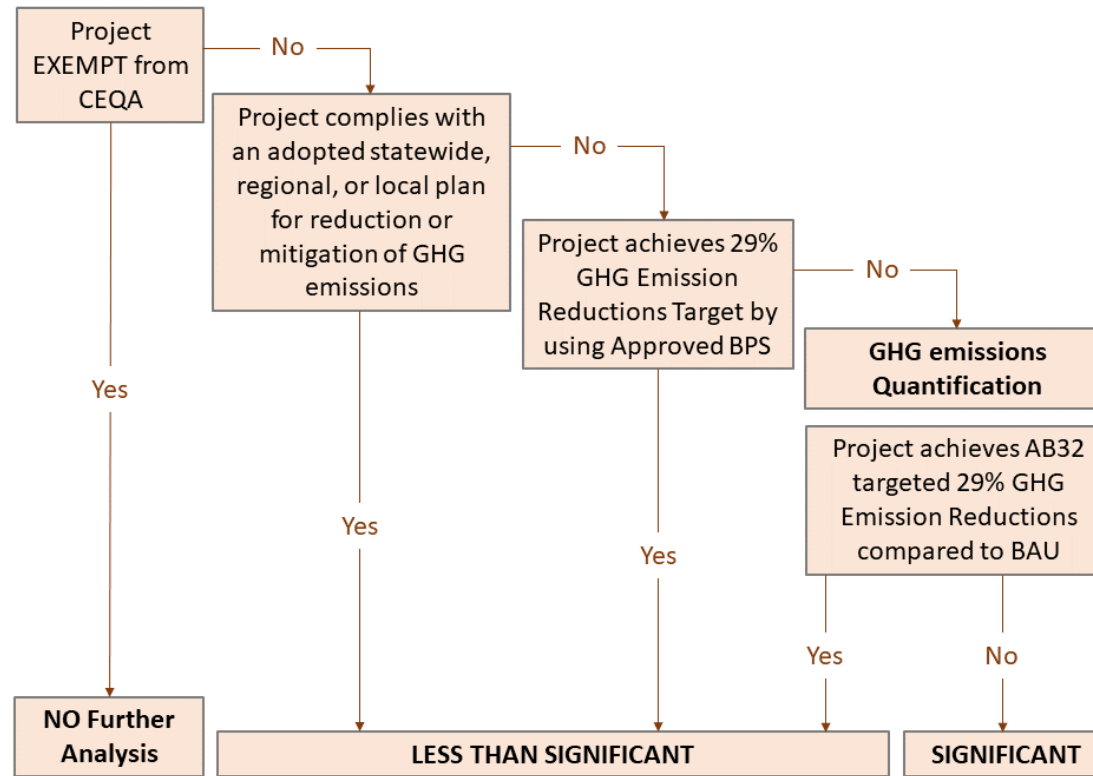


Figure 4-8 SJVAPCD's GHG Thresholds of Significance

Source: SJVAPCD Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA – Land Use Development Projects 2009



### *City of Fresno GHG Reduction Plan*

As part of implementation of the General Plan, the City of Fresno adopted the Climate Action Plan, referred to as the Greenhouse Gas Reduction Plan (GHG Reduction Plan), first in 2014 and updated in 2021. The GHG Reduction Plan provides the City’s primary strategy for reducing GHG emissions. The intent of the GHG Reduction Plan is to achieve compliance with State GHG reduction mandates by focusing on feasible actions the City can take to minimize the adverse impacts of growth and development on climate change.

The GHG Reduction Plan incorporates targets set by AB 32 and SB 32, in addition to the 2015 Newhall Ranch Specific Plan decision by the California Supreme Court invalidating an EIR for a variety of reasons, including the use of 29 percent BAU as a significance threshold for GHG emissions without supporting evidence. The GHG Reduction Plan is considered a “Qualified Plan,” according to California Environmental Quality Act (CEQA) Guidelines Section 15183.5. The proposed Project’s consistency with the GHG Plan Update is assessed and is used to make a significance determination related to GHG impacts.

#### New Discretionary Development Approval Process to determine Consistency with GHG Reduction Plan

Projects requiring discretionary approval from the City are required to comply with CEQA provisions related to GHG emissions. Projects that demonstrate consistency with the GHG Reduction Plan “CEQA Consistency Checklist” are consistent with the GHG Reduction Plan and are considered CEQA-complaint for GHG impacts.<sup>28</sup>

- 1. Review the GHG Reduction Plan Project Update CEQA Consistency Checklist that lists the local GHG reduction strategies identified in the GHG Reduction Plan Update to determine applicability to the project.*
- 2. Incorporate design features or mitigation measures into the project as needed to demonstrate consistency.*
- 3. Implement project design features suitable for the development type and location.*

#### *Review Process for New Discretionary Development Requiring a General Plan Amendment*

For new discretionary development requiring a General Plan Amendment or Rezone, the following review process applies:

- 1. Comply with all of the applicable measures listed above for ministerial and discretionary projects.*
- 2. Ensure that change in land use designation would not result in a significant increase in GHG emissions compared to the existing designation (would require a GHG technical study to quantify GHG emissions and benefits of project design features).*
- 3. Projects currently designated for residential or commercial development that increase development densities and intensities and comply with the relevant GHG reduction strategies in the General Plan, or provide quantified GHG emission reduction calculations which demonstrates that the project would mitigate the cumulative GHG emissions, are considered to have a less than significant GHG impact.*

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<sup>28</sup> City of Fresno. (2021). Greenhouse Gas Reduction Plan Update. Accessed on December 9, 2022, <https://www.fresno.gov/darm/wp-content/uploads/sites/10/2021/03/Link4AppendixGGHGRPUUpdate.pdf>



4. *Emissions from stationary sources for new industrial projects are not considered in the significance determination; however, emissions from motor vehicles trips generated by the project and energy efficiency of the building are considered. (Note: this step is not applicable to the Project because the Project does not propose an industrial use)*
5. *Projects that propose decreases in development densities or intensities requiring a General Plan amendment will require analysis of GHG emissions to determine the impacts on the General Plan land use strategy and must identify mitigation measures to reduce greenhouse gas emissions beyond those required by regulation if needed. (Note: this step is not applicable to the Project because the Project proposes an increase in development density/intensity).*

If the project requires a general plan amendment, then the project proponent is required to provide estimated GHG project emissions under both existing and proposed designation(s) for comparison, comparing the maximum buildout of the existing designation with the maximum buildout of the proposed designation. If the estimated project emissions at maximum buildout of the proposed designation is equivalent to or less than the estimated project emissions at maximum buildout of the existing designation, then in accordance with the City's significance thresholds, the project's GHG impact is less than significant. If there is a proposed development project associated with the general plan amendment or rezone, then the project proponent is required to complete the GHG Plan Update Consistency Checklist and incorporate applicable measures, otherwise there is no further step required.

If the estimated project emission at maximum buildout of the proposed designation(s) is greater than the estimated project emissions at maximum buildout of the existing designation(s), then in accordance with the City's Significance Determination Thresholds, the project's GHG impact is significant. The project must either show consistency with applicable GP objectives and policies (provide applicable GP objectives and policies here) or provide analysis and measures to incorporate into the project to bring the GHG emissions to a level that is less than or equal to the estimated project emission at maximum buildout of the existing designation(s) unless the decision-maker finds that a measure is infeasible in accordance with CEQA Guidelines Section 15091. If there is a proposed development project associated with this plan amendment and or rezone then complete the GHG Plan Update Consistency Checklist and incorporate applicable measures, otherwise there is no further step required.

### **Methodology**

CalEEMod is a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas (GHG) emissions from land use projects. The model quantifies direct emissions from construction and operation (including vehicle use), as well as indirect emissions, such as emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. The model also identifies mitigation measures to reduce criteria pollutant and GHG emissions. CalEEMod.2020.4.0 was used to estimate construction and operational impacts of the proposed project. Modeling assumptions and output files are provided in **Appendix A**.



#### 4.8.2 Impact Assessment

##### Would the project:

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

**Less than Significant Impact.** As stated in the **Environmental Setting**, the SJVAPVD Guidance document provides screening criteria for determining significance. Projects that meet one of these criteria would have a less than significant impact. The first criterion, compliance with an approved GHG emission reduction plan, is addressed in criterion b) finding that the Project would be consistent. Therefore, the following analysis quantifies Project-related GHG emissions from direct and indirect sources resulting from construction and operational activities. Overall, the Project would achieve a 29 percent GHG reduction compared with “business as usual.” Under criterion #2 and #3, the impacts would be less than significant.

##### Construction Emissions

GHG emissions generated throughout the duration of construction activities are summarized and shown in **Table 4-10**. The SJVAPCD does not have a recommendation for assessing the significance of construction related emissions, however, other jurisdictions such as the Sacramento Metropolitan Air Quality Management District (SMAQMD) have concluded that construction emissions should be included since they may remain in the atmosphere for years after construction is complete. The SMAQMD has established quantitative significance thresholds of 1,100 MT CO<sub>2e</sub> per year for the construction phases of land use projects. As such, annual construction emissions below the 1,100 MT CO<sub>2e</sub> would have a less than significant cumulative impact on GHGs. As shown in **Table 4-10**, the Project would result in a maximum annual construction emissions of 370 MT CO<sub>2e</sub> and construction impacts would be less than significant.

**Table 4-7 Summary of Construction-Generated Greenhouse Gas Emissions**

Emissions Source	MT CO <sub>2e</sub> per Year
Annual Construction Emissions (2023)	369.6643
Annual Construction Emissions (2024)	22.9677
<b>Maximum Construction Emissions</b>	<b>369.6643</b>
<b>Significance Threshold</b>	<b>1,100</b>
<b>Threshold Exceeded?</b>	<b>No</b>

*Source: CalEEMod runs February 24, 2023*

##### Operational Emissions

Operational emissions were estimated for the Project under three scenarios: business-as-usual (BAU), earliest operational year/buildout (2024), and 2030. The BAU scenario represents conditions prior to the adoption of GHG reduction regulations (2005) and the earliest operational year/buildout scenario and 2030 scenario accounts for Project-specific design features, regulations, and reduction sources identified in CalEEMod, as further described below. These features, regulations, and reduction sources are identified in CalEEMod as “mitigation measures,” but are considered to represent unmitigated project conditions. The CalEEMod output files with assumptions are provided in **Appendix A**.



- *Business-as-Usual Operational Emissions: Modeling assumptions for construction in 2024 and operational in 2005 were used to represent business as usual conditions. CalEEMod defaults were used for all areas including energy usage, water usage, waste generation, and area sources.*
- *2024 Project Operational Emissions: Modeling for the buildout of the proposed Project in the earliest operational year (2024) is used to represent the Project’s Operational emissions. The modeling assumes compliance with the applicable rules and regulations regarding energy efficiency, vehicle fuel efficiency, renewable energy usage, and other GHG reduction policies. Proposed Project design features are also included in the modeling. (See **Appendix A** for detailed assumptions) The scenario assesses the Project’s consistency with the SJVAPCD 29 percent reduction from BAU threshold and the 21.7 percent threshold required for consistency with AB 32.*
- *2030 Operational Emissions: Modeling assumptions to include existing applicable regulations and Project design features as well as requirements that will be carried out in 2030. The scenario assesses the Project’s consistency with the SB 32, 2030 target which is 40 percent below 1990 emission levels by 2030. The City of Fresno nor the SJVAPCD have adopted quantitative thresholds for the SB 32, 2030 target. In the interim, the Project shall show continued progress toward the SB 32, 2030 target.*
  - *The utilities will be required to increase the use of renewable energy sources to 60 percent by 2030 per SB 100.*

Total operational emissions under the three scenarios are summarized and shown in **Table 4-8**. In order for operational emissions to be considered less than significant, Project-specific GHG emissions must be reduced or mitigated by at least 29 percent compared to BAU, including GHG emission reductions achieved since the 2002-2004 baseline period. As shown, the Project would achieve a 73.1 percent reduction from BAU in the buildout/earliest operational year scenario which is above the 29 percent reduction required by the SJVAPCD guidance as well as the required 21.7 percent average reduction in accordance with AB 32 targets. The Project would achieve a 76.3 percent reduction from BAU in the 2030 operational year scenario, which is 54.6 percent above the 21.7 percent average reduction in accordance with AB 32 targets and demonstrates progress toward achieving the SB 32 targets.

**Table 4-8 Summary and Comparison of Operational Emissions**

Emission Source	Total Operational Emissions (MT CO <sub>2</sub> e Per Year)		
	2005 (Business-as-Usual)	2024 (Earliest Operational Year)	2030
Area	28.6974	0.7949	0.7947
Energy	71.5893	58.5235	51.9773
Mobile	708.9125	148.6442	128.2921
Waste	14.8054	7.4027	7.4027
Water	8.6438	8.5118	8.5118
<b>Total</b>	<b>832.6484</b>	<b>223.8770</b>	<b>196.9786</b>
Reduction from BAU		608.7714	635.6698
<b>Percent Reduction</b>		<b>73.1%</b>	<b>76.3%</b>
<b>Significance Threshold</b>		<b>29%</b>	<b>29%</b>
<b>Significant Impact?</b>		<b>No</b>	<b>No</b>

*Source: CalEEMod runs February 27, 2023*





Overall, the Project shows significant reductions under the 2024 operational year scenario and year 2030 scenario as compared to BAU. The estimated reductions indicate that the Project would not inhibit progress toward achieving statewide GHG emissions targets. Therefore, the impact would be less than significant.

Further, the Project would not exceed the thresholds of significance for construction or operation emissions as discussed in **Section 4.3**. Cumulatively, these emissions would not generate a significant contribution to global climate change over the lifetime of the proposed Project. As such, it can be determined that the Project would not occur at a scale or scope with potential to contribute substantially or cumulatively to the generation of GHG emissions and therefore the impact would be less than significant.

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

**Less than Significant Impact.** The following analysis assesses the Project’s compliance with the applicable plans adopted for the purpose of reducing GHG emissions, including CARB’s 2022 Scoping Plan and the City of Fresno GHG Reduction Plan. Overall, impacts would be less than significant.

**Consistency with the CARB 2022 Scoping Plan**

The first approach recommended by CARB for determining whether a proposed residential development would align with the State’s climate goals is to examine whether the project includes key project attributes that reduce operational GHG emissions while simultaneously advancing fair housing. As stated in the 2022 Scoping Plan, residential projects that have all of the key attributes shown in **Table 4-9** are considered to be aligned with the State’s priority GHG reduction strategies and with the State’s climate and housing goals. As such, these projects would be considered to be consistent with the Scoping Plan and would result in a less significant impact under CEQA. However, lead agencies have the discretion under the Scoping Plan, with additional supporting evidence, that projects that incorporate some but not all of the key project attributes are consistent with the State’s climate goals. As discussed in **Table 4-9**, the Project would be consistent with all applicable key project attributes.

**Table 4-9 Consistency with Key Residential Project Attributes that Reduce GHGs**

Priority Areas	Key Project Attributes	Project Consistency
Transportation Electrification	Provides EV charging infrastructure that, at minimum, meets the most ambitious voluntary standard in the California Green Building Standards Code at the time of project approval.	<b>Consistent.</b> The Project consists of a multi-family residential development and proposes 124 parking stalls. Of the 124 parking stalls, 13 stalls would be “EV capable” accounting for 10% of the parking spaces in accordance with the 2022 California Green Building Standards Code, Title 24, Part 11. Therefore, the Project would provide EV capable parking spaces at 10% of the parking spaces in accordance with the 2022 California Green Building Standards Code, Title 24, Part 11 and would be consistent with this attribute.
VMT Reduction	Is located on infill sites that are surrounded by existing urban uses and reuses or redevelops previously	<b>Consistent.</b> Per Fresno General Plan Objective UF-12, infill development is defined as being within the City of



	<p>undeveloped or underutilized land that is presently served by existing utilities and essential public services (e.g., transit, streets, water, sewer).</p>	<p>December 31, 2012 – including the Downtown core area and surrounding neighborhoods, mixed-use centers, and transit-oriented development along major Bus Rapid Transit corridors, and other non-corridor infill areas, and vacant land. According to the City of Fresno GIS Data Viewing Application, the Project site was annexed into the city on December 5, 2006 and is currently vacant. Therefore, the Project would be located on an infill site. Further, the Project site is surrounded by existing urban uses. The site is surrounded by existing residential uses (north, west), a basin (east), and vacant land (south). All surrounding properties are planned and zoned for residential uses. Lastly, because the Project site is located within city limits, the site is presently served by existing utilities and essential public services. Therefore, the Project is consistent with this attribute.</p>
	<p>Does not result in the loss or conversion of natural and working lands.</p>	<p><b>Consistent.</b> The Project site as it currently exists is developed, containing existing structures. In recent years, the site has been operated as a retail nursery and contains rows of plants for sale by retail. Therefore, the Project would not result in the loss or conversion of natural and working lands and is thereby consistent with this attribute.</p>
	<p>Consists of transit-supportive densities (minimum of 20 residential dwelling units per acre), or</p> <p>Is in proximity to existing transit stops (within a half mile),or</p> <p>Satisfies more detailed and stringent criteria specified in the region’s SCS.</p>	<p><b>Consistent.</b> The 2022 Fresno COG Regional Transportation Plan (RTP)/SCS was adopted by Fresno COG on July 28, 2022. The proposed Project is consistent with the adopted RTP/SCS for the following reasons.</p> <p>SB 375 increased the link between housing planning and the RTP. Although the SCS within the RTP indicates that the SCS preferred scenario supplies enough residential housing capacity by jurisdiction to accommodate the eight-year housing need, the proposed Project would further the goals of the SCS by:</p> <ul style="list-style-type: none"> <li>• <i>Increasing the housing supply and mix of housing types, tenure, and affordability.</i></li> <li>• <i>Promoting infill development and socioeconomic equity,</i></li> </ul>



		<p><i>protecting environmental and agricultural resources, and encouraging efficient development patterns; and</i></p> <ul style="list-style-type: none"> <li>• <i>Promoting an improved intraregional relationship between jobs and housing.</i></li> </ul> <p>Therefore, the Project would be consistent with this attribute.</p>
	<p>Reduces parking requirements by:</p> <p>Eliminating parking requirements or including maximum allowable parking ratios (i.e., the ratio of parking spaces to residential units or square feet); or</p> <p>Providing residential parking supply at a ratio of less than one parking space per dwelling unit; or</p> <p>For multifamily residential development, requiring parking costs to be unbundled from costs to rent or own a residential unit.</p>	<p><b>Consistent.</b> The Project consists of a multi-family residential development that would unbundle parking costs from costs to rent a residential unit. Therefore, the Project would be consistent with this attribute.</p>
	<p>At least 20 percent of units included are affordable to lower-income residents</p>	<p><b>N/A.</b> The Project does not consist of an affordable housing development, therefore this attribute is not applicable.</p>
	<p>Results in no net loss of existing affordable units</p>	<p><b>Consistent.</b> The Project site as it currently exists is developed, containing existing structures. In recent years, the site has been operated as a retail nursery and contains rows of plants for sale by retail. The site does not contain existing affordable units. Therefore, the Project would not result in a no net loss of existing affordable units and would be consistent with this attribute.</p>
<p>Building Decarbonization</p>	<p>Uses all-electric appliances without any natural gas connections and does not use propane or other fossil fuels for space heating, water heating, or indoor cooking</p>	<p><b>Consistent.</b> The Project would exceed all mandatory requirements for multi-family buildings as outlined in the 2022 Energy Code by two to seven percent and verified through the building permit process. The Project would not follow any other GreenPoint ratings. Mandatory requirements apply to building ventilation and indoor air quality, space conditioning systems, water heating systems, electric power distribution, and electric ready buildings. Therefore, the Project would be consistent with this attribute.</p>



### Consistency with City of Fresno’s GHG Reduction Plan

As stated in the **Environmental Setting**, projects that meet the requirements of the Consistency Checklist contained in the City of Fresno GHG Reduction Plan are presumed to be consistent with the Plan and would be found to have a less than significant impact related to the generation of GHG emission, either directly or indirectly. Therefore, if the proposed Project would be consistent with the GHG Reduction Plan then the Project’s impacts related to GHG emissions would be less than significant.

Since the Project consists of discretionary development that requires a General Plan Amendment and Rezone, the GHG Reduction Plan requires modeling of the Project’s GHG emissions under the maximum buildout of the existing land use designation and proposed land use designation utilizing CalEEMod. The maximum buildout of the existing land use designation, Residential – Low Density would be 14 units (4.20 net acres multiplied by 3.5 dwelling units per acre equals 14 units); the maximum buildout of the proposed land use designation, Residential – Medium High Density would be 67 units (4.20 net acres multiplied by 16 dwelling units per acre equals 67 units). For CalEEMod modeling purposes, the “single-family dwelling” land use type and “low-rise apartments” land use type were used in addition to all default factors. Operational emissions are summarized in **Table 4-10**.

**Table 4-10 Comparison of Project and Existing Designation GHG Emissions**

Emissions Source	GHG Emissions (Metric Tons CO <sub>2</sub> e per Year)	
	Existing Designation	Proposed Designation
Area	6.2748	30.0295
Energy	28.4961	74.9450
Mobile	141.7587	530.1396
Waste	8.3230	15.4994
Water	1.8908	9.0490
<b>Total</b>	<b>186.7435</b>	<b>659.6626</b>

*Source: CalEEMod runs February 23, 2023*

As shown in **Table 4-10**, the maximum buildout of the existing land use designation generates an estimated 187 metric tons of CO<sub>2</sub>e per year as opposed to the 660 metric tons of CO<sub>2</sub>e per year that generated by the maximum buildout under the proposed land use designation. Since the maximum buildout under the proposed designation is estimated to generate emissions greater than maximum buildout under the existing designation, then in accordance with the City’s Significance Determination Thresholds, the Project’s GHG impact would be significant unless the Project either shows 1) consistency with all applicable General Plan objectives and policies or 2) provides analysis and measures to incorporate into the Project consistent with the GHG Reduction Plan Consistency Checklist. The GHG Reduction Plan Consistency Checklist is provided in **Table 4-11**.

As described in **Table 4-11**, the Project would be consistent with all applicable strategies and relevant General Plan objectives and policies, and no additional measures would be required. In addition, even though the proposed land use designation is anticipated to produce higher levels of GHG emissions as discussed above, Project-specific design features and measures would significantly reduce GHG emissions. Project-specific GHG emissions are shown in **Table 4-8** under criterion a). As shown, Project operations would generate an estimated 224 MTCO<sub>2</sub>e at build out/first operational year and approximately 197 MTCO<sub>2</sub>e at year 2030. Further, as discussed under criterion a), the Project would not occur at a scale or



scope with potential to contribute substantially or cumulatively to the generation of GHG emissions and the impact would be less than significant. Therefore, as evaluated, the Project would not conflict with the City's GHG Reduction Plan and impacts would be less than significant.

#### **4.8.3 Mitigation Measures**

None required.





Table 4-11 City of Fresno GHG Reduction Plan Consistency Analysis

Checklist Item	Relevant General Plan Policy	Consistent with the General Plan?			Explanation
		Yes	No	N/A	
<b>Strategy 1. Land Use and Transportation Demand Management</b>					
a. Does the project include mixed-use, development? For GHG Reduction Plan consistency, mixed-use development is defined as pedestrian-friendly development that blends two or more residential, commercial, cultural, or institutional, uses, one of which must be residential	Policy UF-1-c, LU-3-b, Objective-UF 12, UF-12-a, UF-12-b, UF-12-d, Policy RC-2-a	--	--	N/A	N/A. The Project proposes a multi-family residential development. A mixed-use development is not proposed or permitted. Therefore, this strategy is not applicable.
b. Is the project high density? For GHG Reduction Plan consistency, is the project developed at 12 units per acre or higher?	LU-5-f	Yes	--	--	<b>Consistent.</b> The Project proposes the development of a 64-unit multi-family residential development to occupy one parcel that totals approximately 4.20 net acres. The residential density of the Project would be 15 dwelling units per acre. The Project can thereby be considered high density because it is developed at 12 units per acre or higher. Therefore, the Project is consistent with this strategy.
c. Is the project infill development, pursuant to the General Plan definition of location within the City limits as of December 31, 2012?	LU-2-a, Objective-12, UF-12-a, UF-12-b, UF-12-d	Yes	--	--	<b>Consistent.</b> Per General Plan Objective UF-12, infill development is defined as being within the City of December 31, 2012. According to the City of Fresno GIS Data Viewing Application, the Project site was annexed into the city on December 5, 2006. Therefore, the Project is infill development and is thereby consistent with this strategy.
d. Does the project implement pedestrian bicycle, and transit linkages with surrounding land uses and neighborhoods? For GHG Reduction Plan consistency, the project must include all sidewalks, paths, trails, and facilities required by the General Plan and Active Transportation Plan, as implemented through the	Policy UF-1-c, UF-12-e, Policy RC-2-a, Objective MT-4,5,6, Policy MT-4-c, Policy MT-6-a, Policy POSS7-h Objective MT 8, Policies MT-8-a, MT-8-b	Yes	--	--	<b>Consistent.</b> The Project site is a developed site with two existing drive approaches located on North Armstrong Avenue. North Armstrong Avenue, a two-lane, north-south collector forms the westerly site boundary. East Clinton Avenue, a two -lane, east-west



<p>Fresno Municipal Code and project conditions of approval.</p>				<p>collector, is approximately 350-ft. south of the southern site boundary. Per the Fresno General Plan Circulation Diagram, the design of the roadways should include two to four lanes with a bike lane, sidewalks, on-street parking, and potentially a median.</p> <p>There are no existing pedestrian facilities including sidewalks, trails, or paths adjacent to the Project site. There is an existing Class II, striped and marked bike lane and sidewalk on the east side of North Armstrong Avenue approximately 700 feet north of the site. The Active Transportation Plan (ATP) identifies a planned Class II bike lane and sidewalk adjacent to the Project site on North Armstrong Avenue.</p> <p>There are no existing or planned transit facilities adjacent to or in proximity to the Project site as identified in the General Plan and by the Fresno Area Express. The nearest transit route to the Project site is Route 45, which has five bus stops within a one mile from the site generally located off of Shields Avenue and Fowler Avenue.</p> <p>The Project would result in public street improvements along North Armstrong Avenue including concrete curb, gutter, sidewalk, and paving per City of Fresno Public Works Standards. The Project would be required to submit Public Improvement Plans for the required off-site improvements through the Building Permit process, for review and approval</p>
--	--	--	--	--



					<p>by the City to ensure improvements would be consistent with adopted City of Fresno Public Works Standards, Specifications, and the approved street plans. Through compliance, the Project would result in improvements to the roadway network consistent with the goals, objectives, and policies of the General Plan and ATP as implemented through the FMC and conditions of approval.</p> <p>Therefore, the Project would implement pedestrian, bicycle, and transit linkages with surrounding land uses and neighborhoods and would include off-site improvements consistent with the General Plan and ATP, as implemented through the FMC and conditions of approval, and is thereby consistent with this strategy.</p>
<p>e. If the project includes mixed-use or high density development, is it located within ½ mile of a High Quality Transit Area as defined in the City’s CEQA Guidelines for Vehicle Miles Traveled? Or, is the project located within 500 feet of an existing or planned transit stop?</p>	<p>Policy UF-12-a, UF-12-b, LU-3-b, Objective MT 8, Policies MT-8-a, MT-8-b</p>	<p>--</p>	<p>--</p>	<p>N/A</p>	<p><b>Not Applicable.</b> The Project includes high-density development, but the Project site is not located within ½-mile of an existing or planned High Quality Transit Area as defined by the City’s CEQA Guidelines for VMT, nor is the Project located within 500 feet of an existing or planned transit stop. Further, the relevant General Plan policies and objectives are not applicable to the proposed Project as described below.</p> <p>General Plan Policy UF-12-a and UF-12-b are applicable to BRT corridors. The Project site is not in the vicinity of an existing or planned BRT corridor.</p>



					<p>Therefore, these policies are not applicable to the proposed Project.</p> <p>General Plan Policy LU-3-b is applicable to the Downtown Planning Area Plans. The Project site is not located within any Downtown Planning Area Plan. Therefore, this policy is not applicable to the proposed Project.</p> <p>General Plan Objective MT-8 pertains to provision of public transit options. The planning, design, and construction of transit facilities is overseen by FAX. The nearest FAX transit route to the Project site is Route 45, which has five bus stops within a one mile from the site generally located off of Shields Avenue and Fowler Avenue. There are no existing or planned transit facilities adjacent to the Project site as identified in the General Plan and by FAX. Therefore, this objective and related policies are not applicable to the proposed Project.</p> <p>Overall, this strategy is not applicable to the proposed Project.</p>
f. Will the project accommodate a large employer (over 100 employees) and will it implement trip reduction programs such as increasing transit use, carpooling, vanpooling, bicycling, or other measures to reduce vehicle miles traveled pursuant to San Joaquin Valley Air Pollution Control District Rule 9410?	Policy MT-8-b, Objective MT-9, Policy MT-10-c, San Joaquin Valley Air Pollution Control District Rule 9410	--	--	<b>N/A</b>	<b>N/A.</b> The Project proposes a multi-family residential development and would not accommodate a large employer. Therefore, this strategy is not applicable.
g. If the project includes modifications to the transportation network, do those improvements meet the requirements of the City of Fresno’s Complete Streets Policy, adopted in October 2019? According to the policy, a complete street is a transportation facility	MT-1-g, MT-1-h	<b>Yes</b>	--	--	<b>Consistent.</b> According to the Complete Streets Policy, all development and new construction projects within the public right-of-way shall be planned, designed, constructed, operated, and maintained



<p>that is planned, designed, operated, and maintained to provide safe mobility for all users - including bicyclists, pedestrians, transit vehicles, trucks, and motorists - appropriate to the function and context of the facility while connecting to a larger transportation network.</p>					<p>so that all modes of transportation allow all users to move safely, comfortably, conveniently, and independently.</p> <p>The Project would result in public street improvements along North Armstrong Avenue including concrete curb, gutter, sidewalk, and paving per City of Fresno Public Works Standards. The Project would be required to submit Public Improvement Plans for the required off-site improvements through the Building Permit process, for review and approval by the City to ensure improvements would be consistent with adopted City of Fresno Public Works Standards, Specifications, and the approved street plans. Through compliance, the Project would result in improvements to the roadway network consistent with the City's Complete Streets Policy. Therefore, the Project is consistent with this strategy.</p>
<p>h. Does the project have a less than significant VMT impact, either through satisfying screening criteria or mitigating VMT impacts, pursuant to the City's adopted VMT thresholds?</p>	<p>MT-2-b, MT-2-c</p>	<p>Yes</p>	<p>--</p>	<p>--</p>	<p><b>Consistent.</b> A Vehicle Miles Traveled (VMT) Analysis was prepared for the Project by JLB Traffic Engineering, Inc. dated November 18, 2022, and provided in <b>Appendix D</b>. Results are summarized below and incorporated herein (See <b>Section 4.17</b> for more information). The Project is expected to yield an average of 9.5 VMT per capita which is within the City of Fresno's VMT threshold of 14.0 VMT per capita for residential land uses. No significant impacts to VMT are associated with the Project. Therefore, the Project is consistent with this strategy.</p>





<b>Strategy 2. Electric Vehicle Strategies</b>					
a. For new multi-family dwelling units with parking, does the project provide EV charging spaces capable of supporting future EV supply equipment (EV capable) at 10% of the parking spaces per 2019 California Green Building Standards Code (CALGREEN, Title 24, Part 11), Section 4.106.4	Policy RC-8-j	Yes	--	--	<b>Consistent.</b> The Project consists of a multi-family residential development and proposes 124 parking stalls. Of the 124 parking stalls, 13 stalls would be “EV capable” accounting for 10% of the parking spaces in accordance with the 2022 California Green Building Standards Code, Title 24, Part 11. Therefore, the Project would provide EV capable parking spaces at 10% of the parking spaces in accordance with the 2022 California Green Building Standards Code, Title 24, Part 11 and would be consistent with this strategy.
b. For new commercial buildings, does project provide EV charging spaces capable of supporting EV capable spaces at 4% to 10% of the parking spaces per 2019 California Green Building Standards Code (CALGREEN, Title 24, Part 11), Section 5.106.5.3	Policy RC-8-j	--	--	N/A	<b>N/A.</b> The Project proposes a multi-family residential development. Commercial buildings are not proposed. Therefore, this strategy is not applicable.
<b>Strategy 3. Energy Conservation Strategies</b>					
a. Does the project meet or exceed mandatory state building energy codes? If yes, does the project follow any other GreenPoint ratings such as LEED, Energy Star or others? If yes, indicate level of certification-Silver, gold, platinum if applicable?	Policy RC-5-c, Objective RC-8, Policy RC 8-a	Yes	--	--	<b>Consistent.</b> The Project would exceed all mandatory requirements for multi-family buildings as outlined in the 2022 Energy Code by two to seven percent and verified through the building permit process. The Project would not follow any other GreenPoint ratings. Mandatory requirements apply to building envelopes, ventilation and indoor air quality, space conditioning systems, water heating systems, outdoor and indoor lighting, electric power distribution, covered process for pools, solar ready buildings, and electric ready buildings. Therefore, the Project would meet and exceed mandatory



					state building energy codes and would be consistent with this strategy.
b. For commercial projects, does the project achieve net zero emissions electricity? Mark NA if project will be permitted before 2030. Mark Yes if voluntary. Add source and capacity in explanation.	Additional Recommended GHG Plan Measure, supports Objective RC-8	--	--	N/A	N/A. The Project proposes a multi-family residential development. A commercial project is not proposed. Therefore, this strategy is not applicable.
<b>Strategy 4. Water Conservation Strategies</b>					
a. Does the project meet or exceed the mandatory outdoor water use measures of the 2019 California Green Building Standards Code (CALGREEN, Title 24, Part 11), Section 4.304? If the project exceeds CalGreen Code mandatory measures provide methods in excess of requirements in the explanation. Examples include outdoor water conservation measures such as; drought tolerant landscaping plants, compliant irrigation systems, xeriscape, replacing turf etc. Provide the conservation measure that the project will include in the explanation.	Objective RC-7, Policy RC-7-a, RC-7-h	Yes	--	--	<b>Consistent.</b> The Project would be built in accordance with all mandatory outdoor water use requirements as outlined in the 2022 California Green Building Standards Code, Title 24, Part 11, Section 4.304 – Outdoor Water Use and verified through the building permit process. As a residential development that contains landscaping, the Project shall comply with the updated Model Water Efficient Landscape Ordinance (MWELO) (California Code of Regulations, Title 23, Chapter 2.7, Division 2), as implemented and enforced through the building permit process. As proposed, the Project exceeds the MWELO requirements by eight percent as achieved through the use of drought tolerant plant material and the installation of low water use irrigation (i.e., drop irrigation). Compliance with MWELO would ensure water efficiency. Therefore, the Project would meet mandatory outdoor water use measures of the 2022 California Green Building Standards Code and would be consistent with this strategy.
b. Does the project meet or exceed the mandatory indoor water use measures of the 2019 California Green Building Standards Code (CALGREEN, Title 24,	Objective RC-7, Policy RC-7-a, RC-7-e	Yes	--	--	<b>Consistent.</b> The Project would be built in accordance with all mandatory indoor water use requirements as outlined in



<p>Part 11), Section 4.303? If the project exceeds CalGreen Code, mandatory measures provide methods in excess of requirements in the explanation. Examples may include water conserving devices and systems such as water leak detection system, hot water pipe insulation, pressure reducing valves, energy efficient appliances such as Energy Star Certified dishwashers, washing machines, dual flush toilets, point of use and/or tankless water heaters.</p>				<p>the 2022 California Green Building Standards Code, Title 24, Part 11, Section 4.303 – Indoor Water Use and verified through the building permit process. As a residential development that contains plumbing fixtures and fittings, the Project shall comply with water-conserving measures for water closets, urinals, showerheads, and faucets. The Project proposes the use of low-flow plumbing fixtures with flow rates that comply with requirements. In addition, as a multi-family residential development, the Project would be required to install submeters to measure water usage of individual units in accordance with the California Plumbing Code. Compliance with these requirements would ensure water efficiency. Therefore, the Project would meet mandatory indoor water use measures of the 2022 California Green Building Standards Code and would be consistent with this strategy.</p>
<p><b>Strategy 5. Waste Diversion and Recycling Strategies</b></p>				
<p>a. Does the project implement techniques of solid waste segregation, disposal and reduction, such as recycling, composting, waste to energy technology, and/or waste separation, to reduce the volume of solid wastes that must be sent to landfill facilities?</p>	<p>Policy PU-9-a, RC-11-a</p>			<p><b>Consistent.</b> Assembly Bill (AB) 939 requires each jurisdiction in California to divert at least 50% of its waste stream away from landfills either through waste reduction, recycling, or other means. Further, recycling services for multi-family residential developments are mandatory in compliance with AB 341, the State’s mandatory commercial and multi-family recycling law. Compliance would be ensured through the building permit process. In addition, the site has been designed to accommodate</p>



					appropriate trash and recycling containers as required by the City. Therefore, the Project would be required to implement techniques of solid waste segregation, disposal, and reduction and would be consistent with this strategy.
b. During construction will the project recycle construction and demolition waste?	Policy RC-11-a	Yes	--	--	<b>Consistent.</b> CALGreen mandates locally permitted new residential building construction and demolition to recycle and/or salvage for reuse a minimum 65% of the nonhazardous construction and demolition debris generated during the Project. Further, the recycling of construction and demolition materials is required for any City-issued building or demolition permit that generates at least eight cubic yards of material by volume. Therefore, the Project would be required to implement techniques to reduce and recycle waste during construction activities in accordance with mandatory requirements under CALGreen as implemented through the building permit process. Compliance would be ensured through the building permit process. Therefore, the Project would recycle construction and demolition waste and would be consistent with this strategy.
c. Does the project provide recycling canisters in public areas where trashcans are also provided?	Policy RC-11-a	Yes	--	--	<b>Consistent.</b> Waste generated by multi-family developments of five or more units is considered “commercial solid waste” and is subject to compliance with AB 827 – Customer Access to Recycling. AB 827 requires recycling and organics recycling containers at the “front-of-house” to collect waste



					<p>generated. These containers are required to be placed adjacent to trash containers and be visible, easily accessible, and clearly marked. Therefore, the Project would be required to provide recycling canisters in public areas where trashcans are also provided in accordance with mandatory requirements under AB 827. Compliance would be ensured through the building permit process. In addition, the site has been designed to accommodate appropriate trash and recycling containers as required by the City. Therefore, the Project would be consistent with this strategy.</p>
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**4.9 HAZARDOUS AND HAZARDOUS MATERIAL**

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
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?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
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?				X
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 for people residing or working in the project area?			X	
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?			X	

**4.9.1 Environmental Setting**

For the purposes of this section, the term “hazardous materials” refers to "injurious substances," which include flammable liquids and gases, poisons, corrosives, explosives, oxidizers, radioactive materials, and medical supplies





and waste. These materials are either generated or used by various commercial and industrial activities. Hazardous wastes are injurious substances that have been or will be disposed. Potential hazards arise from the transport of hazardous materials, including leakage and accidents involving transporting vehicles. There also are hazards associated with the use and storage of these materials and wastes. Hazardous materials are grouped into the following four categories based on their properties:

- Toxic: causes human health effect
- Ignitable: has the ability to burn
- Corrosive: causes severe burns or damage to materials
- Reactive: causes explosions or generates toxic gases

“Hazardous wastes” are defined in California Health and Safety Code Section 25141(b) as wastes that: “...because of their quantity, concentration, or physical, chemical, or infectious characteristics, [may either] cause or significantly contribute to an increase in mortality or an increase in serious illness, or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.” A hazardous waste is any hazardous material that is discarded, abandoned, or slated to be recycled. If improperly handled, hazardous materials and hazardous waste can result in public health hazards if released into the soil or groundwater or through airborne releases in vapors, fumes, or dust. Soil and groundwater having concentrations of hazardous constituents higher than specific regulatory levels must be handled and disposed of as hazardous waste when excavated or pumped from an aquifer. The California Code of Regulations, Title 22, Sections 66261.20-24 contains technical descriptions of toxic characteristics that could cause soil or groundwater to be classified as hazardous waste.

Hazardous waste generators may include industries, businesses, public and private institutions, and households. Federal, state, and local agencies maintain comprehensive databases that identify the location of facilities using large quantities of hazardous materials, as well as facilities generating hazardous waste. Some of these facilities use certain classes of hazardous materials that require risk management plans to protect surrounding land uses. The release of hazardous materials would be subject to existing federal, State, and local regulations and is similar to the transport, use, and disposal of hazard materials.

### *Regulatory Setting*

The California Environmental Protection Agency (CalEPA) was established in 1991 to protect the environment. CalEPA oversees the Unified Program through Certified Unified Program Agencies (CUPAs), which consolidates six (6) environmental programs to ensure the handling of hazardous waste and materials in California. The local CUPA in Fresno County, HazMat Compliance Program, oversees the following six (6) state-mandated CUPA programs: <sup>29</sup>

- *Hazardous Materials Business Plan (HMBP)*
- *California Accidental Release Program (CalARP)*
- *Underground Storage Tank Program (UST)*
- *Aboveground Storage Tank Program (APSA)*

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<sup>29</sup> County of Fresno. HazMat Compliance: The Designated CUPA. Accessed on December 12, 2022, <https://www.co.fresno.ca.us/departments/public-health/environmental-health/hazardous-materials-certified-unified-program-agency-cupa>



- *Hazardous Waste Generator Program*
- *Tiered Permitting Program*

The Department of Toxic Substances Control (DTSC) is another agency in California that regulates hazardous waste, conducts inspections, provide emergency response for hazardous materials-related emergencies, protect water resources from contamination, removing wastes, etc. DTSC acts under the authority of Resource Conservation and Recovery Act (RCRA) and California Health and Safety Code. The DTSC implements California Code of Regulations (CCR) Title 22 Division 4.5 to manage hazardous waste. Government Code Section 65962.5 requires that DTSC shall compile and update at least annually a list of:

- (1) All hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code (“HSC”).*
- (2) All land designated as hazardous waste property or border zone property pursuant to Article 11 (commencing with Section 25220) of Chapter 6.5 of Division 20 of the Health and Safety Code.*
- (3) All information received by the Department of Toxic Substances Control pursuant to Section 25242 of the Health and Safety Code on hazardous waste disposals on public land.*
- (4) All sites listed pursuant to Section 25356 of the Health and Safety Code.*
- (5) All sites included in the Abandoned Site Assessment Program.*

This list of hazardous waste sites in California, referred to as the Cortese List, is then distributed to each city and county. According to the CCR Title 22, soils excavated from a site containing hazardous materials is considered hazardous waste, and remediation actions should be performed accordingly. Cleanup requirements are determined case-by-case by the jurisdiction.

### **Record Search**

The United States Environmental Protection Agency (EPA) Superfund National Priorities List (NPL)<sup>30</sup>, California Department of Toxic Substance Control’s EnviroStor database<sup>31</sup>, and the State Water Resources Control Board’s GeoTracker database<sup>32</sup> include hazardous release and contamination sites. A search of each database was conducted on December 12, 2022. The searches revealed no hazardous material release sites on the Project site or within the vicinity of the Project (i.e., 0.5-mile radius of the Project site).

### **Fresno County Airport Land Use Compatibility Plan**

The nearest public or public use airport is the Fresno Yosemite International Airport approximately 1.5 miles west of the Project site. Fresno Yosemite International Airport is owned and operated by the City of Fresno and has two

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<sup>30</sup> United States Environmental Protection Agency. Superfund National Priorities List. Accessed December 12, 2022 <https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=33cebcdfdd1b4c3a8b51d416956c41f1>

<sup>31</sup> California Department of Toxic Substances Control. Envirostor. Accessed December 12, 2022, <https://www.envirostor.dtsc.ca.gov/public/>

<sup>32</sup> California State Water Resources Control Board. GeoTracker. Accessed December 12, 2022, <https://geotracker.waterboards.ca.gov/>



(2) Large Air Carrier Runways that are 9,539 feet long and 8,008 feet long. The Federal Aviation Administration (FAA)-approved Airport Layout Plan (ALP) identifies extending the length of both runways.<sup>33</sup>

According to the Fresno County Airport Land Use Compatibility Plan (ALUCP), the Project site is located within the Traffic Pattern Zone (TPZ) of the Airport Influence Area (AIA) of the Fresno Yosemite International Airport. The ALUCP has set “safety zone land use compatibility standards” that restrict the development of land uses that could pose hazards to the public or to vulnerable populations in case of an aircraft accident, as shown in **Table 4-12**.

**Table 4-12 Safety Zone Land Use Compatibility Standards**

Zone	6 – Traffic Pattern Zone (TPZ)
<b>Dwelling Units per Acre</b>	No Limit
<b>Maximum Non-Residential Intensity</b>	300 persons per acre No limit in areas designated as Urban on Exhibit D1, Fresno Yosemite International Airport. (not applicable to Project)
<b>Required Open Land</b>	10%
<b>Prohibited Uses</b>	<ul style="list-style-type: none"> <li>• Hazards to flight (i.e., physical (tall objects), visual, and electronic forms of interference with the safety of aircraft operations. Land use development, such as golf courses and certain types of crops that may cause the attraction of birds to increase is also prohibited).</li> <li>• Outdoor stadiums and similar uses with very high intensity uses</li> </ul>
<b>Other Development Conditions</b>	<ul style="list-style-type: none"> <li>• Airport disclosure notice required</li> <li>• Airspace review required for objects &gt;100 feet tall</li> <li>• New structures are prohibited on existing terrain that penetrates 14 CFR Part 77 surfaces</li> <li>• New structures require additional airspace analysis required within the 50-foot terrain penetration buffer</li> </ul>

**Fresno General Plan**

The General Plan include objectives and policies relevant to hazards and hazardous materials in its Noise and Safety Element:

**Objective NS-4** *Minimize the risk of loss of life, injury, serious illness, and damage to property resulting from the use, transport, treatment, and disposal of hazardous materials and hazardous wastes.*

**NS-4-a Processing and Storage.** *Require safe processing and storage of hazardous materials, consistent with the California Building Code and the Uniform Fire Code, as adopted by the City.*

**NS-4-b Coordination.** *Maintain a close liaison with the Fresno County Environmental Health Department, Cal-EPA Division of Toxics, and the State Office of Emergency Services to assist in developing and maintaining hazardous material business plans, inventory statements, risk management prevention plans, and contingency/emergency response action plans.*

<sup>33</sup> Fresno Council of Governments. Airport Land Use Commission of Fresno County. Accessed on December 12, 2022, <https://www.fresnocog.org/project/airport-land-use-commission-fresno-county/>



**NS-4-c Soil and Groundwater Contamination Reports.** *Require an investigation of potential soil or groundwater contamination whenever justified by past site uses. Require appropriate mitigation as a condition of project approval in the event soil or groundwater contamination is identified or could be encountered during site development.*

**NS-4-e Compliance with County Program.** *Require that the production, use, storage, disposal, and transport of hazardous materials conform to the standards and procedures established by the County Division of Environmental Health. Require compliance with the County's Hazardous Waste Generator Program, including the submittal and implementation of a Hazardous Materials Business Plan, when applicable.*

**NS-4-f Hazardous Materials Facilities.** *Require facilities that handle hazardous materials or hazardous wastes to be designed, constructed, and operated in accordance with applicable hazardous materials and waste management laws and regulations.*

**NS-4-h Household Collection.** *Continue to support and assist with Fresno County's special household hazardous waste collection activities, to reduce the amount of this material being improperly discarded.*

#### 4.9.2 Impact Assessment

**Would the project:**

- a) **Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?**

**Less than Significant Impact.** The Project proposes a residential development. The type of hazardous materials that would be associated with Project operations are those typical of residential uses such as cleaning supplies and HVAC equipment. Because of the proposed residential use, it is not expected that the Project would routinely transport, use, or dispose of hazardous materials other than those typical of residential uses and such materials would not be of the type of quantity that would pose a significant hazard to the public.

Some appliances and electronics used or stored by residents may contain hazardous components (e.g., refrigerants, oils, etc.); however, these hazardous components are regulated by the EPA under the Toxic Substances Control Act and Clean Air Act and transport of such components are regulated by the U.S. Department of Transportation, Office of Hazardous Materials Safety as implemented in California by Title 13 of the California Code of Regulations (CCR), California Building Code, and Uniform Fire Code, as adopted by the City (General Plan **Policy NS-4-a**). Through compliance with regulations, appliances and electronics associated with the Project are not expected to create a significant hazard to the public or the environment.

In addition, the Project is subject to review by the Fresno County Department of Public Health. The Department of Public Health has reviewed and conditioned the Project to meet requirements set forth in the California Health and Safety Code (HSC), Division 20, Chapter 6.95 of the CCR, Title 22, Division 4.5 in the case that future residents use and/or stores hazardous materials and/or hazardous wastes. If future residents use and/or store hazardous materials and/or hazardous wastes as defined in the statute, then they shall submit a Hazardous Materials Business Plan (HMBP) pursuant to HSC Division 20, Chapter 6.95, Section 25507, and maintain the HMBP with the County, Cal-EPA Division of Toxics, and State Office of Emergency Services (General Plan **Policy NS-4-b**). Submittal of and maintained compliance with the HMBP as approved by the County would reduce any impacts to less than significant.



Potential impacts during construction of the Project could result from the use of fuels and lubricants for construction equipment. However, these impacts would be short-term and temporary, and would be reduced to less than significant levels through compliance with local, state, and federal regulations including but not limited to compliance with EPA's oil spills prevention and preparedness regulations, California Office of Emergency Services implementation of hazardous materials accident prevention, and California Department of Toxic Substance Control permitting, and regulations as administered by Fresno County, in addition to standard equipment operating practices as indicated in operator manuals. Therefore, the Project would have a less than significant impact.

*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?*

**Less than Significant Impact.** As described under criterion a), it is not anticipated that the Project itself would involve any operations that would require routine transport, use, or disposal of hazardous materials and therefore is not anticipated to create a significant hazard to the public or the environment through release of hazardous materials, including any reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Submittal of and compliance with the HMBP would ensure that the production, use, storage, disposal, and transport of hazardous materials continue to conform to the standards and procedures established by the County (General Plan *Policy NS-4-2*). While potential impacts would occur through construction-related transport and disposal of hazardous materials, such impacts would be short-term and temporary, and would be reduced to less than significant levels through compliance with local, state, and federal regulations in addition to standard equipment operating practices as described under criterion a). Therefore, the Project would have a less than significant impact.

*c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

**No Impact.** There are no proposed schools within one-quarter mile of the subject site. The nearest existing school is Virginia R. Boris Elementary School, which is approximately  $\pm$  0.5 miles southeast of the site. As described under criteria a) and b), the Project is not anticipated to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials and would not create upset and accident conditions involving the release of hazardous materials into the environment. Therefore, no impact would occur.

*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?*

**No Impact.** According to EnviroStor and GeoTracker, the Project is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code *Section 65962.5*. Therefore, the Project would not create a significant hazard to the public of the environment and there would be no impact.

*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 for people residing or working in the project area?*

**Less than Significant Impact.** The Project site is located within the TPZ of the Fresno Yosemite International Airport AIA. Because it is within the AIA, the Project was reviewed by the City of Fresno Planning staff to determine land use compatibility and received a finding of consistency with the ALUCP and General Plan. Therefore, through



compliance with the ALUCP and General Plan, the Project would not result in a safety hazard for people residing or working in the area and impacts would be less than significant.

*f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

**Less than Significant Impact.** The Project would not involve any new or altered infrastructure associated with evacuation, emergency response, and emergency access routes within the City or County of Fresno. Construction may require lane closure; however, these activities would be short-term and access through North Armstrong Avenue would be maintained through standard traffic control. Following construction, this roadway would continue to provide access to the site. Furthermore, the Project would be subject to compliance with applicable standards for on-site emergency access including turn radii and fire access. Therefore, through the development review process and General Plan compliance, the Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan and impacts would be less than significant.

*g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?*

**Less than Significant Impact.** According to the Fresno General Plan, wildfire threats to Fresno are minimal because the city is largely urbanized or working agricultural land and lacks steep topographies. Although the city is proximate to high and very high fire hazard designated area, the urbanized area is categorized as little or no threat or moderate fire hazard which is attributed to its paved areas. Furthermore, the Project site is not identified by the California Department of Forestry and Fire Protection (Cal Fire) as a Very High Fire Hazard Severity Zone (VHFHSZ) within the Local Responsibility Area.<sup>34</sup> In addition, the Project proposes a construction of a structures that would be occupied by humans; as such, the structure shall be constructed in adherence to the Wildland Urban Interface Codes and Standards of the California Building Code Chapter 7A. Compliance with such regulations would ensure that the Project meets standards to help prevent loss, injury, or death involving wildland fires. Impacts would be less than significant.

#### **4.9.3 Mitigation Measures**

None required.

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<sup>34</sup> California Department of Forestry and Fire Protection. FHSZ Viewer. Accessed on February 21, 2023, <https://egis.fire.ca.gov/FHSZ/>.





**4.10 HYDROLOGY AND WATER QUALITY**

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			X	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X	
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:			X	
i. <i>Result in a substantial erosion or siltation on- or off-site;</i>			X	
ii. <i>Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site:</i>			X	
iii. <i>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</i>			X	
iv. <i>Impede or redirect flood flows?</i>			X	
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			X	
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	



#### 4.10.1 Environmental Setting

The Project site is within city limits and thus, will be required to connect to water and stormwater services. The City and responsible agencies have reviewed the Project to determine adequate capacity in these systems and ensure compliance with applicable connection and discharge requirements. Overall, the review of the Project by the City and responsible agencies indicates that the Project would not require or result in the relocation or construction of new or expanded facilities that would otherwise cause significant impacts to existing systems.

##### *Water*

The City of Fresno Water Division manages and operates the City of Fresno's water system. The City's water system consists of about 1,880 miles of distribution and transmission mains, 271 municipal groundwater wells, three surface water treatment plants, five water storage facilities with pump stations, and three booster pump stations. The water system covers approximately 115 square miles and serves a population of about 550,200.

Fresno meets its demand for domestic water from a combination of groundwater, treated surface water, and reclaimed water sources. Groundwater is accessed from the Kings River Sub-basin of the San Joaquin Valley Groundwater Basin, while surface water from the Central Valley Project on the San Joaquin River and Fresno Irrigation District on the Kings River, which are treated at the Northeast Surface Water Treatment Facility, the Southeast Surface Water Treatment Facility, and T-3 Water Storage and Surface Water Treatment Facility. Surface water is also used to replenish the groundwater aquifer through Fresno's recharge program at the City-owned Leaky Acres, Nielsen Recharge Facility, and a cooperative agreement with the Fresno Metropolitan Flood Control District (FMFCD) to utilize over 70 ponding basins across the city.

##### *Stormwater*

The Fresno Metropolitan Flood Control District (FMFCD) manages stormwater runoff in Fresno. The major elements of the FMFCD's flood control system include dams, reservoirs, and detention basins. The FMFCD is responsible for reviewing development proposals to assess drainage and flood control impacts and needs, in addition to determining applicable requirements and modifications needed in order to implement the Storm Drainage and Flood Control Master Plan.

#### 4.10.2 Impact Assessment

##### *Would the project:*

- a) *Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?*

**Less than Significant Impact.** Because the site is greater than one-acre in size, the Applicant is required to prepare a SWPPP in compliance with the NPDES stormwater program. The SWPPP estimates the sediment risk associated with construction activities and includes BMPs to control erosion. BMPs specific to erosion control cover erosion, sediment, tracking, and waste management controls. Implementation of the SWPPP minimizes the potential for the Project to result in substantial soil erosion or loss of topsoil and impacts would be less than significant.

The City of Fresno is under the jurisdiction of the California Regional Water Quality Control Board (RWQCB) Central Valley NPDES Permit and Waste Discharge Requirements General Permit for Discharges from Municipal Separate Storm Sewer Systems (MS4), Order Number R5-2016-0040-014, NPDES Number CA S0085324 ("MS4 Permit"). The



MS4 Permit requires compliance with stormwater quality controls as identified in the Fresno Clovis Storm Water Quality Management Construction and Post-Construction Guidelines. Compliance would reduce the potential for discharge of pollutants in violation of water quality standards or waste discharge requirements and impacts would be less than significant.

Stormwater infiltration has the potential to affect groundwater quality whereby rainfall and stormwater runoff flow into and through the subsurface soil. A majority of the Project site would be of impervious surface. Runoff from the site would be collected and diverted to the storm drainage system through existing drainage services. Further, runoff resulting from the Project would be managed by the FMFCD in compliance with the Storm Drainage and Flood Control Master Plan in addition to approved grading and drainage plans. Therefore, potential for stormwater infiltration reaching subsurface soils and impacting groundwater quality is limited and impacts would be less than significant.

Overall, compliance with the SWPPP, MS4 Permit, FMFCD regulations, and approved grading and drainage plans would minimize the potential for the Project to violate any water or waste discharge requirements or otherwise substantially degrade surface or ground water quality and impacts would be less than significant.

**b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?**

**Less than Significant Impact.** The City’s long-term water resource planning for existing and future demand is addressed in the City’s 2020 Urban Water Management Plan (UWMP).<sup>35</sup> According to the UWMP, water demand in the city has decreased over the past two (2) decades and is expected to grow at a slower rate than the anticipated population growth. This trend is captured by the daily per capita water use, measured as gallons per capita per day (GPCD). For 2020, water use averaged 198 GPCD based on 121,993 acre-feet (AF) of water production. Of note, this GPCD is below the 2020 daily per capita water use target of 247 GPCD, which the UWMP attributes to conservation efforts implemented by the City.

According to the UWMP, the City’s per capita water usage is projected to continue to decline through 2045 due to more water efficiency in future construction and passive conservation pursuant to requirements of the California Plumbing Code (e.g., use of higher efficiency appliances, water efficient landscaping, etc.). Projected water use for residential uses is included in **Table 4-13**. Residential water use accounts for approximately 14 percent of potable water use citywide.

**Table 4-13 Projected Potable Water Demand by Sector, 2025 – 2045**

Use Type	Water Use by Volume (AF)				
	2025	2030	2035	2040	2045
Single-Family	76,255	80,429	82,934	85,437	87,936
Multi-Family	19,000	20,654	21,737	22,831	23,935

**Source:** City of Fresno, Urban Water Management Plan, 2020

<sup>35</sup> City of Fresno (2021). 2020 Urban Water Management Plan. Accessed February 24, 2023, [https://www.fresno.gov/publicutilities/wp-content/uploads/sites/16/2021/06/Fresno-2020-UWMP\\_Public-Draft\\_2021-06-29.pdf](https://www.fresno.gov/publicutilities/wp-content/uploads/sites/16/2021/06/Fresno-2020-UWMP_Public-Draft_2021-06-29.pdf)



As mentioned above, the City of Fresno Water Division manages and operates the City of Fresno’s water system. Fresno meets its demand for domestic water from a combination of groundwater, treated surface water, and reclaimed water sources. Groundwater is accessed from the Kings River Sub-basin of the San Joaquin Valley Groundwater Basin in addition to the three surface water treatment facilities, which provide half of all potable water demands in the City’s service area. Surface water is used to replace lost groundwater through Fresno’s recharge program at the City-owned Leaky Acres, Nielsen Recharge Facility, and smaller facilities in southeast Fresno.

According to the UWMP, the Project site is located in the Booster Station 4 Pressure Zone with two active City wells located north and south of the Project site on North Armstrong Avenue. There is also an existing 16-inch water main located in North Armstrong Avenue in addition to an existing 1.5-inch water service (inactive) at the property. The Project has been reviewed by the City and is required to connect to the available water facilities and install water meter box(es) for service. A Water Capacity Fee charge for the installation of new water services and meters to serve the property would be assessed based on projected water demand.

Potable water demands for the Project were estimated using land-use-based unit water demand factors last updated for the City in 2018. The Project site has an existing General Plan land use designation of Residential – Low Density and proposes a GPA to the Residential – Medium High Density land use designation. According to the land-use-based unit water demand factors for the City, the two land use designations have an annual average (ac-ft/yr/acre) of 2.0 and 3.10, respectively. **Table 4-14** summarizes the total water demands to be expected. As shown, the existing land use would utilize approximately 8.4-acre feet per year (AFY) compared to an estimated 13.02 AFY under the proposed use. Development of the Project site would account for a less than one percent increase above the City’s 2020 water demand of 121,993 AFY.<sup>36</sup> In addition, the minimal increase in demand would not exceed available groundwater supplies during a normal year water supply estimate of 136,504 AFY potable demand. Therefore, the Project would be accommodated by existing groundwater supplies and impacts would be less than significant.

**Table 4-14 Summary of Total Water Demands by Land Use**

Land Use	Area (ac)	Annual Average (Ac-Ft/Yr/Acre)	Annual Average (AFY)
Residential – Low Density	4.2	2.0	8.4
Residential – Medium High Density	4.2	3.10	13.02

**Source:** *City of Fresno, 2018 Water Demand Factors by Land Use Classification*

Furthermore, adherence to connection requirements and recommendations pursuant to the City’s water conservation efforts (e.g., compliance with California Plumbing Code, efficient appliances, efficient landscaping, etc.) should not negatively impact water supply or impede water management. In particular, the Project would be built accordance with all mandatory outdoor water use requirements as outlined in the applicable California Green Building Standards Code, Title 24, Part 11, Section 4.304 – Outdoor Water Use and verified through the building permit process. As a multi-family residential development that would contain landscaping pursuant to FMC regulations, the Project shall comply with the updated Model Water Efficient Landscape Ordinance (MWELO)

<sup>36</sup> City of Fresno (2021). 2020 Urban Water Management Plan. Accessed February 24, 2023, [https://www.fresno.gov/publicutilities/wp-content/uploads/sites/16/2021/06/Fresno-2020-UWMP\\_Public-Draft\\_2021-06-29.pdf](https://www.fresno.gov/publicutilities/wp-content/uploads/sites/16/2021/06/Fresno-2020-UWMP_Public-Draft_2021-06-29.pdf)



(California Code of Regulations, Title 23, Chapter 2.7, Division 2), as implemented and enforced through the building permit process. Therefore, through compliance, the potential for the Project to substantially decrease groundwater supplies is limited and impacts would be less than significant.

In addition, development of the Project site would increase impervious surfaces which could increase stormwater runoff and reduce groundwater recharge. According to FMFCD, rainfall and stormwater runoff in the Fresno area is collected and conveyed through a network of pipelines to 155 stormwater basins where it slowly percolates through the soil to the groundwater aquifer. Runoff from the site would be collected and stored in the proposed onsite basin in compliance with FMFCD's Storm Drainage and Flood Control Master Plan in addition to approved grading and drainage plans. Therefore, potential for the Project to interfere substantially with groundwater recharge such that the Project would impede sustainable groundwater management of the basin is limited and impacts would be less than significant.

Overall, based on the information collected from the UWMP and the City of Fresno, the proposed Project would not generate significantly greater water demand than would otherwise occur with a higher intensity land use. As a result, it can be presumed that the existing and planned water distribution system and supplies should be adequate to serve the Project, and the Project would thereby not decrease groundwater supplies, interfere substantially with groundwater recharge, or impede sustainable groundwater management of the basin. In addition, adherence to connection requirements and recommendations pursuant to the City's water supply planning efforts (i.e., compliance with California Plumbing Code, efficient appliances, efficient landscaping, etc.) should not negatively impact the City's water provision. For these reasons, a less than significant impact would occur as a result of the Project.

- 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:*
- d) *Result in substantial erosion or siltation on- or off-site?*

**Less than Significant Impact.** Erosion is a natural process in which soil is moved from place to place by wind or from flowing water. The effects of erosion within the Project Area can be accelerated by ground-disturbing activities associated with development. Siltation is the settling of sediment to the bed of a stream or lake which increases the turbidity of water. Turbid water can have harmful effects to aquatic life by clogging fish gills, reducing spawning habitat, and suppress aquatic vegetation growth.

Implementation of the proposed Project would result in the redevelopment of developed urban land that has undergone significant disturbance. Bare soils, common within agricultural land, are more susceptible to erosion than an already developed urban land, thus it is not expected that erosion could occur on-site. Further, during construction activities, and in compliance with the Project's SWPPP, construction-related erosion controls and BMPs would be implemented to reduce potential impacts related to erosion and siltation. These BMPs would include, but are not limited to, covering and/or binding soil surfaces to prevent soil from being detached and transported by water or wind, and the use of barriers such as straw bales and sandbags to control sediment. Together, the controls and BMPs are intended to limit soil transportation and erosion and construction impacts related to on- or off-site.

Soil erosion and loss of topsoil can be caused by natural factors, such as wind and flowing water, and human activity. The Project site is relatively flat and mostly paved, which limits the potential for substantial soil erosion.



Implementation of the proposed Project would require typical site preparation activities such as grading and trenching which may result in the potential for short-term soil disturbance or erosion impacts. Soil disturbance during construction is largely caused by the use of water. Excessive soil erosion could cause damage to existing structures and roadways. During construction activities, and in compliance with the Project's SWPPP, construction-related erosion controls and BMPs would be implemented to reduce potential impacts related to erosion and siltation. These BMPs would include, but are not limited to, covering and/or binding soil surfaces to prevent soil from being detached and transported by water or wind, and the use of barriers such as straw bales and sandbags to control sediment. Together, the controls and BMPs are intended to limit soil transportation and erosion.

Development of the site would also result in an increase in the amount of impervious surface, which could increase the volume of runoff. However, the impervious surface area would significantly reduce the amount of exposed soil which would minimize the potential for erosion and siltation. In addition, the Project would be required to maintain the overall site drainage pattern and direct runoff to the proposed onsite drainage system in compliance with the Storm Drainage and Flood Control Master Plan and approved grading and drainage plans. Therefore, compliance with requirements would reduce or eliminate the Project's potential to substantially alter the existing drainage pattern of the site as to cause substantial erosion or siltation and impacts would be less than significant.

*e) Substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?*

**Less than Significant Impact.** During construction, the site's vegetation and soil would be disturbed, thereby temporarily altering the natural hydrology of the site. In turn, this could increase the volume and velocity of stormwater runoff which could increase the potential for flooding on- or off-site. As previously discussed, development of the site would require compliance with the SWPPP, MS4, and implementation of BMPs that would control and direct runoff. Compliance would ensure that construction impacts related to the alteration of the site's natural hydrology and the potential increase in runoff that would result in flooding on- or off-site would be less than significant.

While the development of the site would permanently increase the impervious surface area, the Project would be required to maintain the overall site drainage pattern and direct runoff to the onsite drainage system. In FMFCD's review of the Project for compliance with the Storm Drainage and Flood Control Master Plan, temporary facilities are recommended until permanent drainage service is available. Prior to the issuance of building permits, the Applicant would be required to submit grading and drainage plans for review and approval by the City and FMFCD, in addition to payment of required drainage fees. Review and approval of these plans and payment of drainage fees would ensure that the site drainage pattern is maintained, facilities conform to City and FMFCD requirements, and the stormwater system would be capable of receiving and conveying runoff from the site. Compliance with the Storm Drainage and Flood Control Master Plan would ensure that operational impacts related to the site's drainage pattern and the potential increase in runoff that would result in flooding on- or off-site would be less than significant.

*f) 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?*

**Less than Significant Impact.** Development of the site would disturb the site's vegetation and soil and temporarily alter the natural hydrology of the site. However, compliance with the MS4 permit and implementation of the





SWPPP would reduce construction impacts related to alteration of the site's natural hydrology and the potential increase in runoff or polluted runoff in excess of existing or planned stormwater drainage systems. Therefore, construction would not result in the creation or contribution of additional sources of runoff or polluted runoff in exceedance of the existing or planned stormwater drainage systems and impacts would be less than significant.

In regard to operational impacts, development of the site would result in an increase in the impervious surface area which would increase runoff from the site. However, compliance with the Storm Drainage and Flood Control Master Plan, approved grading and drainage plans, and stormwater quality controls as identified in the Fresno-Clovis Storm Water Quality Management Construction and Post-Construction Guidelines under the MS4 permit would reduce the potential for the Project to cause substantial additional polluted runoff or runoff in excess of existing or planned stormwater drainage systems. A less than significant impact would occur.

***g) Impede or redirect flood flows?***

**Less than Significant Impact.** Although the construction of the proposed Project would increase impervious surfaces, the Project would be required to maintain the site's drainage pattern through Project-specific grading and drainage plans that would be reviewed and approved by the City and FMFCD prior to the issuance of building permits. The site would also be required to utilize onsite drainage services as previously described. Through compliance, the potential for the Project to impede or redirect flood flows would be minimized or eliminated and a less than significant impact would occur.

***h) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?***

**Less than Significant Impact.** The Project site is not in a flood hazard, tsunami, or seiche zone (i.e., standing waves on river, reservoirs, ponds, and lakes); there are no oceans, rivers, reservoirs, ponds, or lakes on or within the site and its vicinity. The Project site is designated as Zone X on the most recent FEMA Flood Insurance Rate Map (FIRM) No. 06019C1595H dated 2/18/2009.<sup>37</sup> Zone X is an area of minimal flood hazards with a 0.2 percent-annual-chance of flood (i.e., 500-year flood). In addition, the Project area as well as the City of Fresno has historically been subject to low to moderate ground shaking and has a relatively low probability of shaking. As such, seiches are unlikely to form due to the low seismic energy produced in the area. Therefore, as a low-risk area, a less than significant impact as it relates to the risk release of pollutants due to project inundations would occur because of the Project.

***i) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?***

**Less than Significant Impact.** A groundwater sustainability plan was adopted for the Kings Groundwater Sub-basin on November 21, 2019, by the North Kings Groundwater Sustainability Agency, of which the City of Fresno is a member.<sup>38</sup> The proposed Project is required to comply with the adopted plan (North Kings Groundwater) to meet the 2040 sustainability deadline for the basin. As mentioned above, surface water will largely be the source of supply in wet hydrologic periods, groundwater will be used in a managed manner in normal hydrologic periods and relied upon more in very dry periods. Through 30 years of diligent water resource planning and construction of surface water treatment facilities, inclusive of the Southeast Surface water Treatment Facility (which is a project

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<sup>37</sup> FEMA. FEMA Flood Map Service Center. Accessed December 12, 2022, <https://msc.fema.gov/portal/home>

<sup>38</sup> North Kings Groundwater Sustainability Agency (2020). Groundwater Sustainability Plan. Accessed December 9, 2022, <https://northkingsgsa.org/groundwater-sustainability-plan/>



within the sustainability plan), the City has largely attained the balanced use of groundwater supplies well ahead of the legislative requirement of 2040, thus making the City compliant with the North Kings Groundwater Sustainability Plan goals. In addition, the Project would be required to comply with the MS4 permit requirements, implement a SWPPP, and adhere to FMFCD requirements related to drainage control. Through compliance, the Project would not cause the degradation of water quality and would therefore not conflict with or obstruct the implementation of a water quality control plan or sustainable groundwater management plan. Therefore, a less than significant impact would occur because of the Project.

#### ***4.10.3 Mitigation Measures***

None required.



**4.11 LAND USE PLANNING**

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Physically divide an established community?			X	
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?			X	

**4.11.1 Environmental Setting**

The Project site is within the city limits of Fresno and is planned and zoned for residential development.

**4.11.2 Impact Assessment**

*Would the project:*

**a) Physically divide an established community?**

**Less than Significant Impact.** Typically, physical division of an established community would occur if a project introduced new incompatible uses inconsistent with the planned or existing land uses or created a physical barrier that impeded access within the community. Typical examples of physical barriers include the introduction of new, intersecting roadways, roadway closures, and construction of new major utility infrastructure (e.g., transmission lines, storm channels, etc.).

**Surrounding Land Uses**

The site is surrounded by existing residential uses (north, east, south, and west), a basin (east), and vacant land (south and west). Surrounding properties are all planned and zoned for residential uses. Proposed site improvements would be regulated by development standards and zoning regulations, including height, landscaping, setbacks, improvements, right-of-way dedications, open space, and parking, etc. As such, the Project would be consistent and therefore compatible with the existing uses surrounding the Project site. Therefore, implementation of the Project would be generally consistent with the existing and planned land uses within the Project area.

**Circulation System**

No new streets are proposed that would result in a physical barrier. North Armstrong Avenue, a two-lane north-south collector forms the westerly site boundary. East Clinton Avenue, a two-lane collector, is approximately 350-ft. south of the southern site boundary. Street frontage improvements including curb, gutter, street trees, overhead utilities, and drive approach are located on North Armstrong Avenue. The Project would continue to be served by the existing circulation system and related infrastructure. The Project does not propose construction of new roadways.



**Utility Infrastructure**

No new major utility infrastructure is proposed that would result in a physical barrier. The Project site is within city limits and thus would be required to connect to water, wastewater, and stormwater services. Natural gas, electricity, telecommunications, and solid waste services are provided by private companies (e.g., PG&E, Mid Valley Disposal). Utility systems are described and analyzed in **Section 4.10** and **Section 4.15**. Based on the analysis, implementation of the Project would not result in the construction of new, major utility infrastructure.

As such, the Project does not represent a significant change in the surrounding area as it would develop a site planned and zoned for residential uses with residential uses that are consistent and compatible with existing uses surrounding the Project site. In addition, the Project does not include new roadways or major utility infrastructure. Therefore, the Project would not result in the physical divide of an established community and a less than significant impact would occur.

*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?*

**Less than Significant Impact.** The Project proposes a 64-unit multi-family residential development that would be consistent with the proposed land use designation and zone district. **Table 4-15** provides a comparison of the Project’s characteristics with all applicable policies included in the General Plan as they relate to land use issues. As discussed below, the proposed Project is generally consistent with the General Plan.

**Table 4-15 Discussion on Land Use Policies in the General Plan**

General Plan Policy	Project Consistency
<p><b>Policy LU-2-e Neighborhood Preservation.</b> <i>Incorporate standards in the Development Code to preserve the existing residential quality of established neighborhoods.</i></p>	<p><b>Consistent.</b> Through the entitlement review and approval process, the Project has been reviewed and conditioned by the City to comply with all applicable regulations and standards within the FMC specific to preserving existing residential quality of established neighborhoods. Since the Project proposes development of an RM district site abutting an RS district, the development would be subject to “RS Transition Standards” contained in FMC <b>Section 15-1004</b> regarding height, setbacks, landscape, and screening. The Project would also be subject to appropriate façade design development standards contained in FMC Section 15-1005 including the following goals: 1) present an attractive appearance to public streets, 2) be aesthetically and functionally compatible to the nearby development context, 3) demonstrate a high level of quality, and 4) support the growth in value of surrounding properties. Through compliance with applicable standards, the Project would be consistent with the policy.</p>
<p><b>Policy LU-5-d Medium-High Density Residential Uses.</b> <i>Promote medium-high density residential uses to optimize use of available or planned public facilities and services and to provide housing opportunities with convenient access to employment, shopping, services, and transportation.</i></p>	<p><b>Consistent.</b> The Project proposes a General Plan Amendment and Rezone to develop a multi-family residential development consistent with the Medium High Density land use and RM-1 zone district. The Project site is within a residentially planned and zone area in close proximity to public facilities including the Virginia R. Boris Elementary School, and would provide housing</p>



	<p>opportunities with convenient access to employment, shopping services, and transportation. The nearest commercial, service, and employment area is approximately 0.40-miles north of the Project site. The nearest transit route to the Project site is Route 45, which is approximately one mile from the site off of Shields Avenue and Fowler Avenue. Therefore, the Project would be consistent with this policy.</p>
<p><b>Policy LU-5-g Scale and Character of New Development.</b> Allow new development in or adjacent to established neighborhoods that is compatible in scale and character with the surrounding area by promoting a transition in scale and architectural character between new buildings and established neighborhoods, as well as integrating pedestrian circulation and vehicular routes.</p>	<p><b>Consistent.</b> The Project proposes a 64-unit multi-family residential development that would be subject to applicable zoning and other regulations of the FMC, including FMC <b>Section 15-1004</b>, <b>Section 15-1005</b>, <b>Section 15-2015</b>, <b>Section 15-2508</b>, and <b>Section 15-2614</b> (See <b>Section 4.1</b>) that govern scenic quality, including the scale and character of the development, promoting a transition in scale between the proposed development and existing neighborhood. In addition, the Project proposes pedestrian and vehicular circulation. Internal circulation of the site would include a private drive aisle for automobiles and four-ft. wide concrete sidewalks for pedestrians. The Project proposes 124 parking stalls including 64 carports and 60 open parking stalls, in addition to a bicycle rack with space for six bicycles. The Project would also install right-of-way improvements along North Armstrong Avenue street frontage (i.e., concrete curb, gutter, sidewalk, and paving per City of Fresno Public Works Standards). Therefore, the Project would be consistent with this policy.</p>
<p><b>Policy LU-5-h Housing Offering Amenities.</b> Support housing that offers residents a range of amenities, including public and private open space, landscaping, and recreation facilities with direct access to commercial services, public transit, and community gathering spaces.</p>	<p><b>Consistent.</b> The Project proposes 64 multi-family residential units and a range of amenities, including approximately 43,190 sf. of common open space throughout the site including indoor and outdoor recreational space (e.g., swimming pool, arbors, and barbecue). Private open space is also proposed for each unit either as a patio or balcony. Further, as discussed above, the Project would have convenient access to employment, shopping services, and transportation. There are also three parks within a one-mile radius (<b>Section 4.16</b>). Therefore, the Project would be consistent with this policy.</p>

Further, through the entitlement process, the Project is reviewed for compliance with applicable regulations inclusive of those adopted for the purpose of avoiding or mitigating environmental effects, including FMC **Section 15-2506** – Noise, **Section 15-2507** – Vibration, **Section 15-2508** – Lighting and Glare, **Section 15-2510** – Odors, and **Section 15-2512** – Air Contaminants. There are standard conditions and processes in place to ensure these code-mandated requirements are complied with during the entitlement review and approval process and prior to issuance of building permits. Overall, the entitlement process would ensure that the Project complies with the General Plan, FMC, and any other applicable policies. As such, the Project would have a less than significant impact.

**4.11.3 Mitigation Measures**

None required.



#### 4.12 MINERAL RESOURCES

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?				X
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?				X

##### 4.12.1 Environmental Setting

The California Geological Survey (CGS) classifies and designates areas within California that contain or potentially contain significant mineral resources. Lands are classified into Aggregate and Mineral Resource Zones (MRZs), which identify known or inferred significant mineral resources. According to the California Department of Conservation, CGS’s Surface Mining and Reclamation Act (SMARA) Mineral Lands Classification (MLC) data portal, the nearest mineral resource areas to the City of Fresno are in the San Joaquin and Kings River areas which are classified as Mineral Resource Zone (MRZ)-2. The Project site is not located within the vicinity of either river.

##### 4.12.2 Impact Assessment

**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?*

**No Impact.** The Project site is not located in an area designated for mineral resource preservation or recovery. Therefore, the Project would not 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. No impact would occur.

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?*

**No Impact.** As described above, the Project site is not located in an area designated for mineral resource preservation or recovery and as a result, the Project would not 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. Further, the site is not delineated in the General Plan, a Specific Plan, or other land use plan as a locally important mineral resource recovery site, thus it would not result in the loss of availability of a locally important mineral resource. Therefore, no impact would occur.

##### 4.12.3 Mitigation Measures

None required.





**4.13 NOISE**

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?		X		
b) Generation of excessive groundborne vibration or groundborne noise levels?		X		
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?			X	

**4.13.1 Environmental Setting**

An Acoustical Analysis of the Project was conducted on December 22, 2022 (revised February 21, 2023) by WJV Acoustics, Inc. (WJVA). The full report is provided in **Appendix C**. A summary of the Acoustical Analysis is provided below. Overall, the Acoustical Analysis concludes that the proposed 64-unit multi-family residential development would comply with all City of Fresno exterior and interior noise level standards, provided the following mitigation measure is incorporated into final Project design: “Mechanical ventilation or air conditioning must be provided for all homes so that windows and doors can remain closed for sound insulation purposes.”

**Fresno General Plan**

The Fresno General Plan Noise Element provides noise level criteria for land use compatibility for both transportation and non-transportation noise sources. The General Plan sets noise compatibility standards for transportation noise sources in terms of the Day-Night Average Level (L<sub>dn</sub>). The L<sub>dn</sub> represents the time-weighted energy average noise level for a 24-hour day, with a 10 dB penalty added to noise levels occurring during the nighttime hours (10:00 p.m.-7:00 a.m.). The L<sub>dn</sub> represents cumulative exposure to noise over an extended period of time and is therefore calculated based upon annual average conditions.



**Table 4-16** provides the General Plan noise level standards for transportation noise sources. Exterior noise standards are to be applied to the outdoor activity areas of residential land uses. Outdoor activity areas are generally considered to be backyards of single-family residential uses and common use outdoor areas (such as pool areas, BBQ and picnic areas, playground areas, etc.) as well as individual unit decks, patios and balconies of multi-family residential uses.

**Table 4-16 City of Fresno General Plan Noise Level Standards: Transportation (Non-aircraft) Noise Sources**

Noise-Sensitive Land Use	Outdoor Activity Areas	Interior Spaces	
	L <sub>dn</sub> /CNEL, dB	L <sub>dn</sub> /CNEL, dB	L <sub>eq</sub> , dB <sup>2</sup>
Residential	65	45	-
Transient Lodging	65	45	-
Hospitals, Nursing Homes	65	45	-
Theaters, Auditoriums, Music Halls	-	-	35
Churches, Meeting Halls	65	-	45
Office Buildings	-	-	45
Schools, Libraries, Museums	-	-	45

**Implementation Policy NS-1-a** of the General Plan provides guidance in regard to the development of new noise sensitive land uses (including residential developments).

***Desirable and Generally Acceptable Exterior Noise Environment.** Establish 65 dBA L<sub>dn</sub> or CNEL as the standard for the desirable maximum average exterior noise levels for defined usable exterior areas of residential and noise-sensitive uses for noise, but designate 60 dBA L<sub>dn</sub> or CNEL (measured at the property line) for noise generated by stationary sources impinging upon residential and noise-sensitive uses. Maintain 65 dBA L<sub>dn</sub> or CNEL as the maximum average exterior noise levels for non-sensitive commercial land uses, and maintain 70 dBA L<sub>dn</sub> or CNEL as maximum average exterior noise level for industrial land uses, both to be measured at the property line of parcels where noise is generated which may impinge on neighboring properties.*

The General Plan also provides noise level standards for non-transportation (stationary) noise sources. The General Plan noise level standards for non-transportation noise sources are identical to those provided in the FMC, provided below in **Table 4-17**.

**Implementation Policy NS-1-j** of the General Plan Noise Element provides guidance in regards to the establishment of a significance threshold when determining an increase in noise levels over existing ambient noise levels.

***Significance Threshold.** Establish, as a threshold of significance for the City's environmental review process, that a significant increase in ambient noise levels is assumed if the project would increase noise levels in the immediate vicinity by 3 dB L<sub>dn</sub> or CNEL or more above the ambient noise limits established in this General Plan Update.*

*Commentary: When an increase in noise would result in a “significant” impact (increase of three dBA or more) to residents or businesses, then noise mitigation would be required to reduce noise exposure. If the increase in noise is less than three dBA, then the noise impact is considered insignificant and no noise mitigation is needed. By setting a specific threshold of significance in the General Plan, this policy facilitates making a determination of environmental impact, as required by the California Environmental Quality Act.*



*It helps the City determine whether (1) the potential impact of a development project on the noise environment warrants mitigation, or (2) a statement of overriding considerations will be required.*

**Municipal Code**

**Section 15-2506** of the FMC establishes hourly acoustical performance standards for non-transportation noise sources. The standards, provided in **Table 4-17**, are made more restrictive during the nighttime hours of 10:00 p.m. to 7:00 a.m. Additionally, the FMC states that when ambient noise levels exceed or equal the levels described in **Table 4-17**, mitigation shall only be required to limit noise to the existing ambient noise levels, plus five dB. **Section 15-2506** is consistent with **Implementing Policy NS-1-I** of the Noise Element.

**Table 4-17 Non-Transportation Noise Level Standards, dBA**

Daytime (7 a.m. – 10 p.m.)		Nighttime (10 p.m. – 7 a.m.)	
L <sub>eq</sub>	L <sub>max</sub>	L <sub>eq</sub>	L <sub>max</sub>
50	70	45	60

*Source: City of Fresno Municipal Code, Section 15-2506*

Additional guidance is provided in **Section 10-102(b)** of the FMC. **Section 10** provides existing ambient noise levels to be applied to various districts, further divided into various hours of the day. **Table 4-18** describes the assumed minimum ambient noise levels by district and time. **Section 10-102(b)** states “For the purpose of this ordinance, ambient noise level is the level obtained when the noise level is averaged over a period of fifteen minutes, without inclusion of the offending noise, at the location and time of day at which a comparison with the offending noise is to be made. Where the ambient noise level is less than that designated in this section, however, the noise level specified herein shall be deemed to be the ambient noise level for that location.”

**Table 4-18 Assumed Minimum Ambient Noise Level, dBA**

District	Time	Sound Level, dB L <sub>eq</sub>
Residential	10 PM TO 7 AM	50
Residential	7 PM TO 10 PM	55
Residential	7 AM TO 7 PM	60
Commercial	10 PM TO 7 AM	60
Commercial	7 AM TO 10 PM	65
Industrial	ANYTIME	70

*Source: City of Fresno Municipal Code, Section 10-102 (B)*

**Section 10-106 (Prima Facie Violation)** States “Any noise or sound exceeding the ambient noise level at the property line of any person offended thereby, or, if a condominium or apartment house, within any adjoining living unit, by more than five decibels shall be deemed to prima facie evidence of a violation of Section 8-305.”

For noise sources that are not transportation related, which usually includes commercial or industrial activities and other stationary noise sources (such as amplified music), it is common to assume that a 3-5 dB increase in noise levels represents a substantial increase in ambient noise levels. This is based on laboratory tests that indicate that a 3 dB increase is the minimum change perceptible to most people, and a 5 dB increase is perceived as a “definitely noticeable change.”

*Construction Noise*



The City of Fresno Municipal Code does not explicitly provide guidance on construction noise or vibration. However, *Section 10.109 (Exceptions)* of the Municipal Code states that the noise provisions shall not apply to “Construction, repair or remodeling work accomplished pursuant to a building, electrical, plumbing, mechanical, or other construction permit issued by the city or other governmental agency, or to site preparation and grading, provided such work takes place between the hours of 7:00 a.m. and 10:00 p.m. on any day except Sunday.” Although not specifically stated in the Noise Element or the Municipal Code, it is also a standard requirement of many jurisdictions that all construction equipment be properly maintained and muffled to minimize noise generation at the source.

The City of Fresno does not have regulations that define acceptable levels of vibration. One of the most recent references suggesting vibration guidelines is the California Department of Transportation (Caltrans) Transportation and Construction Vibration Guidance Manual. The Manual provides guidance for determining annoyance potential criteria and damage potential threshold criteria. These criteria are provided below in **Table 4-19** and **Table 4-20** and are presented in terms of peak particle velocity (PPV) in inches per second (in/sec). The PPV levels reported in **Table 4-19** and **Table 4-20** represent those measured at the potential receiver location.

**Table 4-19 Guideline Vibration Annoyance Potential Criteria**

Human Response	Maximum PPV (in/sec) at Receiver	
	Transient Sources	Continuous/Frequent Intermittent Sources
Barely Perceptible	0.04	0.01
Distinctly Perceptible	0.25	0.04
Strongly Perceptible	0.9	0.1
Severe	2.0	0.4

Source: Caltrans

**Table 4-20 Guideline Vibration Damage Potential Threshold Criteria**

Structure and Condition	Maximum PPV (in/sec) at Receiver	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile, historic buildings, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: Caltrans

**Project Site Noise Exposure Modeling**

The Project site is located along the east side of North Armstrong Avenue, approximately 375 feet north of East Clinton Avenue. The Project site is exposed traffic noise associated with vehicles on North Armstrong Avenue. The



distance from the closest proposed building façade (and individual patios/balconies) to the (future) centerline of North Armstrong Avenue is approximately 65 feet.

Noise exposure from traffic on North Armstrong Avenue was calculated for existing and future (2046) conditions using the Federal Highway Administration (FHWA) Traffic Noise Model and traffic data obtained from Fresno Council of Governments (COG). A detailed description of the noise model, applied data, and methodology is provided in [Appendix C](#).

Noise level measurements and concurrent traffic counts were conducted by WJVA staff within the Project site on December 16, 2022, along North Armstrong Avenue. Traffic noise exposure at the closest proposed residential setbacks to North Armstrong Avenue would be approximately 60 dB L<sub>dn</sub> for both existing conditions and future (2046) conditions, respectively.

#### **4.13.2 Impact Assessment**

**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 in other applicable local, state, or federal standards?*

**Less than Significant Impact with Mitigation Incorporated.** Noise generating activities of the Project would include construction, traffic, and interior noise exposure, as described below. Overall, the Project would result in a less than significant impact in regard to noise.

##### ***Traffic Noise Exposure***

The Project site is exposed to traffic noise associated with vehicles on North Armstrong Avenue. The FHWA Traffic Noise Prediction Model (FHWA-RD-77-108) was utilized for modeling traffic noise exposure ([Appendix C](#)). All exterior spaces where the exterior noise level standard applies would have a noise exposure level of 60 dB L<sub>dn</sub> or less. Such levels are below the City's applicable 65 dB L<sub>dn</sub> exterior noise level standard. Impacts would be less than significant.

##### ***Interior Noise Exposure***

The City of Fresno interior noise level standard is 45 dB L<sub>dn</sub>. The worst-case noise exposure within the proposed residential development would be approximately 60 dB L<sub>dn</sub> (Existing and 2046 conditions). This means that the proposed residential construction must be capable of providing a minimum outdoor-to-indoor noise level reduction (NLR) of approximately 15 dB (60-45=15). A specific analysis of interior noise levels was not performed. However, it may be assumed that residential construction methods complying with current building code requirements would reduce exterior noise levels by approximately 25 dB if windows and doors are closed. This would be sufficient for compliance with the City's 45 dB L<sub>dn</sub> interior standard. Requiring that it be possible for windows and doors to remain closed for sound insulation means that air conditioning or mechanical ventilation would be required. Therefore, the Project shall incorporate *Mitigation Measure NOI-1* as recommended by WJVA. Incorporation of this mitigation measure would reduce interior noise exposure. As a result, the Project would have a less than significant impact with mitigation incorporated.



**Mitigation Measure NOI-1:** Interior Noise Insulation. Mechanical ventilation or air conditioning must be provided for all units so that windows and doors can remain closed for sound insulation purposes.

**Construction Noise Exposure**

Construction noise would occur at various locations within the project site throughout the buildout period. Existing sensitive receptors could be located as close as 75 feet from construction activities. **Table 4-21** provides typical construction-related noise levels at distances of 50, 100 feet, 200 feet, and 300 feet.

Construction noise is not considered to be a significant impact if construction is limited to daytime hours and construction equipment is adequately maintained and muffled. The City of Fresno limits hours of construction to occur only between the hours of 7:00 a.m. to 10:00 p.m., Monday through Saturday. Construction noise impacts could result in annoyance or sleep disruption for nearby residents if nighttime operations were to occur outside of the allowable construction hours, or if equipment is not properly muffled or maintained.

**Table 4-21 Typical Construction Equipment Maximum Noise Levels, dBA**

Type of Equipment	50 ft.	100 ft.	200 ft.	300 ft.
Concrete Saw	90	84	78	74
Crane	81	75	69	65
Excavator	81	75	69	65
Front End Loader	79	73	67	63
Jackhammer	89	83	77	73
Paver	77	71	65	61
Pneumatic Tools	85	79	73	69
Dozer	82	76	70	66
Rollers	80	74	68	64
Trucks	86	80	72	70
Pumps	80	74	68	64
Scrapers	87	81	75	71
Portable Generators	80	74	68	64
Backhoe	86	80	74	70
Grader	86	80	74	70

**Source:** FHWA, *Noise Control for Buildings and Manufacturing Plants*, Bolt, Beranek & Newman, 1987

Further, the Project would be subject to compliance with the General Plan Noise Element and FMC requirements to ensure that the ambient noise level does not rise to a level of significance. Impacts would be less than significant. Therefore, short-term construction related impacts associated with the exposure of persons to or the generation of noise levels in excess of standards established in the General Plan or FMC would be less than significant.”

**b) Generation of excessive groundborne vibration or groundborne noise levels?**

**Less than Significant with Mitigation Incorporated.** Project operations would not include uses or activities that typically generate groundborne vibration or groundborne noise levels in excess. However, temporary groundborne vibration may result from construction, depending on the use of equipment (e.g., pile drivers, bulldozers, jackhammers, etc.), distance to affected structures, and soil type. The dominant sources of man-made vibration are sonic booms, blasting, pile driving, pavement breaking, demolition, diesel locomotives, and rail-car coupling. Generalized vibration levels associated with typical residential construction activities at distances of 50 feet, 100





feet and 300 feet are summarized by **Table 4-22**. These levels would not be expected to exceed any significant threshold levels for annoyance or damage, as provided above in **Table 4-19** and **Table 4-20**.

**Table 4-22 Typical Vibration Levels During Construction**

Equipment	PPV (in/sec)		
	At 50 ft.	At 100 ft.	At 300 ft.
Bulldozer (Large)	0.042	0.019	0.006
Bulldozer (Small)	0.001	0.0006	0.0002
Loaded Truck	0.027	0.017	0.005
Jackhammer	0.012	0.008	0.002
Vibratory Roller	0.097	0.046	0.013
Caisson Drilling	0.042	0.019	0.006

**Source:** Caltrans

After full Project build out, it is not expected that ongoing operational activities will result in any vibration impacts at nearby sensitive uses. Activities involved in trash bin collection could result in minor on-site vibrations as the bin is placed back onto the ground. Such vibrations would not be expected to be felt at off-site sensitive uses.

However, to further assure construction activities do not generate excessive groundborne vibration or groundborne noise levels, the Project shall incorporate *Mitigation Measure NOI-2* as identified in the General Plan PEIR. Incorporation of this mitigation measure would reduce construction-related vibration and restrict heavy construction equipment in close proximity to existing structures. As a result, the Project would have a less than significant impact with mitigation incorporated.

**Mitigation Measure NOI-2: Construction Vibration.** *The use of heavy construction equipment within 25 feet of existing structures shall be prohibited. (General Plan PEIR Mitigation Measure NOI-2)*

- c) *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 expose people residing or working in the project area to excessive noise levels?*

**Less than Significant Impact.** The nearest public and public use airport is the Fresno Yosemite International Airport approximately ± 1.5 miles west of the Project site. The Project site is located within the Fresno Yosemite International Airport, AIA but is outside of the airport’s 60 dBA CNEL and 65 dBA CNEL noise contours. Because it is within the AIA, the Project has been reviewed by the City of Fresno Planning and Development Department and for compatibility with the findings and policies of the ALCUP related to safety and special characteristics (e.g., lights, flare, smoke, birds, etc.) and General Plan, since the General Plan must be compatible with the ALUCP. Therefore, through compliance with the ALUCP and General Plan, the Project would not result in a safety hazard for people residing or working in the area and impacts would be less than significant.

**4.13.3 Mitigation Measures**

The proposed Project shall implement and incorporate, as applicable, the noise related mitigation measures as identified in the attached Project Specific Mitigation Monitoring and Reporting Program dated June 2023.

**Mitigation Measure NOI-1: Interior Noise Insulation.** *Mechanical ventilation or air conditioning must be provided for all units so that windows and doors can remain closed for sound insulation purposes.*

**Mitigation Measure NOI-2: Construction Vibration.** *The use of heavy construction equipment within 25 feet of existing structures shall be prohibited. (General Plan PEIR Mitigation Measure NOI-2)*



#### 4.14 POPULATION AND HOUSING

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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)?			X	
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

##### 4.14.1 Environmental Setting

CEQA Guidelines Section 15126.2(d) requires that a CEQA document discuss the ways in which the proposed Project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. The CEQA Guidelines provide the example of a major expansion of a wastewater treatment plant that may allow for more construction within the service area. The CEQA Guidelines also note that the evaluation of growth inducement should consider the characteristics of a project that may encourage or facilitate other activities that could significantly affect the environment. Direct and Indirect Growth Inducement consists of activities that directly facilitate population growth, such as construction of new dwelling units. A key consideration in evaluating growth inducement is whether the activity in question constitutes “planned growth.”

##### City of Fresno General Plan

The City of Fresno General Plan estimates population under the General Plan Buildout. It estimates approximately 226,000 new residents by 2035 within the Sphere of Influence (SOI), totaling in a population of 771,000, with an average annual growth rate of 1.24. In addition, the Buildout anticipates an additional 425,000 new residents by an unspecified date, totaling an ultimate population of 970,000 within the SOI.

##### U.S. Census Bureau

According to the U.S. Census Bureau, the current population of the city of Fresno is 542,107 with a total of 184,226 housing units and an average household size of 3.65.<sup>39</sup>

<sup>39</sup> U.S. Census Bureau. 2022. Community Profile: Fresno city, California. Accessed on December 12, 2022, [https://data.census.gov/profile/Fresno\\_city,\\_California?g=1600000US0627000](https://data.census.gov/profile/Fresno_city,_California?g=1600000US0627000)



#### 4.14.2 Impact Assessment

##### *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)?*

**Less than Significant Impact.** The Project includes a General Plan Amendment and Rezone that requests a land use change from Residential – Low Density to Residential – Medium High Density and a rezone from RS-1 – Residential Single-Family, Extremely Low Density to RM-1 – Residential Multi-Family, Medium High Density, consistent with the proposed land use designation.

The Project proposes the development of a 64-unit multi-family residential development. Based on an average household size of 3.65, 64 units could generate approximately 234 new residents (compared to 58 new residents if the site was built out under the current land use designation) thereby increasing the city's population from 542,107 to 542,341. The 64 units would also increase the total number of housing units from 184,226 to 184,290.

Overall, the population and housing units generated by the proposed Project would be within the Fresno General Plan projections for the City of Fresno. Therefore, the Project would not induce substantial unplanned population growth and a less than significant impact would occur.

- b) *Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?*

**No Impact.** There are approximately five existing structures including a 1,918-square foot single-family residence (built circa 1962), garage, and storage sheds. In recent years, the site has been operated as a retail nursery and contains rows of plants for sale by retail. The existing structures on site are not used for housing. Since the site does not currently provide housing, future development of the Project site would not result in the physical displacement of people or housing. No impact would occur because of the Project.

#### 4.14.3 Mitigation Measures

None required.



**4.15 PUBLIC SERVICES**

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?			X	
ii. Police protection?			X	
iii. Schools?			X	
iv. Parks?			X	
v. Other public facilities?			X	

**4.15.1 Environmental Setting**

The Project is located within Fresno city limits and thus, would be subject to fees for the construction, acquisition, and improvements for such services. These services and fees include:

**Fire Protection Services**

Fire Protection Services in the city are provided by the Fresno Fire Department (FFD). The FFD operates a total of 20 fire stations/companies that serve a 116-square-mile area. To facilitate adequate service ratios, response times, or other performance objectives for fire protection services, all development in the City of Fresno is required to be located within three (3) miles of an existing fire station. There is one fire station within a three-mile radius of the proposed Project site, Station 10. To address impacts to fire protection services, the City of Fresno has implemented the Fire Facilities Fee pursuant to **Section 12-4.901** of the FMC, which requires developers to pay the “fair share” of construction and acquisition costs for improvements to fire department facilities. A Fire Facilities Impact Fee is assessed for development based on the project size.

**Police Protection Services**

Police Protection Services in the city are provided by the Fresno Police Department (FPD). The FPD is divided into five policing districts. The Project falls within the Southeast Policing District and the nearest police station to the proposed Project is located approximately 2.5 miles southwest of the site at 224 South Argyle Avenue, Fresno, CA 93727. The Southeast Policing District is the largest district with a population of over 150,000. According to the FPD 2021 Annual Report, the Southeast District had a 10 percent reduction in shootings during 2021 compared to 2020.



The City uses a minimum level of service of two officers per 1,000 residents. To address impacts to police protection services, the City of Fresno has implemented the Police Facilities Fee pursuant to **Section 12-4.801** of the FMC, which requires developers to pay the “fair share” of construction and acquisition costs for improvements to police protection services and facilities. A Police Facilities Fee is assessed for development based on the project size.

### **Schools**

Educational services within the Project Area are primarily served by Clovis Unified School District. Schools within a one-mile radius of the Project site include Virginia R. Boris Elementary School and Roger S. Orazo Elementary School. Funding for schools and school facilities impacts is outlined in Education Code Section 17620 and Government Code Section 65995 et. seq., which governs the amount of fees that can be levied against new development. These fees are used to construct new or expanded school facilities. Payment of fees authorized by the statute is deemed “full and complete mitigation.” A School Impact Fee is assessed for development based on the Developer Fee rates in place at the time payment is due.

### **Parks and Recreation**

Park and Recreation Facilities are overseen by the Fresno Parks and Recreation Department, Parks, After School, Recreation, and Community Services (PARCS). The City’s service standard for parks is at least three acres of public parkland per 1,000 residents. Similar to other public services, the City has established the Park Facilities Fee which requires developers to pay the “fair share” of construction and acquisition for improvements to park facilities. A Park Facilities Fee is assessed for development based on the project size.

### **Courts**

The City of Fresno contains two State courts, Fresno County Superior Court, and 5<sup>th</sup> District Court of Appeals, and one federal court.

### **Library**

The Fresno County Public Library System oversees libraries in the city of Fresno. There are 39 libraries throughout the County of Fresno, 11 of which are in the City of Fresno planning area.

### **Hospital**

There are nine hospitals located within the City of Fresno planning area with a total capacity of 1,603 beds as of 2020.

#### **4.15.2 Impact Assessment**

##### **Would the project:**

- a) *Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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?*

**Less than Significant Impact.** The Project site is within the city limits and therefore would be served by the FFD. There is one fire station, Station 10, within a three-mile radius of the proposed Project. The Project’s proximity to



the existing station would support adequate service ratios, response times, and other performance objectives for fire protection services. In addition, the FFD reviewed the Project for requirements related to water supply, fire hydrants, and fire apparatus access to the building on site. FFD indicated that the Project is within the service area of existing Fire Station 10, which is planned to be relocated from East Clinton Avenue and North Clovis Avenue to North Armstrong Avenue 0.25-miles south of the Project site. FFD's review also indicated that there are existing gridded public water mains serving the parcel. Further, the Project is subject to the Fire Facilities Fee for construction and acquisition costs for improvements to fire department facilities. For these reasons, it can be determined that the Project can be served by existing facilities and would not result in the need for new or altered facilities and as a result, a less than significant impact would occur.

*ii. Police protection?*

**Less than Significant Impact.** The Project site is within the city limits and therefore would be served by the FPD. The Project site is within the Southeast Policing District and the nearest police station to the proposed Project is located approximately 2.5 miles southwest of the site. The Project is subject to the Police Facilities Fee for construction and acquisition costs for improvements to police protection services and facilities. In addition, the FPD reviewed the Project and recommended consideration of implementing the Crime Prevention through Environmental Design (CPTED) concept including sufficient lighting and surveillance cameras at entry/exit points and parking lots. The site layout incorporates lighting and surveillance cameras, which both support the FPD's recommendations. For these reasons, it can be determined that the Project can be served by existing facilities and would not result in the need for new or altered facilities and as a result, a less than significant impact would occur.

*iii. Schools?*

**Less than Significant Impact.** An informational letter was received for the Project from Clovis Unified School District (CUSD), dated January 4, 2023. The letter provides school district information relative to the Project including the attendance areas for elementary, intermediate, and high school, bus transportation, and school facilities fee. The School District currently levies a school facilities fee of \$5.36 per square foot (as of July 5, 2022) for residential development. The Project would be subject to the fee in place at the time the fee certificates are obtained. In addition, according to CUSD 2022 student generation rates for multi-family units, the Project would be expected to generate eight students total (elementary through high school) (.1266 multiplied by 64 units), compared to nine students that would otherwise be expected from site build out under the existing land use designation based on the rates for single-family units (.5662 multiplied by 16 units).<sup>40</sup> Therefore, the students expected to be generated from the proposed development would not exceed the number of students previously accounted for by CUSD.

*iv. The development and management of school sites are the responsibility of school districts and elected governing school boards. Funding for schools and school facilities impacts is outlined in Education Code Section 17620 and Government Code Section 65995 et. seq., which governs the amount of fees that can be levied against new development. These fees are used to construct new or expanded school facilities. Payment of fees authorized by the statute is deemed "full and complete mitigation." As stated in the CUSD letter, a School Impact Fee would be assessed for the proposed Project based on the Developer*

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<sup>40</sup> Odell Planning & Research, Inc. (2022). Development Fee Justification Study/School Facilities Needs Analysis. Accessed on 5/3/2023, [https://www.cusd.com/Downloads/1b2c63d8\\_RTF.rtf](https://www.cusd.com/Downloads/1b2c63d8_RTF.rtf)





*Fee rates in place at the time payment is due. In addition, the site is planned and zoned for residential development and has been previously accounted for in siting school facilities; the proposed development would not exceed this number. Therefore, a less than significant impact would occur. Parks?*

**Less than Significant Impact.** Park and recreational facilities are typically impacted by an increase in use from residential development. The Project proposes residential development that would introduce residents to the area and therefore increase the demand for and use of existing neighborhood and regional parks or other recreational facilities. The nearest parks to the Project site include Belterra East Park (1.3 acres, 0.30 miles west), Belterra Park (1.1 acres, 0.40 miles west), Carriage House Park (3.0 acres, 0.90 miles northeast), and Melody Park (5.0 acres, 1.0 miles northwest). As a multi-family residential development, the Project would be subject to providing on-site open space (private, common, or public plaza) pursuant to FMC **Section 15-1004** in addition to the Park Facilities Fee and in-lieu fee requirements as established under FMC **Section 12-4.702** to mitigate any potential impacts to municipally owned parks. Private open space is proposed for each residential unit either as a patio or balcony. In addition, the Project includes approximately 43,190 sf. of common open space throughout the site including indoor and outdoor recreational space (e.g., landscaping, swimming pool, arbors, and barbecue). Compliance with these requirements would reduce any impacts resulting from increased residential demand for park and recreational facilities so as to not cause substantial physical deterioration of the facilities. For these reasons, the Project would have a less than significant impact.

**v. Other public facilities?**

**Less than Significant Impact.** The Project introduces residences to the area, thus increasing the demand for other public services, such as courts, libraries, hospitals, etc., which could result in development or expansion of public facilities. However, the Project, which proposes 64 residential units, is not of a scale that would result in the construction of additional public facilities (i.e. libraries, hospitals, etc.). Typical environmental impacts associated with the development of these facilities include air quality, greenhouse gas emissions, noise, traffic, etc. The expansion of these facilities would be subject to CEQA as they are proposed. In addition, future development would be subject to the payment of the Development Impact Fee in order to mitigate any potential impacts to these public facilities. As a result, the Project would have a less than significant impact.

**4.15.3 Mitigation Measures**

None required.



#### 4.16 RECREATION

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) 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?			X	
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?			X	

##### 4.16.1 Environmental Setting

The nearest parks to the Project site include Belterra East Park (1.3 acres, 0.30 miles west), Belterra Park (1.1 acres, 0.40 miles west), Carriage House Park (3.0 acres, 0.90 miles northeast), and Melody Park (5.0 acres, 1.0 miles northwest). Park and Recreation Facilities are overseen by the Fresno Parks and Recreation Department, Parks, After School, Recreation, and Community Services (PARCS). The City’s service standard for parks is at least three acres of public parkland per 1,000 residents.

##### Fresno General Plan

The Fresno General Plan Parks, Open Space, and Schools Element includes the following objectives and policies related to park and recreational facilities and services:

**Objective POSS-1** Provide an expanded, high quality and diversified park system, allowing for varied recreational opportunities for the entire Fresno community.

**Policy POSS-1-a Parkland standard.** Implement a standard of at least three acres of public parkland per 1,000 residents for Pocket, Neighborhood, and Community parks throughout the city, while striving for five acres per 1,000 residents for all parks throughout the city, subject to identifying additional funding for Regional Parks, Open Space/Natural Areas, and Special Use Parks/Facilities.

**Policy POSS-1-e Criteria for Parks in Development Areas.** Continue to use park size and service area criteria for siting new parks and planning for parks in Development Areas:

Park Type	Size Range (Acreage)	Population Served	Service Area Radius
Neighborhood	2.01 to 10	10,000-15,000	Up to 1 mile
Community	10.01 to 40	50,000-80,000	Up to 4 miles
Regional	More than 40*	100,000	100,000 residents

\*Or when amenities provide regional service.



**Objective POSS-2** Ensure that adequate land, in appropriate locations, is designated and acquired for park and recreation uses in infill and growth areas.

**Policy POSS-2-a** Identify opportunities to site, develop and co-locate Fire and Police stations with needed parks and open space as joint-use facilities.

**Policy POSS-2-b Park and Recreation Priorities.** Use the following priorities and guidelines in acquiring and developing parks and recreation facilities:

- Acquire and develop neighborhood park space in existing developed neighborhoods that are deficient of such space and in areas along BRT corridors that are designated as priorities for encouraging new mixed-use transit-oriented development;
- Provide accessible recreation facilities in established neighborhoods with emphasis on those neighborhoods currently underserved by recreation facilities;
- Improve established neighborhood parks with emphasis on those neighborhoods with the greatest need;
- Acquire and develop neighborhood and community parks in new Development Areas;
- Recognize community parks as a special need in areas that lack these facilities or are planned for transit supportive urban densities, and explore all potential sources of revenue to secure and develop appropriate sites including joint use facilities;
- Develop new special purpose parks, such as outdoor gym equipment, natural resource based trail parks, equestrian centers, dog parks, and amphitheaters, as well as alternative recreation facilities, such as community recreation centers, passive wildlife observation park, cultural heritage and diversity park, military veterans memorial park, and universal access open space park; and
- Acquire and develop park and open space in established neighborhoods and Development Areas, prioritizing existing neighborhoods with the greatest deficiencies, so that all residents have access to park or open space within one-half mile of their residence. Develop these facilities to be fully accessible to individuals with disabilities as required by law.

**Policy POSS-2-c Review of Development Applications.** Coordinate review of all development applications (i.e., site plans, conditional use permits, and subdivision maps) in order to implement the parks and open space standards of this Plan.

- Assure the provision of adequate active and passive open spaces and facilities as appropriate within residential subdivisions through Development Code requirements for mandatory dedication and improvement of land and/or development fees.
- Require the provision of appropriate outdoor living areas or private open space in multi-family residential developments not subject to the Subdivision Map Act.
- Request open space easements where feasible and warranted to secure appropriate public use of sensitive areas with scenic or recreation values, and for buffering space for sensitive areas.
- Require provision of appropriate open space areas in private projects, in the form of trails, enhanced landscaped setbacks, parks, and water features.



- Evaluate the merits of establishing a development bonus entitlement program in which development incentives (i.e., bonus densities, bonus floor area square footage) are provided for contributions to public recreational facilities on-site or in the vicinity of the development project.

**Policy POSS-2-e Open Space Dedication for Residential Development.** Ensure new residential developments provide adequate land for parks, open space, landscaping, and trails through the dedication of land or otherwise providing for Pocket Parks, planned trails, and other recreational space, maintained by an HOA, CFD, or other such entity.

**Objective POSS-3** Ensure that park and recreational facilities make the most efficient use of land; that they are designed and managed to provide for the entire Fresno community; and that they represent positive examples of design and energy conservation.

**Policy POSS-3-a Centralized Park Locations.** Site parks central and accessible to the population served, while preserving the integrity of the surrounding neighborhood.

**Policy POSS-3-b Park Location and Walking Distance.** Site Pocket and Neighborhood Parks within a half-mile walking distance of new residential development.

**Policy POSS-3-c Link Parks with Walkways.** Link public open space to adjacent, schools, and residential uses and Activity Centers through a series of landscaped linear walkways and bikeways that enhance and encourage pedestrian use.

**Policy POSS-3-d Sidewalks to Connect Neighborhoods.** Sidewalks should be designed for internal neighborhood circulation, and to connect neighborhoods to other residential areas, parks, community trails, shopping, and major streets.

**Policy POSS-3-e Minimum Park Size for Active Recreation.** Minimize City acquisition or acceptance of dedication of park sites less than two acres in size for active recreational uses, except where maintenance costs are secured through a CFD, HOA, or other such mechanism.

**Policy POSS-3-f Park Design Guidelines.** Create, maintain, and apply park design guidelines, with provisions for appropriate amenities for each park type, which may include:

- Minimum and maximum shade.
- Protections from shading by adjacent buildings.
- Accessibility to persons with disabilities.
- Street trees and landscaped median strips in adjacent arterial roads.
- Art and points of attraction.
- Landscape and hardscape features.
- Street furniture, signage, and lighting.
- Food sales and entertainment.
- Restroom facilities, play structures, and picnic shelters.
- Landscape design synthesis with input from civil engineers and hydrologists, educators and daycare providers, fitness trainers and coaches, police officers and experts in crime prevention through environmental design, as appropriate.
- Solar panels, new LED lighting, and water efficiency improvements.
- Sports field areas designed to allow periodic changes in field locations to minimize wear areas and provide sufficient fields to host regional, state, or national tournaments.
- Using topography to create interesting and visually appealing spaces and forms.
- Use of waterways as a key design influence, a focus of restoration, and an opportunity to provide for public enjoyment of views.
- Reflecting the agricultural and horticultural heritage of the site or area.
- Connecting with surrounding areas in a way that encourages expanded pedestrian activity.
- Creating individual places within a park that respond to the needs of a broad range of park users, from youth to the



*elderly. • Creating places of delight that engage the senses. • Creating places that engage the mind, by treating park features as opportunities for interpretation and questioning. • Using sustainable design practices, and highlighting these as opportunities for learning.*

**Policy POSS-3-g Park Security and Design.** *Promote safety, attractiveness, and compatibility between parks and adjacent residential areas through design, maintenance, and enforcement of park regulations*

- *Require the installation of security lighting for parking, points of access, and building areas at all public recreation and park sites.*
- *Keep neighborhood eyes on parks to increase security.*

**Policy POSS-3-i Joint Use with Drainage Facilities.** *Continue to seek joint use agreements for use of FMFCD stormwater drainage facilities.*

**Objective POSS-4** *Pursue sufficient and dedicated funding for parks acquisition, operations, and maintenance.*

**Policy POSS-4-b Operation and Maintenance Financing.** *Continue to require new residential development to form lighting and landscaping maintenance districts or community facility districts or ensure other means of financing to pay for park operations and maintenance.*

**Policy POSS-4-c Improvements in Established Neighborhoods.** *Seek agreements with formal neighborhood associations and institutions for improvements and ongoing maintenance of parks in established neighborhoods.*

### **Fresno Municipal Code**

FMC **Section 12-4.702** establishes the Park Facilities Fee to pay for municipally owned park and recreation facilities. Residential development is responsible for a combination of land dedication and payment of in-lieu fees. Multi-family development in particular is subject to on-site open space and in-lieu fee requirements. On-site open space requirements for multi-family residential uses are outlined in FMC **Section 15-1004**. The minimum amount of on-site open space required is based on the size of the lot and can be met through a combination of private open space, common open space, or public plazas.

#### **4.16.2 Impact Assessment**

**Would the project:**

- a) *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?*

**Less than Significant Impact.** Park and recreational facilities are typically impacted by an increase in use from residential development. The Project proposes residential development that would introduce residents to the area and therefore increase the demand for and use of existing neighborhood and regional parks or other recreational facilities. The nearest parks to the Project site include Belterra East Park (1.3 acres, 0.30 miles west), Belterra Park (1.1 acres, 0.40 miles west), Carriage House Park (3.0 acres, 0.90 miles northeast), and Melody Park (5.0 acres, 1.0 miles northwest). As a multi-family residential development, the Project would be subject to providing on-site open space (private, common, plaza, etc.) pursuant to FMC **Section 15-1004** in addition to the Park Facilities Fee and in-lieu fee requirements as established under FMC **Section 12-4.702** to mitigate any potential impacts to municipally owned parks. Private open space is proposed for each residential unit either as a patio or balcony. In addition, the



Project includes approximately 43,190 sf. of common open space throughout the site including indoor and outdoor recreational space (e.g., landscaping, swimming pool, arbors, and barbecue). Compliance with these requirements would reduce any impacts resulting from increased residential demand for park and recreational facilities so as to not cause substantial physical deterioration of the facilities. For these reasons, the Project would have a less than significant impact.

*b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?*

**Less than Significant Impact.** The Project includes on-site recreational facilities as described under criterion a). Other than the on-site facilities, the Project would not require the construction or expansion of recreational facilities. The on-site recreational facilities would be developed in accordance with on-site open space requirements pursuant to FMC **Section 15-1004**. Compliance would ensure that the facilities would not be in an area or be built to a scale that would cause an adverse physical effect on the environment. As a result, a less than significant impact would occur.

#### **4.16.3 Mitigation Measures**

None required.





**4.17 TRANSPORTATION**

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

**4.17.1 Environmental Setting**

The Project site is a developed site with two existing drive approaches located on North Armstrong Avenue. North Armstrong Avenue, a two-lane, north-south collector forms the westerly site boundary. East Clinton Avenue, a two-lane, east-west collector, is approximately 350-ft. south of the southern site boundary. There are no existing pedestrian facilities including sidewalks, trails, or paths adjacent to the Project site. There is an existing Class II, striped and marked bike lane and sidewalk on the east side of North Armstrong Avenue approximately 700 feet north of the site. There are no existing or planned transit facilities adjacent to or in proximity to the Project site as identified in the General Plan and by FAX. The nearest FAX transit route to the Project site is Route 45, which has five bus stops within a one-mile radius generally located off of Shields Avenue and Fowler Avenue.

**Fresno General Plan**

The Fresno General Plan establishes a street classification system to categorize roadways and transportation facilities. The classification system is used for engineering design and traffic operation standards. The following roadway classifications are applicable to the Project site, as defined by the General Plan:

**Collector:** Two- to four-lane undivided (opposing travel lanes generally not separated by a median island) roadways, with the primary function of connecting local streets and arterials and neighborhood traffic generators and providing access to abutting properties. Local street intersections and motor vehicle access points from abutting properties are allowed consistent with the City’s engineering standards and accepted traffic engineering practices. Collectors typically have a center two-way left-turn lane.

The General Plan expands the classification description to include specific characteristics including pedestrian realm, on-street parking, number of vehicle lanes, bike lanes, and landscaped median as shown in **Table 4-23**.



Table 4-23 Roadway Characteristic Matrix from the Fresno General Plan (Table 4-1)

Roadway Type	Number of Vehicle Lanes	Bike Lanes	Pedestrian Facilities	On-Street Parking	Median
Collector	2 to 4	Yes	Sidewalks	Yes	Possible

**Source:** Fresno General Plan, Mobility and Transportation, Table 4-1

The General Plan identifies the following objective and policy related to analyzing transportation impacts.

**Objective MT-1.** Create and maintain a transportation system that is safe, efficient, provides access in an equitable manner, and optimizes travel by all modes.

**Policy MT-1b. Circulation Plan Diagram Implementation.** Design and construct planned streets and highways that complement and enhance the existing network, as well as future improvements to the network consistent with the goals, objectives and policies of the General Plan, as shown on the Circulation Diagram (Figure MT-1), to ensure that each new and existing roadway continues to function as intended.

**Policy MT-1-d Integrate Land Use and Transportation Planning.** Plan for and maintain a coordinated and well integrated land use pattern, local circulation network and transportation system that accommodates planned growth, reduces impacts on adjacent land uses, and preserves the integrity of established neighborhoods.

**Policy MT-1-f Match Travel Demand with Transportation Facilities.** Designate the types and intensities of land uses at locations such that related travel demands can be accommodated by a variety of viable transportation modes and support Complete Neighborhoods while avoiding the routing of excessive or incompatible traffic through local residential streets.

**Policy MT-1-k. Multi-Modal Level of Service Standards.** Develop and use a tiered system of flexible, multi-modal Level of Service standards for streets designated by the Circulation Diagram (Figure MT-1). Strive to accommodate a peak hour vehicle LOS of D or better on street segments and at intersections, except where Policies MT-1-m through MT-1-p provide greater specificity. Establish minimum acceptable service levels for other modes and use them in the development review process.

**Policy MT-1-n. Peak Hour Vehicle LOS.** For planning purposes and implementation of Capital Improvement Projects, maintain a peak-hour vehicle LOS standard of D or better for all roadway areas outside of identified Activity Center and Bus Rapid Transit Corridor districts, unless the City Traffic Engineer determines that maintaining this LOS would be infeasible and/or conflict with the achievement of other General Plan policies.

**Objective MT-2.** Make efficient use of the City’s existing and proposed transportation system and strive to ensure the planning and provision of adequate resources to operate and maintain it.

**Policy MT-2-i. Transportation Impact Studies.** Require a Transportation Impact Study (currently named Traffic Impact Study) to assess the impacts of new development projects on existing and planned streets for projects meeting one or more of the following criteria, unless it is determined by the City Traffic Engineer that the project site and surrounding area already has appropriate multi-modal infrastructure improvements.

- When a project includes a General Plan amendment that changes the General Plan Land Use Designation.



- When the project will substantially change the off-site transportation system (auto, transit, bike or pedestrian) or connection to the system, as determined by the City Traffic Engineer.
- Transportation impact criteria are tiered based on a project's location within the City's Sphere of Influence. This is to assist with areas being incentivized for development. The four zones, as defined on Figure MT-4, are listed below. The following criteria apply (**Note:** the Project site is in Traffic Impact Zone III, so the other zones are omitted for brevity):
  - Traffic Impact Zone III (TIZ-III): TIZ-III generally represents areas near or outside the City Limits but within the SOI as of December 31, 2012. Maintain a peak hour LOS standard of D or better for all intersections and roadway segments. A TIS will be required for all development projected to generate 100 or more peak hour new vehicle trips.

**Policy MT-2-m. Use VMT Analysis for CEQA.** Use VMT Analysis for CEQA. Use Vehicle Miles Traveled (VMT) as the criteria for evaluating transportation impacts under the California Environmental Quality Act (CEQA), pursuant to Senate Bill 743. Level of Service (LOS) may still be used for planning purposes and implementation of Capital Improvement Projects, however VMT shall be used for determining mitigation under CEQA beginning in July of 2020.

**Objective MT-4.** Establish and maintain a continuous, safe, and easily accessible bikeways system throughout the metropolitan area to reduce vehicle use, improve air quality and the quality of life, and provide public health benefits.

**Policy MT-4-a Active Transportation Plan.** To the extent consistent with this General Plan, continue to implement and periodically update the Active Transportation Plan to meet State standards and requirements for recommended improvements and funding proposals as determined appropriate and feasible.

**Policy MT-4-b Bikeway Improvements.** Establish and implement property development standards to assure that projects adjacent to designated bikeways provide adequate right-of-way and that necessary improvements are constructed to implement the planned bikeway system shown on Figure MT-2 to provide for bikeways, to the extent feasible, when existing roadways are reconstructed; and alternative bikeway alignments or routes where inadequate right-of-way is available.

**Policy MT-4-h Bicycle Parking Facilities.** Promote the installation of bicycle locking racks and bicycle parking facilities at public buildings, transit facilities, public and private parking lots, and recreational facilities. Establish standards for bicycle parking in the Development Code.

### **City of Fresno Active Transportation Plan**

The City of Fresno Active Transportation Plan (ATP) adopted March 2017, updates and supersedes the City of Fresno 2010 Bicycle, Pedestrian, and Trails Master Plan (BMP). The ATP outlines the vision to provide human-powered travel including walking, bicycling, and wheelchair use. The ATP aims to improve the accessibility and connectivity of bicycle and pedestrian network to increase the number of people to travel active transportation. The goals identified in the ATP are:

- Equitably improve the safety and perceived safety of walking and bicycling in Fresno
- Increase walking and bicycling trips in Fresno by creating user-friendly facilities
- Improve the geographic equity of access to walking and bicycling facilities in Fresno



- *Fill key gaps in Fresno’s walking and bicycling networks*

The ATP identifies an existing Class II bike lane and sidewalk on the east side of North Armstrong Avenue approximately 700 feet north of the site. The ATP also identifies a planned Class II bike lane and sidewalk adjacent to the Project site on North Armstrong Avenue.

### **Vehicle Miles Traveled Analysis**

A Vehicle Miles Traveled (VMT) Analysis was prepared for the Project by JLB Traffic Engineering, Inc. dated November 18, 2022, and provided in **Appendix D**. Results are summarized below and incorporated herein.

- *At buildout, the Project is estimated to generate approximately 431 daily trips, 26 AM peak hour trips, and 33 PM peak hour trips.*
- *The Project is expected to yield an average 9.5 VMT per capita which is within the City of Fresno’s VMT threshold of 14.0 VMT per capita for residential land uses.*
- *No significant impacts to VMT are associated with the Project.*

### **Trip Generation Analysis**

A Trip Generation Analysis was prepared for the Project by JLB Traffic Engineering, Inc. dated October 1, 2021, and provided in **Appendix D**. Results are summarized as follows and incorporated herein. The Project site is located in TIZ-III. All development within TIZ-III is required to maintain a Level of Service (LOS) Standard of D and requires a Traffic Impact Study (TIS) when projected to generate more than 100 new peak hour trips. Considering the Project is located within TIZ-III, its anticipated trip generation would not exceed 40 peak hour trips, and would not substantially change the off-site transportation system, a TIS would likely not be required. The City accepted the Trip Generation Analysis on September 2, 2022 and a TIS was not required.

#### **4.17.2 Impact Assessment**

**Would the project:**

- a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?*

**Less than Significant Impact.** The Project would be required to comply with all project-level requirements implemented by a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Compliance is further discussed below. Overall, the Project would not conflict with a program plan, ordinance, or policy addressing the circulation system and a less than significant impact would occur.

### **Roadway Facilities**

The Project site is a developed site with two existing drive approaches located on North Armstrong Avenue. North Armstrong Avenue, a two-lane, north-south collector forms the westerly site boundary. East Clinton Avenue, a two-lane, east-west collector, is approximately 350-ft. south of the southern site boundary. Per the Fresno General Plan Circulation Diagram, the design of the roadways should include two to four lanes with a bike lane, sidewalks, on-street parking, and potentially a median.



The Project would result in public street improvements along North Armstrong Avenue including concrete curb, gutter, sidewalk, and paving per City of Fresno Public Works Standards. The Project would be required to submit Public Improvement Plans for the required off-site improvements through the Building Permit process, for review and approval by the City to ensure improvements would be consistent with adopted City of Fresno Public Works Standards, Specifications, and the approved street plans. Through compliance, the Project would result in improvements to the roadway network consistent with the goals, objectives, and policies of the General Plan as shown on the Circulation Diagram (General Plan **Policy MT-1b**) and maintain a coordinated and well-integrated land use pattern, local circulation network, and transportation system (General Plan **Policy MT-1-d**).

Furthermore, as indicated by the Trip Generation Analysis, the anticipated trip generation would not exceed 40 peak hour trips which is significantly less than the TIS threshold of 100 or more peak hour trips. In addition, as discussed under criterion b) below, the Project is expected to yield an average of 9.5 VMT per capita which is within the City of Fresno's VMT threshold of 14.0 VMT per capita for residential land uses. Therefore, the existing roadway network could accommodate an acceptable peak hour vehicle LOS (General Plan **Policy MT-1-k** and **Policy MT-1-n**) and the Project would thereby result in the redevelopment of a site at an intensity that can be accommodated by transportation modes while avoiding excessive or incompatible traffic (General Plan **Policy MT-1-f**). Overall, the Project would be consistent with the General Plan and would not conflict with a program plan, ordinance, or policy addressing roadway facilities.

### ***Pedestrian and Bicycle Facilities***

There are no existing pedestrian facilities including sidewalks, trails, or paths adjacent to the Project site. There is an existing Class II, striped and marked bike lane and sidewalk on the east side of North Armstrong Avenue approximately 700 feet north of the site. There are no existing or planned transit facilities adjacent to or in proximity to the Project site as identified in the General Plan and by the Fresno Area Express. The nearest transit route to the Project site is Route 45, which is approximately one mile from the site off of Shields Avenue and Fowler Avenue.

The Project would result in public street improvements along North Armstrong Avenue including concrete curb, gutter, sidewalk, and paving per City of Fresno Public Works Standards. The Project also proposes a four-ft. wide concrete sidewalk for onsite pedestrian circulation in addition to bicycle parking for up to six bicycles. The proposed facilities would help achieve the ATP's goals by improving the safety and perceived safety of walking and bicycling, creating user-friendly facilities and thereby increasing walking and bicycling trips, improving the geographic equity of access to walking and bicycling facilities, and filling gaps in the walking and bicycling network.

Off-site improvements would be verified and ensured through the Building Permit process. Provision of the pedestrian and bicycle facilities would be ensured through the Building Permit process. Therefore, the Project would be consistent with the General Plan (**Policy MT-4-a**, **Policy MT-4-h**) and ATP and thereby would not conflict with a program, plan, ordinance, or policy addressing bicycle and pedestrian facilities.

### ***Transit Facilities***

There are no existing or planned transit facilities adjacent to or in proximity to the Project site as identified by the General Plan and by Fresno Area Express. The nearest transit route to the Project site is Route 45, which is approximately one mile from the site off of Shields Avenue and Fowler Avenue. Therefore, the Project would not conflict with a program, plan, ordinance, or policy addressing transit facilities.



***b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?***

**Less than Significant Impact.** Senate Bill (SB) 743 requires that relevant CEQA analysis of transportation impacts be conducted using a metric known as vehicle miles traveled (VMT) instead of Level of Service (LOS). VMT measures how much actual auto travel (additional miles driven) a proposed project would create on California roads. If the project adds excessive car travel onto our roads, the project may cause a significant transportation impact.

The State CEQA Guidelines were amended to implement SB 743, by adding Section 15064.3. Among its provisions, Section 15064.3 confirms that, except with respect to transportation projects, a project's effect on automobile delay shall not constitute a significant environmental impact. Therefore, LOS measures of impacts on traffic facilities are no longer a relevant CEQA criteria for transportation impacts.

CEQA Guidelines Section 15064.3(b)(4) states that “[a] lead agency has discretion to evaluate a project’s vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project’s vehicle miles traveled and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate used to estimate vehicle miles traveled and any revision to model outputs should be documented and explained in the environmental document prepared for the project. The standard of adequacy in Section 15151 shall apply to the analysis described in this section.”

On June 25, 2020, the City of Fresno adopted CEQA Guidelines for Vehicle Miles Traveled Thresholds, dated June 25, 2020, pursuant to Senate Bill 743 to be effective of July 1, 2020. The thresholds described therein are referred to herein as the City of Fresno VMT Thresholds. The City of Fresno VMT Thresholds document was prepared and adopted consistent with the requirements of CEQA Guidelines Sections 15064.3 and 15064.7. The December 2018 Technical Advisory on Evaluating Transportation Impacts in CEQA (Technical Advisory) published by the Governor’s Office of Planning and Research (OPR), was utilized as a reference and guidance document in the preparation of the Fresno VMT Thresholds.

The City of Fresno VMT Thresholds adopted a screening standard and criteria that can be used to screen out qualified projects that meet the adopted criteria from needing to prepare a detailed VMT analysis. The City of Fresno VMT Thresholds Section 3.1 regarding Development Projects states that if a project constitutes a General Plan Amendment or a Rezone, none of the screening criteria may apply, and that the City must evaluate such projects on a case-by-case basis. Here the Project includes both a General Plan Amendment and a Rezone and does not meet the screening criteria. As such, a quantitative VMT analysis is required.

As previously stated, a quantitative VMT analysis was prepared for the Project by JLB Traffic Engineering, Inc. dated November 18, 2022 (**Appendix D**). Based on the analysis, the Project is expected to yield an average of 9.5 VMT per capita which is within the City of Fresno’s VMT threshold of 14.0 VMT per capita for residential land uses. Therefore, the Project would not conflict with CEQA Guidelines Section 15064.3(b) and impacts would be less than significant.

***c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?***

**Less than Significant Impact.** The Project design does not contain any geometric design features that would create hazards. Implementation of the Project would not require the improvement and expansion of the roadway network serving the Project site. The site would be accessible via one (1) point of ingress/egress on North Armstrong Avenue





with a gated entry. An inside/outside turning radius is also proposed per City of Fresno Standards for fire and solid waste vehicle access. Further, as indicated in the Trip Generation Analysis, the Project would not generate new peak hour trips at a level that would cause intersections to operate at an unacceptable LOS. In addition, the Project would be required to submit Public Improvement Plans through the Building Permit process for review and approval by the City to ensure offsite improvements would be consistent with adopted City of Fresno Public Works Standards, Specifications, and the approved street plans. Compliance with such standards, specifications, and plans would ensure that any traffic hazards are minimized. Lastly, the Project proposes a residential development of a site that is planned and zoned for residential use within an area comprising existing and planned residential uses. Therefore, the Project does not propose an incompatible use because it is consistent with the existing development in the area and is similar in nature to the surrounding uses. As a result, implementation of the Project would result in a less than significant impact related to hazards due to roadway design features or incompatible uses.

***d) Result in inadequate emergency access?***

**Less than Significant Impact.** The Project does not involve a change to any emergency response plan. In addition, the City's Engineering Department and Fire Department have reviewed the Project and imposed standard conditions to ensure adequate site access including emergency access in addition to adequately sized emergency access lanes to accommodate emergency vehicles. In the case that Project construction requires lane closures, access through North Armstrong Avenue would be maintained through standard traffic control and therefore, potential lane closures would not affect emergency evacuation plans. Thus, a less than significant impact would occur because of the Project.

***4.17.3 Mitigation Measures***

None required.



#### 4.18 TRIBAL CULTURAL RESOURCES

<p><b>Would the project:</b>                      Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC 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:</p>	<p><b>Potentially Significant Impact</b></p>	<p><b>Less than Significant with Mitigation Incorporated</b></p>	<p><b>Less than Significant Impact</b></p>	<p><b>No Impact</b></p>
<p>a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC section 5020.1(k), or,</p>		<p>X</p>		
<p>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 PRC section 5024.1. In applying the criteria set forth in subdivision (c) of PRC section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.</p>		<p>X</p>		

##### 4.18.1 Environmental Setting

See [Section 4.5 Cultural Resources](#).

##### 4.18.2 Impact Assessment

*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), or*

**Less than Significant Impact with Mitigation Incorporated.** As discussed in [Section 4.5](#), the Project site does not contain any property or site features that are eligible for listing in the California Register of Historical Sources, or in a local register of historical resources as defined in PRC *Section 5020.1(k)*. Nevertheless, there is some possibility that a non-visible, buried site may exist and may be uncovered during ground disturbing construction activities which would constitute a significant impact. As such, implementation of *Mitigation Measure CUL-1* as described in [Section 4.5](#) would reduce any impacts to less than significant.



*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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.*

**Less than Significant Impact with Mitigation Incorporated.** The Project site has not been determined by the City of Fresno to be a significant resource pursuant to Public Resources Code *Section 5024.1* and to-date, no substantial information has been provided to the city to indicate otherwise. However, there is some possibility that a non-visible, buried site may exist and may be uncovered during ground disturbing construction activities which would constitute a significant impact. Implementation of *Mitigation Measure CUL-1* and *Mitigation Measure CUL-2* as described in **Section 4.5** would reduce any impacts to less than significant.

#### **4.18.3 Mitigation Measures**

The proposed project shall implement and incorporate, as applicable, the tribal cultural resources related mitigation measures as identified in the attached Project Specific Mitigation Monitoring Checklist dated June 2023.

***Mitigation Measure CUL-1:** If previously unknown resources are encountered before or during grading activities, construction shall stop in the immediate vicinity of the find and a qualified historical resources specialist shall be consulted to determine whether the resource requires further study. The qualified historical resources specialist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines and the City's Historic Preservation Ordinance. If the resources are determined to be unique historical resources as defined under Section 15064.5 of the CEQA Guidelines, measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds.*

*No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any historical artifacts recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study. (PEIR Mitigation Measure CUL-1.1)*



**4.19 UTILITIES AND SERVICE SYSTEMS**

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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 effect?			X	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X	
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?			X	
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?			X	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			X	

**4.19.1 Environmental Setting**

The Project site as it currently exists is developed, containing existing structures and on- and off-site improvements including drive approaches, curb, gutter, and overhead utilities along North Armstrong Avenue. There are approximately five existing structures including a 1,918-square foot single-family residence (built circa 1962), garage, and storage sheds. The site is connected to water, wastewater, and stormwater services. Natural gas, electricity, and telecommunications are provided by private companies. Each utility system is described below.

**Water**

Water supply, usage, and services are described in [Section 4.10 Hydrology and Water Quality](#).



### *Wastewater*

The City of Fresno Wastewater Management Division (WMD) is responsible for the collection, conveyance, treatment, and reclamation of wastewater generated in the Fresno-Clovis metropolitan area. Wastewater treatment and disposal is handled through the City-operated Regional Sewer Agency for the Fresno-Clovis Regional Wastewater Reclamation Facility (RWRF) North Fresno Wastewater Reclamation Facility (North Facility) via a wastewater collection system that consists of gravity sewer pipes, manholes, lift stations, junction structures, and force mains. The nearest sanitary sewer main to serve the proposed Project is an eight-inch sewer main located in North Armstrong Avenue. New connections are subject to Sewer Connection Charges pursuant to Fresno Municipal Code Section 6-304 and 6-305.

### *Solid Waste*

Solid waste in the city is collected by a Commercial Solid Waste Franchisee, Mid Valley Disposal.

### *Stormwater*

Stormwater services are described in [Section 4.10 Hydrology and Water Quality](#).

### *Natural Gas and Electricity*

PG&E, the natural gas and electric service provider for the area, incrementally expands and updates its service system as needed to serve its users. PG&E has existing overhead electric distribution facilities currently servicing the Project site.

### *Telecommunications*

Accordingly, telecommunications providers in the area incrementally expand and update their service systems in response to usage and demand. Upon request, the site would be connected to existing broadband infrastructure and subject to applicable connection and service fees.

#### **4.19.2 Impact Assessment**

##### ***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?*

**Less than Significant Impact.** The Project site is within city limits and thus, would be required to connect to water, stormwater, solid waste, and wastewater services. Natural gas, electricity, and telecommunications would be provided by private companies including PG&E and Mid Valley Disposal. The City has reviewed the Project to determine adequate capacity in these systems and ensure compliance with applicable connection requirements. In addition to connections to water, stormwater, solid waste, and wastewater services, the Project would be served by PG&E for natural gas and electricity and by the appropriate telecommunications provider for the Project Area. Therefore, all wet and dry public utilities, facilities, and infrastructure are in place and available to serve the Project site without the need for relocated, new, or expanded facilities. While new utility and service connections would need to be extended to and from the Project site (e.g., sewer, stormwater runoff, electrical), these new connections would not result in a need to modify the larger off-site infrastructure. Therefore, the Project would not require or



result in the relocation or construction of new or expanded facilities and as such, and impact would be less than significant.

***b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?***

**Less than Significant Impact.** As discussed in detail in **Section 4.10**, the City’s long-term water resource planning is addressed in the City’s 2020 UWMP. As concluded in **Section 4.10**, it can be presumed that that existing groundwater water supplies should be adequate to serve the Project’s anticipated demand.

Regarding water supply availability, the City manages its surface water and groundwater supply by maximizing water for potable use and intentional recharge during wet and normal years and relies on groundwater during dry years. To optimize water supply reliability and resiliency, the City is currently undergoing an update of its Metro Plan which will identify projects and programs. Generally, the City’s approach is to maximize local supplies and improve the storage of the groundwater basin through recharge, recycled water usage, and conservation.

The UWMP projects normal water year, single dry water year, and five-year consecutive drought period supplies based on historic water allocations, sustainable yields, and utilization of recycled water. Based on these projections, the UWMP found that groundwater supplies remain reliable in all hydrologic conditions, attributing the stability to intentional recharge. The projections also show that the City will have greater than 100,000 AF available supply in normal years after meeting demands. In a single dry year, surface water supplies will be reduced but the City would still be able to meet all potable demands. Lastly, for five-year consecutive drought periods, the City is projected to meet all demands with its existing supplies with reduced groundwater recharge in year three and four to accommodate reduced surface water allocations. Based on these projections, it can be inferred that future development, such as the proposed Project, will not negatively impact the City’s ability to provide water assuming adherence to requirements and recommendations from the City’s water resources planning efforts.

Overall, based on the information collected from the UWMP, the Project would not generate significantly greater water demand as to substantially decrease groundwater supplies. As a result, it can be presumed that the existing and planned water distribution system should be adequate to serve the Project during normal, dry, and multiple dry years. In addition, adherence to connection requirements and recommendations pursuant to the City’s water supply planning efforts (i.e., compliance with California Plumbing Code, efficient appliances, efficient landscaping, etc.) should not negatively impact the City’s water provision. For these reasons, a less than significant impact would occur as a result of the Project.

***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?***

**Less than Significant Impact.** The City’s long-term wastewater planning is addressed in the City’s Wastewater Collection System Master Plan Update (Master Plan).<sup>41</sup> Land use types are important to determine projected demand and adequate sizing and capacity for pipes and facilities to maintain effective sanitary sewer system

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<sup>41</sup> City of Fresno (2015). Wastewater Collection System Master Plan Update. Accessed December 13, 2022, <https://www.fresno.gov/publicutilities/wp-content/uploads/sites/16/2020/09/2015CollectionSystemMasterPlanUpdate2015FINAL.pdf>





facilities. The land use assumptions in the Master Plan were based on the General Plan and projected future development within the City’s proposed growth boundary. The Master Plan estimates the future quantity of wastewater generated at build out of the collections system. Wastewater flows associated with build out are projected to be approximately 129.9 millions of gallons per day (mgd).

The Project proposes a GPA to change the planned land use designation from Residential – Low Density to Residential – Medium Density. Therefore, as a higher density residential development, the Project is anticipated to generate additional wastewater beyond existing conditions. As shown in Table 5.5 of the Master Plan, the Low Density (1-3 dwelling units per acre) residential land use type is projected to generate a wastewater flow coefficient (gpd/ac) of 600 gpd/ac and the Medium High Density (12-16 dwelling units per acre) residential land use type is projected to generate 2,800 gpd/ac. **Table 4-24** summarizes the total wastewater flows to be expected for the Project. However, payment of Sewer Connection Charges and ongoing user fees would ensure that the Project’s impacts on existing wastewater facilities are adequately offset (i.e., ensuring that sufficient capacity is available).

**Table 4-24 Summary of Total Wastewater Flows by Land Use**

Land Use Type	Area (ac)	Wastewater Flow Coefficient (gpd/ac)	Daily Average (GPD)
Low Density Residential	4.2	600	2,520
Medium Density Residential	4.2	2,800	11,760

*Source: City of Fresno, Wastewater Collection System Master Plan Update*

According to the Master Plan, the City manages and maintains more than 1,500 miles of gravity sewer lines up to 84-inches in diameter, 15 active lift stations, and associated force mains. Wastewater generated in the sewer service area is conveyed to the RWRf or the North Facility. As of 2020, the RWRf has a capacity of 91.5 mgd (millions of gallons per day) and the North Facility has a capacity of 0.17 mgd (daily average flow). Expansion of these facilities is planned for 2025 or later, based on capacity levels.

The Master Plan also identifies “areas of change” and “areas of stability,” wherein “areas of change” are areas within the study area that will contribute to a net increase in wastewater flows into the collection system and “areas of sustainability” are the remaining land use areas within the current sewer service area that are assumed to remain unchanged at build out of the General Plan. The Project site is identified as an area of change by Figure 2.5 of the Master Plan and therefore, a net increase in wastewater flows into the collection system resulting from development in this area has been previously anticipated.

Aerial imagery from the City of Fresno GIS Data Viewing Application for 2015 and 2023 indicates that a majority of parcels within the “areas of change” surrounding the Project site have been developed or are currently being developed with single-family residential subdivisions. Based on this development, it is likely that the Project Area inclusive of the Project site is now within an existing sewer service area. This is further evidenced by the presence of an existing eight-inch sewer main located in North Armstrong Avenue. According to review of the Project by the City of Fresno Department of Public Utilities, sanitary sewer facilities are available to service the site subject to installation of new sewer house branch(es) and payment of Sewer Connection Charges. Collectively, these facilities would convey wastewater generated from the Project. Therefore, the Project would not require the construction of new pipelines or facilities.

In addition, the Project site is not within an area with deficient pipelines. According to the Master Plan, “in general, the City’s collection system has sufficient capacity to convey current PWWFs [Peak Wet Weather Flow] without



*exceeding the established  $q/Q$  ratio [Peak Flow to Pipe Capacity Ratio]. However, there are a few areas where wet weather capacity restrictions are present and required mitigation. The location of these capacity deficient pipelines for current PWWF conditions are shown on Figure 6.1 in red.”* As shown in Figure 6.1 of the Master Plan, there are no deficiencies identified in the Project Area and thus, no construction of new pipelines or facilities or improvements to existing pipelines or facilities would be required.

In summary, the Project is anticipated to generate additional wastewater beyond existing conditions. However, there are existing facilities available to convey wastewater generated from the Project subject to the installation of a new sewer house branch(es) and payment of Sewer Connection Charges and ongoing user fees. Payment of the required Sewer Connection Charge and ongoing user fees would ensure that sufficient capacity is available and that the Project’s impacts on existing facilities are adequately offset. For these reasons, it can be determined that the wastewater treatment provider has adequate capacity to serve the Project’s projected demand in addition to the provider’s existing commitments. Therefore, the Project would have a less than significant impact.

*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?*

**Less than Significant Impact.** The City of Fresno disposes municipal solid waste at the American Avenue Landfill (SWIS Number 10-AA-009). The American Avenue Landfill will continue operation until 2031. It currently has a maximum throughput of 2,200 tons per day, a remaining capacity of 29,358,535 cubic yards, and a maximum permit capacity of 32,700,000 cubic yards.<sup>42</sup> The Fresno General Plan Public Utilities and Services Element contains policies addressing waste collection and service in compliance with the California Integrated Waste Management Act of 1989 (AB 939), which requires each jurisdiction in California to divert at least 50% of its waste stream away from landfills either through waste reduction, recycling, or other means.

### **Construction**

CALGreen mandates locally permitted new residential building construction and demolition to recycle and/or salvage for reuse a minimum 65% of the nonhazardous construction and demolition debris generated during the Project. Further, the recycling of construction and demolition materials is required for any City-issued building or demolition permit that generates at least eight cubic yards of material by volume. Therefore, the Project would be required to implement techniques to reduce and recycle waste during construction activities in accordance with mandatory requirements under CALGreen as implemented through the building permit process. Compliance would be ensured through the building permit process. Therefore, through compliance, solid waste generated through construction activities is not anticipated to generate solid waste in excess of state or local standards, in excess of the capacity of the local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Therefore, the Project would have a less than significant impact.

### **Operations**

The Project is anticipated to generate 29.44 tons of solid waste per year (or 0.08 tons per day) as estimated by CalEEMod (**Appendix A**). The estimation accounts for compliance with AB 939. According to the review of the

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<sup>42</sup> California Department of Resources Recycling and Recovery (2023). “SWIS Facility/Site Search.” Accessed on February 27, 2023, <https://www2.calrecycle.ca.gov/SolidWaste/Site/Search>



Project by the City of Fresno Department of Public Utilities, solid waste and recycling services collectively shall equal or exceed a 2:1 ratio of two units per one cubic yard of service per week. Based on this, the 64-unit development must have a minimum of 32 cubic yards of solid waste and recycling service per week. Solid waste generated through Project operations would account for less than 0.1 percent of the daily permitted throughput capacity of the landfill. As such, Project operations are not anticipated to generate solid waste in excess of state or local standards, in excess of the capacity of the local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Therefore, the Project would have a less than significant impact.

*e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?*

**Less than Significant Impact.** As described under criterion d), Project construction and operational activities that generate solid waste would be handled, transported, and disposed of in accordance with AB 939 and CALGreen regulations related to solid waste. As a multi-family development, the Project would also be subject to AB 341, the state’s mandatory commercial recycling law, AB 827, the state’s customer access to recycling law. AB 341 requires all businesses that generate four cubic yards or more of solid waste per week and multi-family properties with five or more units to arrange for recycling services. AB 827 requires recycling and organics recycling containers at the “front-of-house” to collect waste generated. These containers are required to be placed adjacent to trash containers and be visible, easily accessible, and clearly marked. Compliance would be ensured through the building permit process. Therefore, through compliance, the Project would comply with laws and regulations that would ensure impacts related to solid waste are reduced to less than significant levels.

**4.19.3 Mitigation Measures**

None required.



## 4.20 WILDFIRE

If located in or near state responsibility or lands classified as very high fire hazard severity zones, <b>Would the project:</b>	<b>Potentially Significant Impact</b>	<b>Less than Significant with Mitigation Incorporated</b>	<b>Less than Significant Impact</b>	<b>No Impact</b>
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?			X	
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?				X
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?				X
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?				X

### 4.20.1 Environmental Setting

In general, Fresno is categorized as having little or no threat or moderate fire hazard, which can be attributed to its impervious surface areas. The area along the San Joaquin River bluff is an exception, as it is prone to wildfires due to steep terrain and native vegetation. The Project site comprises a relatively flat property within the city limits in an area comprising residential uses and is approximately 9.5 miles southeast of the San Joaquin River. In addition, the site nor the City of Fresno are identified by Cal Fire as being in a VHFHSZ. Rather, the city, inclusive of the Project site, is in an “area of local responsibility” that is an area of low fire risk.<sup>43</sup> As an area of local responsibility, the Fresno Fire Department is responsible for providing fire protection services (See [Section 4.15](#)).

### 4.20.2 Impact Assessment

*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?*

<sup>43</sup> Cal Fire, “FHSZ Viewer.” Accessed on December 13, 2022, <https://egis.fire.ca.gov/FHSZ/>



**Less than Significant Impact.** The Project would not impair access to the existing roadway network. Construction may require lane closure; however, these activities would be short-term and access through North Armstrong Avenue would be maintained through standard traffic control. Following construction, this roadway would continue to provide access to the site. Safe and convenient vehicular and pedestrian circulation would be provided in addition to adequate access for emergency vehicles. To determine and ensure adequate vehicular and pedestrian circulation and emergency vehicle access, the Project has been reviewed and conditioned by the City of Fresno Police Department and Fire Department for compliance with applicable code and regulations including applicable emergency response and evacuation plans. Therefore, the Project would not substantially impair any emergency response plan or emergency evacuation plan and no impact would occur.

*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?*

**No Impact.** The Project site is located on a relatively flat property with minimal slope and is not in an area that is subject to strong prevailing winds or other factors that would exacerbate wildfire risks. The site is highly disturbed and is not located within a wildland (i.e., wild, uncultivated, and uninhabited land), which precludes the risk of wildfire. Further, the Project site is within an “area of local responsibility” and is not identified by Cal Fire to be in a VHFHSZ. For these reasons, no impact would occur as a result of this Project.

*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?*

**No Impact.** The Project is located within city limits in an area with existing infrastructure such as roads and utilities that are maintained accordingly. As previously discussed, all proposed project components (including utilities, roadway, buildings, walls, and landscaping) would be located within the boundaries of the Project site and have been reviewed and/or conditioned by the City of Fresno for compliance with applicable codes and regulations. Through compliance, such infrastructure would not exacerbate fire risk or result in temporary or ongoing impacts to the environment and no impact would occur.

*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?*

**No Impact.** The city inclusive of the Project site is not located in or near state responsibility or lands classified as very high fire hazard severity zones. The topography of the Project site is relatively flat with stable, native soils, and the site is not in the immediate vicinity of rivers or creeks that would be more susceptible to landslides. Therefore, no impact would occur because of the Project.

#### **4.20.3 Mitigation Measures**

None required.



**4.21 MANDATORY FINDINGS OF SIGNIFICANCE**

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a 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?		X		
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a 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)?			X	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X	

**4.21.1 Impact Assessment**

a) *Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?*

**Less than Significant Impact with Mitigation Incorporated.** The analyses of environmental issues contained in this Initial Study indicate that the Project is not expected to have substantial impact on the environment or on any resources identified in the Initial Study. Standard requirements that will be implemented through the entitlement process and the attached mitigation monitoring and reporting program have been incorporated in the project to reduce all potentially significant impacts to less than significant, including *Mitigation Measures AES-1, AES-2, AES-*





3, CUL-1, CUL-1, NOI-1, and NOI-2. Therefore, the Project would have a less than significant impact with mitigation incorporated.

*b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a 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.)*

**Less than Significant Impact.** CEQA Guidelines Section 15064(i) states that a Lead Agency shall consider whether the cumulative impact of a project is significant and whether the effects of the project are cumulatively considerable. The assessment of the significance of the cumulative effects of a project must, therefore, be conducted in connection with the effects of past projects, other current projects, and probable future projects. Due to the nature of the Project including its relatively small size and consistency with environmental policies, incremental contributions to impacts are considered less than cumulatively considerable. All Project-related impacts were determined to be less than significant. The Project would not contribute substantially to adverse cumulative conditions, or create any substantial indirect impacts (i.e., increase in population could lead to an increased need for housing, increase in traffic, air pollutants, etc.). As such, Project impacts are not considered to be cumulatively considerable given the insignificance of project induced impacts. The impact is therefore less than significant.

*c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?*

**Less than Significant Impact.** The analyses of environmental issues contained in this Initial Study indicate that the project is not expected to have substantial impact on human beings, either directly or indirectly. Standard requirements and conditions have been incorporated in the project to reduce all potentially significant impacts to less than significant. Therefore, the Project would have a less than significant impact.



## 5 MITIGATION MONITORING AND REPORTING PROGRAM

This mitigation monitoring and reporting checklist was prepared for General Plan Amendment/Rezone/Development Permit Application No. P22-02376 for the proposed Armstrong Apartments (“Project”) and is dated June 2023. The checklist was prepared pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15097 and Section 21081.6 of the Public Resources Code (PRC). The timing of implementing each mitigation measure is identified in in the checklist, as well as identifies the entity responsible for verifying that the mitigation measures applied to a project are performed. The Project Applicant is responsible for providing evidence that mitigation measures are implemented. As lead agency, the City of Fresno is responsible for verifying that mitigation is performed/completed.



**Mitigation Monitoring and Reporting Checklist**  
**For Plan Amendment – Rezone No. P22-04389 / Development Permit Application No. P22-02079**  
**Dated June 2023**

INCORPORATING MEASURES FROM THE PROGRAM ENVIRONMENTAL IMPACT REPORT (PEIR) CERTIFIED FOR  
 THE CITY OF FRESNO GENERAL PLAN UPDATE (SCH No. 2012111015)

Mitigation Measures	Timing of Verification	Compliance Verified By	Verification of Completion	
			Date	Initials
<b>Aesthetics</b>				
<b>AES-1:</b> Lighting for Street and Parking Areas. Lighting systems for street and parking areas shall include shields to direct light to the roadway surfaces and parking areas. Vertical shields on the light fixtures shall also be used to direct light away from adjacent light sensitive land uses such as residences. (PEIR Mitigation Measure AES-4.1) <b>Verification comments:</b>	Lighting systems to be confirmed during plan check, prior to issuance of building permits	Public Works Department (PW) and Planning and Development Department		
<b>AES-2:</b> Signage Lighting. Lighting systems for freestanding signs shall not exceed 100-foot Lamberts (FT-L) when adjacent to streets which have an average light intensity of less than 2.0 horizontal footcandles and shall not exceed 500 FT-L when adjacent to streets that have an average light intensity of 2.0 horizontal footcandles or greater. (PEIR Mitigation Measure AES-4.4) <b>Verification comments:</b>	Lighting systems to be confirmed during plan check, prior to issuance of building permits	PW and Planning and Development Department		
<b>AES-3:</b> Use of Non-Reflective Materials. Materials used on building facades shall be non-reflective. (PEIR Mitigation Measure AES-4.5) <b>Verification comments:</b>	Lighting systems to be confirmed during plan check, prior to issuance of building permits	PW and Planning and Development Department		



Cultural Resources				
<p><b>CUL-1:</b> If previously unknown resources are encountered before or during grading activities, construction shall stop in the immediate vicinity of the find and a qualified historical resources specialist shall be consulted to determine whether the resource requires further study. The qualified historical resources specialist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines and the City’s Historic Preservation Ordinance. If the resources are determined to be unique historical resources as defined under Section 15064.5 of the CEQA Guidelines, measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any historical artifacts recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study. (PEIR Mitigation Measure CUL-1.1)</p> <p><b>Verification comments:</b></p>	<p>Planning and Development Department to review contract specifications to ensure inclusion of provisions included in project-specific mitigation measure. Following discovery of previously unknown resource, a qualified historical resources specialist shall prepare recommendations and submit to the Planning and Development Department. Timing for recommendations shall be established by project-specific mitigation measure.</p>	<p>Planning and Development Department</p>		
<p><b>CUL-2:</b> In the event that human remains are unearthed during excavation and grading activities of any future development project, all activity shall cease immediately. Pursuant to Health and Safety Code (HSC) Section 7050.5, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98(a). If the remains are determined to be of Native American descent, the coroner shall within 24 hours notify the Native American Heritage Commission (NAHC). The NAHC shall then contact the most likely descendent of the deceased Native American, who shall then serve as the consultant on how to proceed with the remains. Pursuant to</p>	<p>Planning and Development Department to review construction specifications to ensure inclusion of provisions included in mitigation measure.</p>	<p>Planning and Development Department</p>		



<p>PRC Section 5097.98(b), upon the discovery of Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendants regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment. (PEIR Mitigation Measure CUL-3)  <b>Verification comments:</b></p>				
<b>Geology and Soils</b>				
<i>See CUL-2</i>				
<b>Noise</b>				
<p><b>NOI-1:</b> Interior Noise Insulation. Mechanical ventilation or air conditioning must be provided for all units so that windows and doors can remain closed for sound insulation purposes.  <b>Verification comments:</b></p>	<p>Mechanical systems to be confirmed during plan check, prior to issuance of building permits</p>	<p>Public Works Department (PW) and Planning and Development Department</p>		
<p><b>NOI-2:</b> Construction Vibration. The use of heavy construction equipment within 25 feet of existing structures shall be prohibited. (PEIR Mitigation Measure NOI-2)  <b>Verification comments:</b></p>	<p>Prior to issuance of any grading or construction permits, the Planning and Development Department shall ensure that project construction specifications</p>	<p>Planning and Development Department prohibit heavy construction within 25 feet of existing structures.</p>		
<b>Tribal Cultural Resources</b>				
<i>See CUL-1 and CUL-2</i>				



## 6 REPORT PREPARATION

Names of Persons Who Prepared or Participated in the Initial Study:

Lead Agency		
Lead Agency	City of Fresno, Planning and Development Department 2600 Fresno Street, 3rd Floor Fresno, CA 93721	Steven Lieng, Planner
Initial Study Consultant		
Initial Study	Precision Civil Engineering, Inc. 1234 O Street Fresno, CA 93721 (559) 449-4500	Bonique Emerson, AICP, VP of Planning Jenna Chilingirian, AICP, Senior Associate Planner Shin Tu, AICP Candidate, Associate Planner
Acoustical Analysis		
Acoustical Analysis	WJV Acoustics, Inc. 113 N. Church Street, Suite 203 Visalia, California 93291 (559) 627-4923	Walter J Van Groningen, President
Historic Review		
Historical Review	Karana Hattersley-Drayton, M.A. 4110 N. Maroa Avenue Fresno, CA 93704 karanadrayton@comcast.net	Karana Hattersley-Drayton, M.A., Architectural Historian
Vehicle Miles Traveled Analysis		
Vehicle Miles Traveled Analysis	JLB Traffic Engineering, Inc. 516 W. Shaw Ave., Ste. 103 Fresno, CA 93704 (559) 317-6249	Jose Luis Benavides, P.E., T.E., President





## APPENDICIES

### 6.1 Appendix A: CalEEMod Output Files

Prepared by Precision Civil Engineering, Inc., dated February 2023.

#### Armstrong Apartments – 2005

Assumptions:

- *This modeling includes 64 residential units. The Low-rise Apartments land use type is used for modeling purposes.*
- *All CalEEMod default numbers were used.*



## Armstrong Apartments – proposed Project

### Assumptions:

- *The proposed Project includes 64 residential units. The Low-rise Apartments land use type is used for modeling purposes.*
- *Effective January 1, 2022, nonflat gloss and semigloss paints are required to meet the 50 g/l standard, providing lower VOC emissions for buildings constructed after that date. Therefore, the analysis uses the 50 g/l emission factor for the analysis.*
- *Trip Generation Rate: Updated Trip Rate to match with ITE 11 edition.*
- *H-W (Home to Work) Vehicle Trips: assume 9.5-mile length trips. See Transportation Section for VMT generation.*
- *H-S (Home to Shop) Vehicle Trips: assume 2-mile length trips since there are three grocery stores approximately two miles from the Project site. Other services within two miles of the site include Dollar Tree, Starbucks, and several restaurants.*
- *H-O (Home to Other) Vehicle Trips: assume 1-mile length trips since trips for recreational purposes that can be provided by the apartment's amenities (swimming pool, gym, etc.) and within 1 miles (Belterra Park, Melody Park, Swim School, Elementary School, etc.).*
- *Energy Use: The buildings exceed Title 24 Energy Compliance Standards by 2% to 7%. As such, for modeling purposes, Title 24 electricity and natural gas energy intensity has a 7% decrease compared to the default value.*
- *Water and Wastewater: The Project exceeds the requirements of the State Water Efficient Landscape Ordinance (WELO) as called for in the 2019 CGBC by 8%. As such, outdoor water use is has a 8% decrease compared to the default value.*
- *Mitigation – Area: It is assumed that the Project would have no hearth.*
- *Mitigation – Traffic: The Project proposes the increase of residential density and pedestrian improvements on and connecting off-site. For commute trip reduction, the Project assumes that 20% people work from home, thus 20% trips are reduced.*
- *Mitigation – Energy: The Project exceeds Title 24 Energy Compliance Standards by 2% to 7%. In addition, the Renewable Electricity Standard requires that electricity providers include a minimum of 33 percent renewable energy in their portfolios by the year 2020.*
- *Mitigation – Water: The Project includes the installation of low-flow indoor appliances. Regarding outdoor water use, the project exceeds the requirements of the State Water Efficient Landscape Ordinance (MWELo) as called for in the 2019 CGBC by 8%.*
- *Mitigation – Solid Waste: The Project will recycle 50% of the solid waste in compliance with state requirements.*



## Armstrong Apartments – 2030

### Assumptions:

- *All assumptions for the proposed Project is included in the 2030 modeling.*
- *In addition, per SB 110, the utilities in California will be required to increase the use of renewable energy sources to 60 percent by 2030.*

Armstrong Apartments - 2005 - San Joaquin Valley Unified APCD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**Armstrong Apartments - 2005**

**San Joaquin Valley Unified APCD Air District, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	64.00	Dwelling Unit	4.20	64,000.00	203

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.7	<b>Precipitation Freq (Days)</b>	45
<b>Climate Zone</b>	3			<b>Operational Year</b>	2005
<b>Utility Company</b>	Pacific Gas and Electric Company				
<b>CO2 Intensity (lb/MWhr)</b>	203.98	<b>CH4 Intensity (lb/MWhr)</b>	0.033	<b>N2O Intensity (lb/MWhr)</b>	0.004

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - total acreage of project site is 4.2 ac

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	4.00	4.20
tblWoodstoves	NumberCatalytic	4.20	0.00
tblWoodstoves	NumberNoncatalytic	4.20	0.00

**2.0 Emissions Summary**

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**2.1 Overall Construction**

**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2004	1.3181	7.1507	4.3970	0.0443	0.1269	0.5171	0.6440	0.0522	0.5165	0.5687	0.0000	434.8650	434.8650	0.1061	0.0112	440.8605
2005	1.0601	0.3636	0.2086	2.4600e-003	2.2900e-003	0.0261	0.0284	6.1000e-004	0.0261	0.0267	0.0000	23.8163	23.8163	4.8100e-003	3.1000e-004	24.0283
<b>Maximum</b>	<b>1.3181</b>	<b>7.1507</b>	<b>4.3970</b>	<b>0.0443</b>	<b>0.1269</b>	<b>0.5171</b>	<b>0.6440</b>	<b>0.0522</b>	<b>0.5165</b>	<b>0.5687</b>	<b>0.0000</b>	<b>434.8650</b>	<b>434.8650</b>	<b>0.1061</b>	<b>0.0112</b>	<b>440.8605</b>

**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					
2004	1.3181	7.1507	4.3970	0.0443	0.1269	0.5171	0.6440	0.0522	0.5165	0.5687	0.0000	434.8646	434.8646	0.1061	0.0112	440.8600
2005	1.0601	0.3636	0.2086	2.4600e-003	2.2900e-003	0.0261	0.0284	6.1000e-004	0.0261	0.0267	0.0000	23.8162	23.8162	4.8100e-003	3.1000e-004	24.0283
<b>Maximum</b>	<b>1.3181</b>	<b>7.1507</b>	<b>4.3970</b>	<b>0.0443</b>	<b>0.1269</b>	<b>0.5171</b>	<b>0.6440</b>	<b>0.0522</b>	<b>0.5165</b>	<b>0.5687</b>	<b>0.0000</b>	<b>434.8646</b>	<b>434.8646</b>	<b>0.1061</b>	<b>0.0112</b>	<b>440.8600</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2004	3-31-2004	2.3831	2.3831
2	4-1-2004	6-30-2004	2.0068	2.0068
3	7-1-2004	9-30-2004	2.0289	2.0289
4	10-1-2004	12-31-2004	2.0402	2.0402
5	1-1-2005	3-31-2005	1.4713	1.4713
		Highest	2.3831	2.3831

**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	0.3767	0.0314	0.5613	1.8000e-004		4.2600e-003	4.2600e-003		4.2600e-003	4.2600e-003	0.0000	28.5015	28.5015	1.7700e-003	5.1000e-004	28.6974
Energy	4.7100e-003	0.0403	0.0171	2.6000e-004		3.2500e-003	3.2500e-003		3.2500e-003	3.2500e-003	0.0000	71.0704	71.0704	4.8500e-003	1.3300e-003	71.5893
Mobile	0.8808	2.3822	10.1999	0.0160	0.5085	0.0491	0.5576	0.1363	0.0467	0.1830	0.0000	683.5394	683.5394	0.0944	0.0772	708.9125
Waste						0.0000	0.0000		0.0000	0.0000	5.9761	0.0000	5.9761	0.3532	0.0000	14.8054
Water						0.0000	0.0000		0.0000	0.0000	1.3229	2.9389	4.2618	0.1364	3.2700e-003	8.6438
<b>Total</b>	<b>1.2622</b>	<b>2.4539</b>	<b>10.7783</b>	<b>0.0165</b>	<b>0.5085</b>	<b>0.0566</b>	<b>0.5651</b>	<b>0.1363</b>	<b>0.0542</b>	<b>0.1905</b>	<b>7.2990</b>	<b>786.0503</b>	<b>793.3493</b>	<b>0.5905</b>	<b>0.0823</b>	<b>832.6484</b>



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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	0.3767	0.0314	0.5613	1.8000e-004		4.2600e-003	4.2600e-003		4.2600e-003	4.2600e-003	0.0000	28.5015	28.5015	1.7700e-003	5.1000e-004	28.6974
Energy	4.7100e-003	0.0403	0.0171	2.6000e-004		3.2500e-003	3.2500e-003		3.2500e-003	3.2500e-003	0.0000	71.0704	71.0704	4.8500e-003	1.3300e-003	71.5893
Mobile	0.8808	2.3822	10.1999	0.0160	0.5085	0.0491	0.5576	0.1363	0.0467	0.1830	0.0000	683.5394	683.5394	0.0944	0.0772	708.9125
Waste						0.0000	0.0000		0.0000	0.0000	5.9761	0.0000	5.9761	0.3532	0.0000	14.8054
Water						0.0000	0.0000		0.0000	0.0000	1.3229	2.9389	4.2618	0.1364	3.2700e-003	8.6438
<b>Total</b>	<b>1.2622</b>	<b>2.4539</b>	<b>10.7783</b>	<b>0.0165</b>	<b>0.5085</b>	<b>0.0566</b>	<b>0.5651</b>	<b>0.1363</b>	<b>0.0542</b>	<b>0.1905</b>	<b>7.2990</b>	<b>786.0503</b>	<b>793.3493</b>	<b>0.5905</b>	<b>0.0823</b>	<b>832.6484</b>

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

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2004	1/28/2004	5	20	
2	Site Preparation	Site Preparation	1/29/2004	2/4/2004	5	5	
3	Grading	Grading	2/5/2004	2/16/2004	5	8	

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

4	Building Construction	Building Construction	2/17/2004	1/3/2005	5	230
5	Paving	Paving	1/4/2005	1/27/2005	5	18
6	Architectural Coating	Architectural Coating	1/28/2005	2/22/2005	5	18

**Acres of Grading (Site Preparation Phase): 7.5**

**Acres of Grading (Grading Phase): 8**

**Acres of Paving: 0**

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

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	7.00	231	0.29
Demolition	Excavators	3	8.00	158	0.38
Grading	Excavators	1	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37

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Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	46.00	7.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

**3.2 Demolition - 2004**

**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	0.1020	0.7704	0.2922	4.4200e-003		0.0438	0.0438		0.0438	0.0438	0.0000	39.7218	39.7218	8.3100e-003	0.0000	39.9295
<b>Total</b>	<b>0.1020</b>	<b>0.7704</b>	<b>0.2922</b>	<b>4.4200e-003</b>		<b>0.0438</b>	<b>0.0438</b>		<b>0.0438</b>	<b>0.0438</b>	<b>0.0000</b>	<b>39.7218</b>	<b>39.7218</b>	<b>8.3100e-003</b>	<b>0.0000</b>	<b>39.9295</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.2 Demolition - 2004**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5300e-003	4.7600e-003	0.0338	2.0000e-005	1.2000e-003	5.0000e-005	1.2500e-003	3.2000e-004	5.0000e-005	3.7000e-004	0.0000	1.4041	1.4041	2.8000e-004	2.2000e-004	1.4780
<b>Total</b>	<b>3.5300e-003</b>	<b>4.7600e-003</b>	<b>0.0338</b>	<b>2.0000e-005</b>	<b>1.2000e-003</b>	<b>5.0000e-005</b>	<b>1.2500e-003</b>	<b>3.2000e-004</b>	<b>5.0000e-005</b>	<b>3.7000e-004</b>	<b>0.0000</b>	<b>1.4041</b>	<b>1.4041</b>	<b>2.8000e-004</b>	<b>2.2000e-004</b>	<b>1.4780</b>

**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	0.1020	0.7704	0.2922	4.4200e-003		0.0438	0.0438		0.0438	0.0438	0.0000	39.7218	39.7218	8.3100e-003	0.0000	39.9295
<b>Total</b>	<b>0.1020</b>	<b>0.7704</b>	<b>0.2922</b>	<b>4.4200e-003</b>		<b>0.0438</b>	<b>0.0438</b>		<b>0.0438</b>	<b>0.0438</b>	<b>0.0000</b>	<b>39.7218</b>	<b>39.7218</b>	<b>8.3100e-003</b>	<b>0.0000</b>	<b>39.9295</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.2 Demolition - 2004**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5300e-003	4.7600e-003	0.0338	2.0000e-005	1.2000e-003	5.0000e-005	1.2500e-003	3.2000e-004	5.0000e-005	3.7000e-004	0.0000	1.4041	1.4041	2.8000e-004	2.2000e-004	1.4780
<b>Total</b>	<b>3.5300e-003</b>	<b>4.7600e-003</b>	<b>0.0338</b>	<b>2.0000e-005</b>	<b>1.2000e-003</b>	<b>5.0000e-005</b>	<b>1.2500e-003</b>	<b>3.2000e-004</b>	<b>5.0000e-005</b>	<b>3.7000e-004</b>	<b>0.0000</b>	<b>1.4041</b>	<b>1.4041</b>	<b>2.8000e-004</b>	<b>2.2000e-004</b>	<b>1.4780</b>

**3.3 Site Preparation - 2004**

**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					0.0491	0.0000	0.0491	0.0253	0.0000	0.0253	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0280	0.2008	0.0769	1.1200e-003		0.0126	0.0126		0.0126	0.0126	0.0000	10.0012	10.0012	2.2800e-003	0.0000	10.0582
<b>Total</b>	<b>0.0280</b>	<b>0.2008</b>	<b>0.0769</b>	<b>1.1200e-003</b>	<b>0.0491</b>	<b>0.0126</b>	<b>0.0618</b>	<b>0.0253</b>	<b>0.0126</b>	<b>0.0379</b>	<b>0.0000</b>	<b>10.0012</b>	<b>10.0012</b>	<b>2.2800e-003</b>	<b>0.0000</b>	<b>10.0582</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.3 Site Preparation - 2004**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0600e-003	1.4300e-003	0.0101	1.0000e-005	3.6000e-004	2.0000e-005	3.8000e-004	1.0000e-004	1.0000e-005	1.1000e-004	0.0000	0.4212	0.4212	8.0000e-005	7.0000e-005	0.4434
<b>Total</b>	<b>1.0600e-003</b>	<b>1.4300e-003</b>	<b>0.0101</b>	<b>1.0000e-005</b>	<b>3.6000e-004</b>	<b>2.0000e-005</b>	<b>3.8000e-004</b>	<b>1.0000e-004</b>	<b>1.0000e-005</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>0.4212</b>	<b>0.4212</b>	<b>8.0000e-005</b>	<b>7.0000e-005</b>	<b>0.4434</b>

**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					0.0491	0.0000	0.0491	0.0253	0.0000	0.0253	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0280	0.2008	0.0769	1.1200e-003		0.0126	0.0126		0.0126	0.0126	0.0000	10.0011	10.0011	2.2800e-003	0.0000	10.0582
<b>Total</b>	<b>0.0280</b>	<b>0.2008</b>	<b>0.0769</b>	<b>1.1200e-003</b>	<b>0.0491</b>	<b>0.0126</b>	<b>0.0618</b>	<b>0.0253</b>	<b>0.0126</b>	<b>0.0379</b>	<b>0.0000</b>	<b>10.0011</b>	<b>10.0011</b>	<b>2.2800e-003</b>	<b>0.0000</b>	<b>10.0582</b>

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**3.3 Site Preparation - 2004**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0600e-003	1.4300e-003	0.0101	1.0000e-005	3.6000e-004	2.0000e-005	3.8000e-004	1.0000e-004	1.0000e-005	1.1000e-004	0.0000	0.4212	0.4212	8.0000e-005	7.0000e-005	0.4434
<b>Total</b>	<b>1.0600e-003</b>	<b>1.4300e-003</b>	<b>0.0101</b>	<b>1.0000e-005</b>	<b>3.6000e-004</b>	<b>2.0000e-005</b>	<b>3.8000e-004</b>	<b>1.0000e-004</b>	<b>1.0000e-005</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>0.4212</b>	<b>0.4212</b>	<b>8.0000e-005</b>	<b>7.0000e-005</b>	<b>0.4434</b>

**3.4 Grading - 2004**

**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					0.0283	0.0000	0.0283	0.0137	0.0000	0.0137	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0333	0.2381	0.0918	1.4000e-003		0.0150	0.0150		0.0150	0.0150	0.0000	12.4819	12.4819	2.7100e-003	0.0000	12.5495
<b>Total</b>	<b>0.0333</b>	<b>0.2381</b>	<b>0.0918</b>	<b>1.4000e-003</b>	<b>0.0283</b>	<b>0.0150</b>	<b>0.0433</b>	<b>0.0137</b>	<b>0.0150</b>	<b>0.0287</b>	<b>0.0000</b>	<b>12.4819</b>	<b>12.4819</b>	<b>2.7100e-003</b>	<b>0.0000</b>	<b>12.5495</b>



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**3.4 Grading - 2004**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4100e-003	1.9000e-003	0.0135	1.0000e-005	4.8000e-004	2.0000e-005	5.0000e-004	1.3000e-004	2.0000e-005	1.5000e-004	0.0000	0.5616	0.5616	1.1000e-004	9.0000e-005	0.5912
<b>Total</b>	<b>1.4100e-003</b>	<b>1.9000e-003</b>	<b>0.0135</b>	<b>1.0000e-005</b>	<b>4.8000e-004</b>	<b>2.0000e-005</b>	<b>5.0000e-004</b>	<b>1.3000e-004</b>	<b>2.0000e-005</b>	<b>1.5000e-004</b>	<b>0.0000</b>	<b>0.5616</b>	<b>0.5616</b>	<b>1.1000e-004</b>	<b>9.0000e-005</b>	<b>0.5912</b>

**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					0.0283	0.0000	0.0283	0.0137	0.0000	0.0137	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0333	0.2381	0.0918	1.4000e-003		0.0150	0.0150		0.0150	0.0150	0.0000	12.4818	12.4818	2.7100e-003	0.0000	12.5495
<b>Total</b>	<b>0.0333</b>	<b>0.2381</b>	<b>0.0918</b>	<b>1.4000e-003</b>	<b>0.0283</b>	<b>0.0150</b>	<b>0.0433</b>	<b>0.0137</b>	<b>0.0150</b>	<b>0.0287</b>	<b>0.0000</b>	<b>12.4818</b>	<b>12.4818</b>	<b>2.7100e-003</b>	<b>0.0000</b>	<b>12.5495</b>

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**3.4 Grading - 2004**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4100e-003	1.9000e-003	0.0135	1.0000e-005	4.8000e-004	2.0000e-005	5.0000e-004	1.3000e-004	2.0000e-005	1.5000e-004	0.0000	0.5616	0.5616	1.1000e-004	9.0000e-005	0.5912
<b>Total</b>	<b>1.4100e-003</b>	<b>1.9000e-003</b>	<b>0.0135</b>	<b>1.0000e-005</b>	<b>4.8000e-004</b>	<b>2.0000e-005</b>	<b>5.0000e-004</b>	<b>1.3000e-004</b>	<b>2.0000e-005</b>	<b>1.5000e-004</b>	<b>0.0000</b>	<b>0.5616</b>	<b>0.5616</b>	<b>1.1000e-004</b>	<b>9.0000e-005</b>	<b>0.5912</b>

**3.5 Building Construction - 2004**

**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	0.9990	5.5260	2.5601	0.0348		0.4344	0.4344		0.4344	0.4344	0.0000	300.9759	300.9759	0.0814	0.0000	303.0099
<b>Total</b>	<b>0.9990</b>	<b>5.5260</b>	<b>2.5601</b>	<b>0.0348</b>		<b>0.4344</b>	<b>0.4344</b>		<b>0.4344</b>	<b>0.4344</b>	<b>0.0000</b>	<b>300.9759</b>	<b>300.9759</b>	<b>0.0814</b>	<b>0.0000</b>	<b>303.0099</b>

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**3.5 Building Construction - 2004**

**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	0.0259	0.2401	0.1313	1.7100e-003	5.3100e-003	9.3200e-003	0.0146	1.5400e-003	8.9100e-003	0.0105	0.0000	19.9965	19.9965	1.2700e-003	2.9400e-003	20.9041
Worker	0.1239	0.1672	1.1872	7.8000e-004	0.0421	1.8400e-003	0.0440	0.0112	1.7100e-003	0.0129	0.0000	49.3010	49.3010	9.7500e-003	7.8900e-003	51.8967
<b>Total</b>	<b>0.1498</b>	<b>0.4073</b>	<b>1.3185</b>	<b>2.4900e-003</b>	<b>0.0474</b>	<b>0.0112</b>	<b>0.0586</b>	<b>0.0127</b>	<b>0.0106</b>	<b>0.0234</b>	<b>0.0000</b>	<b>69.2975</b>	<b>69.2975</b>	<b>0.0110</b>	<b>0.0108</b>	<b>72.8008</b>

**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	0.9990	5.5260	2.5601	0.0348		0.4344	0.4344		0.4344	0.4344	0.0000	300.9755	300.9755	0.0814	0.0000	303.0095
<b>Total</b>	<b>0.9990</b>	<b>5.5260</b>	<b>2.5601</b>	<b>0.0348</b>		<b>0.4344</b>	<b>0.4344</b>		<b>0.4344</b>	<b>0.4344</b>	<b>0.0000</b>	<b>300.9755</b>	<b>300.9755</b>	<b>0.0814</b>	<b>0.0000</b>	<b>303.0095</b>

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**3.5 Building Construction - 2004**

**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	0.0259	0.2401	0.1313	1.7100e-003	5.3100e-003	9.3200e-003	0.0146	1.5400e-003	8.9100e-003	0.0105	0.0000	19.9965	19.9965	1.2700e-003	2.9400e-003	20.9041
Worker	0.1239	0.1672	1.1872	7.8000e-004	0.0421	1.8400e-003	0.0440	0.0112	1.7100e-003	0.0129	0.0000	49.3010	49.3010	9.7500e-003	7.8900e-003	51.8967
<b>Total</b>	<b>0.1498</b>	<b>0.4073</b>	<b>1.3185</b>	<b>2.4900e-003</b>	<b>0.0474</b>	<b>0.0112</b>	<b>0.0586</b>	<b>0.0127</b>	<b>0.0106</b>	<b>0.0234</b>	<b>0.0000</b>	<b>69.2975</b>	<b>69.2975</b>	<b>0.0110</b>	<b>0.0108</b>	<b>72.8008</b>

**3.5 Building Construction - 2005**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.7600e-003	0.0207	0.0102	1.5000e-004		1.7400e-003	1.7400e-003		1.7400e-003	1.7400e-003	0.0000	1.3143	1.3143	3.1000e-004	0.0000	1.3220
<b>Total</b>	<b>3.7600e-003</b>	<b>0.0207</b>	<b>0.0102</b>	<b>1.5000e-004</b>		<b>1.7400e-003</b>	<b>1.7400e-003</b>		<b>1.7400e-003</b>	<b>1.7400e-003</b>	<b>0.0000</b>	<b>1.3143</b>	<b>1.3143</b>	<b>3.1000e-004</b>	<b>0.0000</b>	<b>1.3220</b>

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**3.5 Building Construction - 2005**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-004	9.6000e-004	3.6000e-004	1.0000e-005	2.0000e-005	4.0000e-005	6.0000e-005	1.0000e-005	4.0000e-005	4.0000e-005	0.0000	0.0853	0.0853	0.0000	1.0000e-005	0.0893
Worker	3.6000e-004	4.7000e-004	3.6800e-003	0.0000	1.8000e-004	0.0000	1.9000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.2049	0.2049	3.0000e-005	2.0000e-005	0.2128
<b>Total</b>	<b>4.6000e-004</b>	<b>1.4300e-003</b>	<b>4.0400e-003</b>	<b>1.0000e-005</b>	<b>2.0000e-004</b>	<b>4.0000e-005</b>	<b>2.5000e-004</b>	<b>6.0000e-005</b>	<b>4.0000e-005</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>0.2902</b>	<b>0.2902</b>	<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>0.3020</b>

**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	3.7600e-003	0.0207	0.0102	1.5000e-004		1.7400e-003	1.7400e-003		1.7400e-003	1.7400e-003	0.0000	1.3143	1.3143	3.1000e-004	0.0000	1.3220
<b>Total</b>	<b>3.7600e-003</b>	<b>0.0207</b>	<b>0.0102</b>	<b>1.5000e-004</b>		<b>1.7400e-003</b>	<b>1.7400e-003</b>		<b>1.7400e-003</b>	<b>1.7400e-003</b>	<b>0.0000</b>	<b>1.3143</b>	<b>1.3143</b>	<b>3.1000e-004</b>	<b>0.0000</b>	<b>1.3220</b>

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**3.5 Building Construction - 2005**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-004	9.6000e-004	3.6000e-004	1.0000e-005	2.0000e-005	4.0000e-005	6.0000e-005	1.0000e-005	4.0000e-005	4.0000e-005	0.0000	0.0853	0.0853	0.0000	1.0000e-005	0.0893
Worker	3.6000e-004	4.7000e-004	3.6800e-003	0.0000	1.8000e-004	0.0000	1.9000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.2049	0.2049	3.0000e-005	2.0000e-005	0.2128
<b>Total</b>	<b>4.6000e-004</b>	<b>1.4300e-003</b>	<b>4.0400e-003</b>	<b>1.0000e-005</b>	<b>2.0000e-004</b>	<b>4.0000e-005</b>	<b>2.5000e-004</b>	<b>6.0000e-005</b>	<b>4.0000e-005</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>0.2902</b>	<b>0.2902</b>	<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>0.3020</b>

**3.6 Paving - 2005**

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	0.0438	0.2976	0.1339	2.0100e-003		0.0208	0.0208		0.0208	0.0208	0.0000	17.5888	17.5888	3.5800e-003	0.0000	17.6783
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0438</b>	<b>0.2976</b>	<b>0.1339</b>	<b>2.0100e-003</b>		<b>0.0208</b>	<b>0.0208</b>		<b>0.0208</b>	<b>0.0208</b>	<b>0.0000</b>	<b>17.5888</b>	<b>17.5888</b>	<b>3.5800e-003</b>	<b>0.0000</b>	<b>17.6783</b>

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**3.6 Paving - 2005**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8100e-003	3.6600e-003	0.0288	2.0000e-005	1.4400e-003	4.0000e-005	1.4700e-003	3.8000e-004	3.0000e-005	4.2000e-004	0.0000	1.6035	1.6035	2.3000e-004	1.9000e-004	1.6650
<b>Total</b>	<b>2.8100e-003</b>	<b>3.6600e-003</b>	<b>0.0288</b>	<b>2.0000e-005</b>	<b>1.4400e-003</b>	<b>4.0000e-005</b>	<b>1.4700e-003</b>	<b>3.8000e-004</b>	<b>3.0000e-005</b>	<b>4.2000e-004</b>	<b>0.0000</b>	<b>1.6035</b>	<b>1.6035</b>	<b>2.3000e-004</b>	<b>1.9000e-004</b>	<b>1.6650</b>

**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	0.0438	0.2976	0.1339	2.0100e-003		0.0208	0.0208		0.0208	0.0208	0.0000	17.5888	17.5888	3.5800e-003	0.0000	17.6783
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0438</b>	<b>0.2976</b>	<b>0.1339</b>	<b>2.0100e-003</b>		<b>0.0208</b>	<b>0.0208</b>		<b>0.0208</b>	<b>0.0208</b>	<b>0.0000</b>	<b>17.5888</b>	<b>17.5888</b>	<b>3.5800e-003</b>	<b>0.0000</b>	<b>17.6783</b>



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**3.6 Paving - 2005**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8100e-003	3.6600e-003	0.0288	2.0000e-005	1.4400e-003	4.0000e-005	1.4700e-003	3.8000e-004	3.0000e-005	4.2000e-004	0.0000	1.6035	1.6035	2.3000e-004	1.9000e-004	1.6650
<b>Total</b>	<b>2.8100e-003</b>	<b>3.6600e-003</b>	<b>0.0288</b>	<b>2.0000e-005</b>	<b>1.4400e-003</b>	<b>4.0000e-005</b>	<b>1.4700e-003</b>	<b>3.8000e-004</b>	<b>3.0000e-005</b>	<b>4.2000e-004</b>	<b>0.0000</b>	<b>1.6035</b>	<b>1.6035</b>	<b>2.3000e-004</b>	<b>1.9000e-004</b>	<b>1.6650</b>

**3.7 Architectural Coating - 2005**

**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	1.0012					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.7700e-003	0.0385	0.0187	2.7000e-004		3.4500e-003	3.4500e-003		3.4500e-003	3.4500e-003	0.0000	2.2979	2.2979	5.5000e-004	0.0000	2.3118
<b>Total</b>	<b>1.0079</b>	<b>0.0385</b>	<b>0.0187</b>	<b>2.7000e-004</b>		<b>3.4500e-003</b>	<b>3.4500e-003</b>		<b>3.4500e-003</b>	<b>3.4500e-003</b>	<b>0.0000</b>	<b>2.2979</b>	<b>2.2979</b>	<b>5.5000e-004</b>	<b>0.0000</b>	<b>2.3118</b>

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**3.7 Architectural Coating - 2005**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2700e-003	1.6500e-003	0.0130	1.0000e-005	6.5000e-004	2.0000e-005	6.6000e-004	1.7000e-004	1.0000e-005	1.9000e-004	0.0000	0.7216	0.7216	1.0000e-004	8.0000e-005	0.7493
<b>Total</b>	<b>1.2700e-003</b>	<b>1.6500e-003</b>	<b>0.0130</b>	<b>1.0000e-005</b>	<b>6.5000e-004</b>	<b>2.0000e-005</b>	<b>6.6000e-004</b>	<b>1.7000e-004</b>	<b>1.0000e-005</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>0.7216</b>	<b>0.7216</b>	<b>1.0000e-004</b>	<b>8.0000e-005</b>	<b>0.7493</b>

**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	1.0012					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.7700e-003	0.0385	0.0187	2.7000e-004		3.4500e-003	3.4500e-003		3.4500e-003	3.4500e-003	0.0000	2.2979	2.2979	5.5000e-004	0.0000	2.3118
<b>Total</b>	<b>1.0079</b>	<b>0.0385</b>	<b>0.0187</b>	<b>2.7000e-004</b>		<b>3.4500e-003</b>	<b>3.4500e-003</b>		<b>3.4500e-003</b>	<b>3.4500e-003</b>	<b>0.0000</b>	<b>2.2979</b>	<b>2.2979</b>	<b>5.5000e-004</b>	<b>0.0000</b>	<b>2.3118</b>

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**3.7 Architectural Coating - 2005**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2700e-003	1.6500e-003	0.0130	1.0000e-005	6.5000e-004	2.0000e-005	6.6000e-004	1.7000e-004	1.0000e-005	1.9000e-004	0.0000	0.7216	0.7216	1.0000e-004	8.0000e-005	0.7493
<b>Total</b>	<b>1.2700e-003</b>	<b>1.6500e-003</b>	<b>0.0130</b>	<b>1.0000e-005</b>	<b>6.5000e-004</b>	<b>2.0000e-005</b>	<b>6.6000e-004</b>	<b>1.7000e-004</b>	<b>1.0000e-005</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>0.7216</b>	<b>0.7216</b>	<b>1.0000e-004</b>	<b>8.0000e-005</b>	<b>0.7493</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.8808	2.3822	10.1999	0.0160	0.5085	0.0491	0.5576	0.1363	0.0467	0.1830	0.0000	683.5394	683.5394	0.0944	0.0772	708.9125
Unmitigated	0.8808	2.3822	10.1999	0.0160	0.5085	0.0491	0.5576	0.1363	0.0467	0.1830	0.0000	683.5394	683.5394	0.0944	0.0772	708.9125

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	468.48	520.96	401.92	1,351,740	1,351,740
Total	468.48	520.96	401.92	1,351,740	1,351,740

**4.3 Trip Type Information**

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	45.60	19.00	35.40	86	11	3

**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.460863	0.082817	0.161996	0.175922	0.042775	0.006945	0.015814	0.020071	0.000747	0.000286	0.021199	0.001051	0.009516

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**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	24.4620	24.4620	3.9600e-003	4.8000e-004	24.7039
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	24.4620	24.4620	3.9600e-003	4.8000e-004	24.7039
NaturalGas Mitigated	4.7100e-003	0.0403	0.0171	2.6000e-004		3.2500e-003	3.2500e-003		3.2500e-003	3.2500e-003	0.0000	46.6085	46.6085	8.9000e-004	8.5000e-004	46.8854
NaturalGas Unmitigated	4.7100e-003	0.0403	0.0171	2.6000e-004		3.2500e-003	3.2500e-003		3.2500e-003	3.2500e-003	0.0000	46.6085	46.6085	8.9000e-004	8.5000e-004	46.8854

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**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	873409	4.7100e-003	0.0403	0.0171	2.6000e-004		3.2500e-003	3.2500e-003		3.2500e-003	3.2500e-003	0.0000	46.6085	46.6085	8.9000e-004	8.5000e-004	46.8854
<b>Total</b>		<b>4.7100e-003</b>	<b>0.0403</b>	<b>0.0171</b>	<b>2.6000e-004</b>		<b>3.2500e-003</b>	<b>3.2500e-003</b>		<b>3.2500e-003</b>	<b>3.2500e-003</b>	<b>0.0000</b>	<b>46.6085</b>	<b>46.6085</b>	<b>8.9000e-004</b>	<b>8.5000e-004</b>	<b>46.8854</b>

**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					
Apartments Low Rise	873409	4.7100e-003	0.0403	0.0171	2.6000e-004		3.2500e-003	3.2500e-003		3.2500e-003	3.2500e-003	0.0000	46.6085	46.6085	8.9000e-004	8.5000e-004	46.8854
<b>Total</b>		<b>4.7100e-003</b>	<b>0.0403</b>	<b>0.0171</b>	<b>2.6000e-004</b>		<b>3.2500e-003</b>	<b>3.2500e-003</b>		<b>3.2500e-003</b>	<b>3.2500e-003</b>	<b>0.0000</b>	<b>46.6085</b>	<b>46.6085</b>	<b>8.9000e-004</b>	<b>8.5000e-004</b>	<b>46.8854</b>

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**5.3 Energy by Land Use - Electricity**

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	264386	24.4620	3.9600e-003	4.8000e-004	24.7039
<b>Total</b>		<b>24.4620</b>	<b>3.9600e-003</b>	<b>4.8000e-004</b>	<b>24.7039</b>

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	264386	24.4620	3.9600e-003	4.8000e-004	24.7039
<b>Total</b>		<b>24.4620</b>	<b>3.9600e-003</b>	<b>4.8000e-004</b>	<b>24.7039</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**



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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3767	0.0314	0.5613	1.8000e-004		4.2600e-003	4.2600e-003		4.2600e-003	4.2600e-003	0.0000	28.5015	28.5015	1.7700e-003	5.1000e-004	28.6974
Unmitigated	0.3767	0.0314	0.5613	1.8000e-004		4.2600e-003	4.2600e-003		4.2600e-003	4.2600e-003	0.0000	28.5015	28.5015	1.7700e-003	5.1000e-004	28.6974

**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	0.1001					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2500					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.8000e-003	0.0239	0.0102	1.5000e-004		1.9400e-003	1.9400e-003		1.9400e-003	1.9400e-003	0.0000	27.7253	27.7253	5.3000e-004	5.1000e-004	27.8900
Landscaping	0.0238	7.4900e-003	0.5511	3.0000e-005		2.3300e-003	2.3300e-003		2.3300e-003	2.3300e-003	0.0000	0.7762	0.7762	1.2400e-003	0.0000	0.8073
<b>Total</b>	<b>0.3767</b>	<b>0.0314</b>	<b>0.5613</b>	<b>1.8000e-004</b>		<b>4.2700e-003</b>	<b>4.2700e-003</b>		<b>4.2700e-003</b>	<b>4.2700e-003</b>	<b>0.0000</b>	<b>28.5015</b>	<b>28.5015</b>	<b>1.7700e-003</b>	<b>5.1000e-004</b>	<b>28.6974</b>

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**6.2 Area by SubCategory**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1001					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2500					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.8000e-003	0.0239	0.0102	1.5000e-004		1.9400e-003	1.9400e-003		1.9400e-003	1.9400e-003	0.0000	27.7253	27.7253	5.3000e-004	5.1000e-004	27.8900
Landscaping	0.0238	7.4900e-003	0.5511	3.0000e-005		2.3300e-003	2.3300e-003		2.3300e-003	2.3300e-003	0.0000	0.7762	0.7762	1.2400e-003	0.0000	0.8073
<b>Total</b>	<b>0.3767</b>	<b>0.0314</b>	<b>0.5613</b>	<b>1.8000e-004</b>		<b>4.2700e-003</b>	<b>4.2700e-003</b>		<b>4.2700e-003</b>	<b>4.2700e-003</b>	<b>0.0000</b>	<b>28.5015</b>	<b>28.5015</b>	<b>1.7700e-003</b>	<b>5.1000e-004</b>	<b>28.6974</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

Armstrong Apartments - 2005 - San Joaquin Valley Unified APCD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	4.2618	0.1364	3.2700e-003	8.6438
Unmitigated	4.2618	0.1364	3.2700e-003	8.6438

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	4.16986 / 2.62882	4.2618	0.1364	3.2700e-003	8.6438
<b>Total</b>		<b>4.2618</b>	<b>0.1364</b>	<b>3.2700e-003</b>	<b>8.6438</b>

Armstrong Apartments - 2005 - San Joaquin Valley Unified APCD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**7.2 Water by Land Use**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	4.16986 / 2.62882	4.2618	0.1364	3.2700e-003	8.6438
<b>Total</b>		<b>4.2618</b>	<b>0.1364</b>	<b>3.2700e-003</b>	<b>8.6438</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	5.9761	0.3532	0.0000	14.8054
Unmitigated	5.9761	0.3532	0.0000	14.8054

Armstrong Apartments - 2005 - San Joaquin Valley Unified APCD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**8.2 Waste by Land Use**

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	29.44	5.9761	0.3532	0.0000	14.8054
<b>Total</b>		<b>5.9761</b>	<b>0.3532</b>	<b>0.0000</b>	<b>14.8054</b>

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	29.44	5.9761	0.3532	0.0000	14.8054
<b>Total</b>		<b>5.9761</b>	<b>0.3532</b>	<b>0.0000</b>	<b>14.8054</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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Armstrong Apartments - 2005 - San Joaquin Valley Unified APCD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

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

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

Equipment Type	Number
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**11.0 Vegetation**

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Armstrong Apartments - proposed Project - San Joaquin Valley Unified APCD Air District, Annual

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

**Armstrong Apartments - proposed Project  
San Joaquin Valley Unified APCD Air District, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	64.00	Dwelling Unit	4.20	64,000.00	203

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.7	<b>Precipitation Freq (Days)</b>	45
<b>Climate Zone</b>	3			<b>Operational Year</b>	2024
<b>Utility Company</b>	Pacific Gas and Electric Company				
<b>CO2 Intensity (lb/MWhr)</b>	203.98	<b>CH4 Intensity (lb/MWhr)</b>	0.033	<b>N2O Intensity (lb/MWhr)</b>	0.004

**1.3 User Entered Comments & Non-Default Data**

- Project Characteristics -
- Land Use - total acreage of project site is 4.2 ac
- Architectural Coating - standard effective January 1, 2022
- Vehicle Trips - Trip Rate per ITE 11th ed.
- Area Coating - Standard effective January 1, 2022
- Energy Use - see analysis for assumptions
- Water And Wastewater - see analysis for assumptions
- Mobile Land Use Mitigation -
- Mobile Commute Mitigation -
- Area Mitigation - Standard effective January 1, 2022
- Energy Mitigation -
- Water Mitigation -



Armstrong Apartments - proposed Project - San Joaquin Valley Unified APCD Air District, Annual

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

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	150	50
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	150	50
tblEnergyUse	T24E	147.91	137.56
tblEnergyUse	T24NG	9,924.02	9,229.34
tblLandUse	LotAcreage	4.00	4.20
tblVehicleTrips	HO_TL	7.50	1.00
tblVehicleTrips	HS_TL	7.30	2.00
tblVehicleTrips	HW_TL	10.80	9.50
tblVehicleTrips	ST_TR	8.14	4.55
tblVehicleTrips	SU_TR	6.28	3.86
tblVehicleTrips	WD_TR	7.32	6.74
tblWater	OutdoorWaterUseRate	2,628,823.29	2,418,517.43
tblWoodstoves	NumberCatalytic	4.20	0.00
tblWoodstoves	NumberNoncatalytic	4.20	0.00

**2.0 Emissions Summary**

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Armstrong Apartments - proposed Project - San Joaquin Valley Unified APCD Air District, Annual

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

**2.1 Overall Construction**

**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.2328	2.0347	2.2918	4.2000e-003	0.1265	0.0961	0.2226	0.0521	0.0902	0.1423	0.0000	366.6883	366.6883	0.0794	3.3300e-003	369.6643
2024	0.6134	0.1067	0.1583	2.6000e-004	2.7100e-003	5.0700e-003	7.7800e-003	7.2000e-004	4.7500e-003	5.4700e-003	0.0000	22.8006	22.8006	5.6400e-003	9.0000e-005	22.9677
<b>Maximum</b>	<b>0.6134</b>	<b>2.0347</b>	<b>2.2918</b>	<b>4.2000e-003</b>	<b>0.1265</b>	<b>0.0961</b>	<b>0.2226</b>	<b>0.0521</b>	<b>0.0902</b>	<b>0.1423</b>	<b>0.0000</b>	<b>366.6883</b>	<b>366.6883</b>	<b>0.0794</b>	<b>3.3300e-003</b>	<b>369.6643</b>

**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					
2023	0.2328	2.0347	2.2918	4.2000e-003	0.1265	0.0961	0.2226	0.0521	0.0902	0.1423	0.0000	366.6879	366.6879	0.0794	3.3300e-003	369.6639
2024	0.6134	0.1067	0.1583	2.6000e-004	2.7100e-003	5.0700e-003	7.7800e-003	7.2000e-004	4.7400e-003	5.4700e-003	0.0000	22.8005	22.8005	5.6400e-003	9.0000e-005	22.9677
<b>Maximum</b>	<b>0.6134</b>	<b>2.0347</b>	<b>2.2918</b>	<b>4.2000e-003</b>	<b>0.1265</b>	<b>0.0961</b>	<b>0.2226</b>	<b>0.0521</b>	<b>0.0902</b>	<b>0.1423</b>	<b>0.0000</b>	<b>366.6879</b>	<b>366.6879</b>	<b>0.0794</b>	<b>3.3300e-003</b>	<b>369.6639</b>

Armstrong Apartments - proposed Project - San Joaquin Valley Unified APCD Air District, 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
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2023	3-31-2023	0.6500	0.6500
2	4-1-2023	6-30-2023	0.5369	0.5369
3	7-1-2023	9-30-2023	0.5428	0.5428
4	10-1-2023	12-31-2023	0.5434	0.5434
5	1-1-2024	3-31-2024	0.6870	0.6870
		Highest	0.6870	0.6870

**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	0.3271	0.0294	0.4852	1.8000e-004		4.5700e-003	4.5700e-003		4.5700e-003	4.5700e-003	0.0000	28.5015	28.5015	1.2800e-003	5.1000e-004	28.6849
Energy	4.4700e-003	0.0382	0.0163	2.4000e-004		3.0900e-003	3.0900e-003		3.0900e-003	3.0900e-003	0.0000	68.6366	68.6366	4.8000e-003	1.2900e-003	69.1408
Mobile	0.1568	0.2287	1.2121	2.5300e-003	0.2366	2.3400e-003	0.2390	0.0633	2.1900e-003	0.0655	0.0000	237.5650	237.5650	0.0157	0.0148	242.3782
Waste						0.0000	0.0000		0.0000	0.0000	5.9761	0.0000	5.9761	0.3532	0.0000	14.8054
Water						0.0000	0.0000		0.0000	0.0000	1.3229	2.8708	4.1937	0.1363	3.2600e-003	8.5751
<b>Total</b>	<b>0.4884</b>	<b>0.2963</b>	<b>1.7135</b>	<b>2.9500e-003</b>	<b>0.2366</b>	<b>0.0100</b>	<b>0.2466</b>	<b>0.0633</b>	<b>9.8500e-003</b>	<b>0.0732</b>	<b>7.2990</b>	<b>337.5739</b>	<b>344.8729</b>	<b>0.5113</b>	<b>0.0199</b>	<b>363.5843</b>

Armstrong Apartments - proposed Project - San Joaquin Valley Unified APCD Air District, 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	0.2656	5.4700e-003	0.4750	3.0000e-005		2.6300e-003	2.6300e-003		2.6300e-003	2.6300e-003	0.0000	0.7762	0.7762	7.4000e-004	0.0000	0.7949
Energy	4.2500e-003	0.0363	0.0154	2.3000e-004		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003	0.0000	58.1147	58.1147	3.4100e-003	1.0900e-003	58.5235
Mobile	0.1366	0.1650	0.8796	1.5400e-003	0.1394	1.4900e-003	0.1409	0.0373	1.4000e-003	0.0387	0.0000	145.1936	145.1936	0.0126	0.0105	148.6442
Waste						0.0000	0.0000		0.0000	0.0000	2.9880	0.0000	2.9880	0.1766	0.0000	7.4027
Water						0.0000	0.0000		0.0000	0.0000	1.3229	2.8082	4.1311	0.1363	3.2600e-003	8.5118
<b>Total</b>	<b>0.4064</b>	<b>0.2068</b>	<b>1.3701</b>	<b>1.8000e-003</b>	<b>0.1394</b>	<b>7.0500e-003</b>	<b>0.1465</b>	<b>0.0373</b>	<b>6.9600e-003</b>	<b>0.0443</b>	<b>4.3109</b>	<b>206.8927</b>	<b>211.2036</b>	<b>0.3297</b>	<b>0.0149</b>	<b>223.8770</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>16.79</b>	<b>30.22</b>	<b>20.04</b>	<b>38.98</b>	<b>41.08</b>	<b>29.50</b>	<b>40.61</b>	<b>41.07</b>	<b>29.34</b>	<b>39.51</b>	<b>40.94</b>	<b>38.71</b>	<b>38.76</b>	<b>35.52</b>	<b>25.24</b>	<b>38.43</b>

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2023	1/27/2023	5	20	
2	Site Preparation	Site Preparation	1/28/2023	2/3/2023	5	5	
3	Grading	Grading	2/4/2023	2/15/2023	5	8	

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

4	Building Construction	Building Construction	2/16/2023	1/3/2024	5	230
5	Paving	Paving	1/4/2024	1/29/2024	5	18
6	Architectural Coating	Architectural Coating	1/30/2024	2/22/2024	5	18

**Acres of Grading (Site Preparation Phase): 7.5**

**Acres of Grading (Grading Phase): 8**

**Acres of Paving: 0**

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

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	7.00	231	0.29
Demolition	Excavators	3	8.00	158	0.38
Grading	Excavators	1	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37

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

Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	46.00	7.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

**3.2 Demolition - 2023**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0227	0.2148	0.1964	3.9000e-004		9.9800e-003	9.9800e-003		9.2800e-003	9.2800e-003	0.0000	33.9921	33.9921	9.5200e-003	0.0000	34.2301
<b>Total</b>	<b>0.0227</b>	<b>0.2148</b>	<b>0.1964</b>	<b>3.9000e-004</b>		<b>9.9800e-003</b>	<b>9.9800e-003</b>		<b>9.2800e-003</b>	<b>9.2800e-003</b>	<b>0.0000</b>	<b>33.9921</b>	<b>33.9921</b>	<b>9.5200e-003</b>	<b>0.0000</b>	<b>34.2301</b>

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

**3.2 Demolition - 2023**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.7000e-004	3.2000e-004	3.7300e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9711	0.9711	3.0000e-005	3.0000e-005	0.9803
<b>Total</b>	<b>4.7000e-004</b>	<b>3.2000e-004</b>	<b>3.7300e-003</b>	<b>1.0000e-005</b>	<b>1.2000e-003</b>	<b>1.0000e-005</b>	<b>1.2100e-003</b>	<b>3.2000e-004</b>	<b>1.0000e-005</b>	<b>3.2000e-004</b>	<b>0.0000</b>	<b>0.9711</b>	<b>0.9711</b>	<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>0.9803</b>

**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	0.0227	0.2148	0.1964	3.9000e-004		9.9800e-003	9.9800e-003		9.2800e-003	9.2800e-003	0.0000	33.9920	33.9920	9.5200e-003	0.0000	34.2300
<b>Total</b>	<b>0.0227</b>	<b>0.2148</b>	<b>0.1964</b>	<b>3.9000e-004</b>		<b>9.9800e-003</b>	<b>9.9800e-003</b>		<b>9.2800e-003</b>	<b>9.2800e-003</b>	<b>0.0000</b>	<b>33.9920</b>	<b>33.9920</b>	<b>9.5200e-003</b>	<b>0.0000</b>	<b>34.2300</b>



Armstrong Apartments - proposed Project - San Joaquin Valley Unified APCD Air District, Annual

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

**3.2 Demolition - 2023**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.7000e-004	3.2000e-004	3.7300e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9711	0.9711	3.0000e-005	3.0000e-005	0.9803
<b>Total</b>	<b>4.7000e-004</b>	<b>3.2000e-004</b>	<b>3.7300e-003</b>	<b>1.0000e-005</b>	<b>1.2000e-003</b>	<b>1.0000e-005</b>	<b>1.2100e-003</b>	<b>3.2000e-004</b>	<b>1.0000e-005</b>	<b>3.2000e-004</b>	<b>0.0000</b>	<b>0.9711</b>	<b>0.9711</b>	<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>0.9803</b>

**3.3 Site Preparation - 2023**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0491	0.0000	0.0491	0.0253	0.0000	0.0253	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.6500e-003	0.0688	0.0456	1.0000e-004		3.1700e-003	3.1700e-003		2.9100e-003	2.9100e-003	0.0000	8.3627	8.3627	2.7000e-003	0.0000	8.4303
<b>Total</b>	<b>6.6500e-003</b>	<b>0.0688</b>	<b>0.0456</b>	<b>1.0000e-004</b>	<b>0.0491</b>	<b>3.1700e-003</b>	<b>0.0523</b>	<b>0.0253</b>	<b>2.9100e-003</b>	<b>0.0282</b>	<b>0.0000</b>	<b>8.3627</b>	<b>8.3627</b>	<b>2.7000e-003</b>	<b>0.0000</b>	<b>8.4303</b>

Armstrong Apartments - proposed Project - San Joaquin Valley Unified APCD Air District, Annual

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

**3.3 Site Preparation - 2023**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	9.0000e-005	1.1200e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2913	0.2913	1.0000e-005	1.0000e-005	0.2941
<b>Total</b>	<b>1.4000e-004</b>	<b>9.0000e-005</b>	<b>1.1200e-003</b>	<b>0.0000</b>	<b>3.6000e-004</b>	<b>0.0000</b>	<b>3.6000e-004</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>0.2913</b>	<b>0.2913</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.2941</b>

**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					0.0491	0.0000	0.0491	0.0253	0.0000	0.0253	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.6500e-003	0.0688	0.0456	1.0000e-004		3.1700e-003	3.1700e-003		2.9100e-003	2.9100e-003	0.0000	8.3627	8.3627	2.7000e-003	0.0000	8.4303
<b>Total</b>	<b>6.6500e-003</b>	<b>0.0688</b>	<b>0.0456</b>	<b>1.0000e-004</b>	<b>0.0491</b>	<b>3.1700e-003</b>	<b>0.0523</b>	<b>0.0253</b>	<b>2.9100e-003</b>	<b>0.0282</b>	<b>0.0000</b>	<b>8.3627</b>	<b>8.3627</b>	<b>2.7000e-003</b>	<b>0.0000</b>	<b>8.4303</b>

Armstrong Apartments - proposed Project - San Joaquin Valley Unified APCD Air District, Annual

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

**3.3 Site Preparation - 2023**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	9.0000e-005	1.1200e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2913	0.2913	1.0000e-005	1.0000e-005	0.2941
<b>Total</b>	<b>1.4000e-004</b>	<b>9.0000e-005</b>	<b>1.1200e-003</b>	<b>0.0000</b>	<b>3.6000e-004</b>	<b>0.0000</b>	<b>3.6000e-004</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>0.2913</b>	<b>0.2913</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.2941</b>

**3.4 Grading - 2023**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0283	0.0000	0.0283	0.0137	0.0000	0.0137	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.8400e-003	0.0717	0.0590	1.2000e-004		3.1000e-003	3.1000e-003		2.8500e-003	2.8500e-003	0.0000	10.4243	10.4243	3.3700e-003	0.0000	10.5085
<b>Total</b>	<b>6.8400e-003</b>	<b>0.0717</b>	<b>0.0590</b>	<b>1.2000e-004</b>	<b>0.0283</b>	<b>3.1000e-003</b>	<b>0.0314</b>	<b>0.0137</b>	<b>2.8500e-003</b>	<b>0.0166</b>	<b>0.0000</b>	<b>10.4243</b>	<b>10.4243</b>	<b>3.3700e-003</b>	<b>0.0000</b>	<b>10.5085</b>

Armstrong Apartments - proposed Project - San Joaquin Valley Unified APCD Air District, Annual

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

**3.4 Grading - 2023**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	1.3000e-004	1.4900e-003	0.0000	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3884	0.3884	1.0000e-005	1.0000e-005	0.3921
<b>Total</b>	<b>1.9000e-004</b>	<b>1.3000e-004</b>	<b>1.4900e-003</b>	<b>0.0000</b>	<b>4.8000e-004</b>	<b>0.0000</b>	<b>4.8000e-004</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>0.3884</b>	<b>0.3884</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.3921</b>

**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					0.0283	0.0000	0.0283	0.0137	0.0000	0.0137	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.8400e-003	0.0717	0.0590	1.2000e-004		3.1000e-003	3.1000e-003		2.8500e-003	2.8500e-003	0.0000	10.4242	10.4242	3.3700e-003	0.0000	10.5085
<b>Total</b>	<b>6.8400e-003</b>	<b>0.0717</b>	<b>0.0590</b>	<b>1.2000e-004</b>	<b>0.0283</b>	<b>3.1000e-003</b>	<b>0.0314</b>	<b>0.0137</b>	<b>2.8500e-003</b>	<b>0.0166</b>	<b>0.0000</b>	<b>10.4242</b>	<b>10.4242</b>	<b>3.3700e-003</b>	<b>0.0000</b>	<b>10.5085</b>

Armstrong Apartments - proposed Project - San Joaquin Valley Unified APCD Air District, Annual

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

**3.4 Grading - 2023**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	1.3000e-004	1.4900e-003	0.0000	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3884	0.3884	1.0000e-005	1.0000e-005	0.3921
<b>Total</b>	<b>1.9000e-004</b>	<b>1.3000e-004</b>	<b>1.4900e-003</b>	<b>0.0000</b>	<b>4.8000e-004</b>	<b>0.0000</b>	<b>4.8000e-004</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>0.3884</b>	<b>0.3884</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.3921</b>

**3.5 Building Construction - 2023**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6327	1.8437	3.0600e-003		0.0794	0.0794		0.0747	0.0747	0.0000	263.0984	263.0984	0.0626	0.0000	264.6631
<b>Total</b>	<b>0.1785</b>	<b>1.6327</b>	<b>1.8437</b>	<b>3.0600e-003</b>		<b>0.0794</b>	<b>0.0794</b>		<b>0.0747</b>	<b>0.0747</b>	<b>0.0000</b>	<b>263.0984</b>	<b>263.0984</b>	<b>0.0626</b>	<b>0.0000</b>	<b>264.6631</b>

Armstrong Apartments - proposed Project - San Joaquin Valley Unified APCD Air District, Annual

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

**3.5 Building Construction - 2023**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.8000e-004	0.0351	0.0108	1.6000e-004	5.2700e-003	2.3000e-004	5.5000e-003	1.5200e-003	2.2000e-004	1.7400e-003	0.0000	15.3590	15.3590	7.0000e-005	2.3000e-003	16.0455
Worker	0.0164	0.0110	0.1299	3.6000e-004	0.0417	2.2000e-004	0.0420	0.0111	2.0000e-004	0.0113	0.0000	33.8011	33.8011	1.0500e-003	9.8000e-004	34.1204
<b>Total</b>	<b>0.0173</b>	<b>0.0461</b>	<b>0.1407</b>	<b>5.2000e-004</b>	<b>0.0470</b>	<b>4.5000e-004</b>	<b>0.0475</b>	<b>0.0126</b>	<b>4.2000e-004</b>	<b>0.0130</b>	<b>0.0000</b>	<b>49.1601</b>	<b>49.1601</b>	<b>1.1200e-003</b>	<b>3.2800e-003</b>	<b>50.1658</b>

**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	0.1785	1.6327	1.8437	3.0600e-003		0.0794	0.0794		0.0747	0.0747	0.0000	263.0981	263.0981	0.0626	0.0000	264.6628
<b>Total</b>	<b>0.1785</b>	<b>1.6327</b>	<b>1.8437</b>	<b>3.0600e-003</b>		<b>0.0794</b>	<b>0.0794</b>		<b>0.0747</b>	<b>0.0747</b>	<b>0.0000</b>	<b>263.0981</b>	<b>263.0981</b>	<b>0.0626</b>	<b>0.0000</b>	<b>264.6628</b>

Armstrong Apartments - proposed Project - San Joaquin Valley Unified APCD Air District, Annual

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

**3.5 Building Construction - 2023**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.8000e-004	0.0351	0.0108	1.6000e-004	5.2700e-003	2.3000e-004	5.5000e-003	1.5200e-003	2.2000e-004	1.7400e-003	0.0000	15.3590	15.3590	7.0000e-005	2.3000e-003	16.0455
Worker	0.0164	0.0110	0.1299	3.6000e-004	0.0417	2.2000e-004	0.0420	0.0111	2.0000e-004	0.0113	0.0000	33.8011	33.8011	1.0500e-003	9.8000e-004	34.1204
<b>Total</b>	<b>0.0173</b>	<b>0.0461</b>	<b>0.1407</b>	<b>5.2000e-004</b>	<b>0.0470</b>	<b>4.5000e-004</b>	<b>0.0475</b>	<b>0.0126</b>	<b>4.2000e-004</b>	<b>0.0130</b>	<b>0.0000</b>	<b>49.1601</b>	<b>49.1601</b>	<b>1.1200e-003</b>	<b>3.2800e-003</b>	<b>50.1658</b>

**3.5 Building Construction - 2024**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.2100e-003	0.0202	0.0243	4.0000e-005		9.2000e-004	9.2000e-004		8.7000e-004	8.7000e-004	0.0000	3.4777	3.4777	8.2000e-004	0.0000	3.4983
<b>Total</b>	<b>2.2100e-003</b>	<b>0.0202</b>	<b>0.0243</b>	<b>4.0000e-005</b>		<b>9.2000e-004</b>	<b>9.2000e-004</b>		<b>8.7000e-004</b>	<b>8.7000e-004</b>	<b>0.0000</b>	<b>3.4777</b>	<b>3.4777</b>	<b>8.2000e-004</b>	<b>0.0000</b>	<b>3.4983</b>

Armstrong Apartments - proposed Project - San Joaquin Valley Unified APCD Air District, Annual

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

**3.5 Building Construction - 2024**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-005	4.6000e-004	1.4000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.1997	0.1997	0.0000	3.0000e-005	0.2087
Worker	2.0000e-004	1.3000e-004	1.5900e-003	0.0000	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4355	0.4355	1.0000e-005	1.0000e-005	0.4394
<b>Total</b>	<b>2.1000e-004</b>	<b>5.9000e-004</b>	<b>1.7300e-003</b>	<b>0.0000</b>	<b>6.2000e-004</b>	<b>0.0000</b>	<b>6.2000e-004</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>0.6353</b>	<b>0.6353</b>	<b>1.0000e-005</b>	<b>4.0000e-005</b>	<b>0.6481</b>

**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	2.2100e-003	0.0202	0.0243	4.0000e-005		9.2000e-004	9.2000e-004		8.7000e-004	8.7000e-004	0.0000	3.4777	3.4777	8.2000e-004	0.0000	3.4983
<b>Total</b>	<b>2.2100e-003</b>	<b>0.0202</b>	<b>0.0243</b>	<b>4.0000e-005</b>		<b>9.2000e-004</b>	<b>9.2000e-004</b>		<b>8.7000e-004</b>	<b>8.7000e-004</b>	<b>0.0000</b>	<b>3.4777</b>	<b>3.4777</b>	<b>8.2000e-004</b>	<b>0.0000</b>	<b>3.4983</b>



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

**3.5 Building Construction - 2024**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-005	4.6000e-004	1.4000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.1997	0.1997	0.0000	3.0000e-005	0.2087
Worker	2.0000e-004	1.3000e-004	1.5900e-003	0.0000	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4355	0.4355	1.0000e-005	1.0000e-005	0.4394
<b>Total</b>	<b>2.1000e-004</b>	<b>5.9000e-004</b>	<b>1.7300e-003</b>	<b>0.0000</b>	<b>6.2000e-004</b>	<b>0.0000</b>	<b>6.2000e-004</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>0.6353</b>	<b>0.6353</b>	<b>1.0000e-005</b>	<b>4.0000e-005</b>	<b>0.6481</b>

**3.6 Paving - 2024**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.9300e-003	0.0745	0.1100	1.7000e-004		3.5900e-003	3.5900e-003		3.3200e-003	3.3200e-003	0.0000	14.7423	14.7423	4.6300e-003	0.0000	14.8581
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>7.9300e-003</b>	<b>0.0745</b>	<b>0.1100</b>	<b>1.7000e-004</b>		<b>3.5900e-003</b>	<b>3.5900e-003</b>		<b>3.3200e-003</b>	<b>3.3200e-003</b>	<b>0.0000</b>	<b>14.7423</b>	<b>14.7423</b>	<b>4.6300e-003</b>	<b>0.0000</b>	<b>14.8581</b>

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

**3.6 Paving - 2024**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.3000e-004	4.1400e-003	1.0000e-005	1.4400e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1361	1.1361	3.0000e-005	3.0000e-005	1.1463
<b>Total</b>	<b>5.2000e-004</b>	<b>3.3000e-004</b>	<b>4.1400e-003</b>	<b>1.0000e-005</b>	<b>1.4400e-003</b>	<b>1.0000e-005</b>	<b>1.4500e-003</b>	<b>3.8000e-004</b>	<b>1.0000e-005</b>	<b>3.9000e-004</b>	<b>0.0000</b>	<b>1.1361</b>	<b>1.1361</b>	<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>1.1463</b>

**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	7.9300e-003	0.0745	0.1100	1.7000e-004		3.5900e-003	3.5900e-003		3.3200e-003	3.3200e-003	0.0000	14.7423	14.7423	4.6300e-003	0.0000	14.8581
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>7.9300e-003</b>	<b>0.0745</b>	<b>0.1100</b>	<b>1.7000e-004</b>		<b>3.5900e-003</b>	<b>3.5900e-003</b>		<b>3.3200e-003</b>	<b>3.3200e-003</b>	<b>0.0000</b>	<b>14.7423</b>	<b>14.7423</b>	<b>4.6300e-003</b>	<b>0.0000</b>	<b>14.8581</b>

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

**3.6 Paving - 2024**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.3000e-004	4.1400e-003	1.0000e-005	1.4400e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1361	1.1361	3.0000e-005	3.0000e-005	1.1463
<b>Total</b>	<b>5.2000e-004</b>	<b>3.3000e-004</b>	<b>4.1400e-003</b>	<b>1.0000e-005</b>	<b>1.4400e-003</b>	<b>1.0000e-005</b>	<b>1.4500e-003</b>	<b>3.8000e-004</b>	<b>1.0000e-005</b>	<b>3.9000e-004</b>	<b>0.0000</b>	<b>1.1361</b>	<b>1.1361</b>	<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>1.1463</b>

**3.7 Architectural Coating - 2024**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6007					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6300e-003	0.0110	0.0163	3.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	2.2979	2.2979	1.3000e-004	0.0000	2.3012
<b>Total</b>	<b>0.6023</b>	<b>0.0110</b>	<b>0.0163</b>	<b>3.0000e-005</b>		<b>5.5000e-004</b>	<b>5.5000e-004</b>		<b>5.5000e-004</b>	<b>5.5000e-004</b>	<b>0.0000</b>	<b>2.2979</b>	<b>2.2979</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>2.3012</b>

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

**3.7 Architectural Coating - 2024**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	1.5000e-004	1.8600e-003	1.0000e-005	6.5000e-004	0.0000	6.5000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5113	0.5113	1.0000e-005	1.0000e-005	0.5158
<b>Total</b>	<b>2.3000e-004</b>	<b>1.5000e-004</b>	<b>1.8600e-003</b>	<b>1.0000e-005</b>	<b>6.5000e-004</b>	<b>0.0000</b>	<b>6.5000e-004</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>1.8000e-004</b>	<b>0.0000</b>	<b>0.5113</b>	<b>0.5113</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.5158</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6007					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6300e-003	0.0110	0.0163	3.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	2.2979	2.2979	1.3000e-004	0.0000	2.3012
<b>Total</b>	<b>0.6023</b>	<b>0.0110</b>	<b>0.0163</b>	<b>3.0000e-005</b>		<b>5.5000e-004</b>	<b>5.5000e-004</b>		<b>5.5000e-004</b>	<b>5.5000e-004</b>	<b>0.0000</b>	<b>2.2979</b>	<b>2.2979</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>2.3012</b>

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

**3.7 Architectural Coating - 2024**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	1.5000e-004	1.8600e-003	1.0000e-005	6.5000e-004	0.0000	6.5000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5113	0.5113	1.0000e-005	1.0000e-005	0.5158
<b>Total</b>	<b>2.3000e-004</b>	<b>1.5000e-004</b>	<b>1.8600e-003</b>	<b>1.0000e-005</b>	<b>6.5000e-004</b>	<b>0.0000</b>	<b>6.5000e-004</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>1.8000e-004</b>	<b>0.0000</b>	<b>0.5113</b>	<b>0.5113</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.5158</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

- Increase Density
- Increase Diversity
- Improve Destination Accessibility
- Increase Transit Accessibility
- Improve Pedestrian Network
- Implement NEV Network
- Implement Trip Reduction Program

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**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	0.1366	0.1650	0.8796	1.5400e-003	0.1394	1.4900e-003	0.1409	0.0373	1.4000e-003	0.0387	0.0000	145.1936	145.1936	0.0126	0.0105	148.6442
Unmitigated	0.1568	0.2287	1.2121	2.5300e-003	0.2366	2.3400e-003	0.2390	0.0633	2.1900e-003	0.0655	0.0000	237.5650	237.5650	0.0157	0.0148	242.3782

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	431.36	291.20	247.04	630,510	371,513
Total	431.36	291.20	247.04	630,510	371,513

**4.3 Trip Type Information**

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	9.50	2.00	1.00	45.60	19.00	35.40	86	11	3

**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.511221	0.052103	0.170611	0.160645	0.028932	0.007649	0.013284	0.025916	0.000654	0.000315	0.023645	0.001472	0.003552

**5.0 Energy Detail**

Historical Energy Use: N

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

**5.1 Mitigation Measures Energy**

Exceed Title 24

Install High Efficiency Lighting

Percent of Electricity Use Generated with Renewable 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	16.0852	16.0852	2.6000e-003	3.2000e-004	16.2443
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	24.4007	24.4007	3.9500e-003	4.8000e-004	24.6420
NaturalGas Mitigated	4.2500e-003	0.0363	0.0154	2.3000e-004		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003	0.0000	42.0295	42.0295	8.1000e-004	7.7000e-004	42.2792
NaturalGas Unmitigated	4.4700e-003	0.0382	0.0163	2.4000e-004		3.0900e-003	3.0900e-003		3.0900e-003	3.0900e-003	0.0000	44.2359	44.2359	8.5000e-004	8.1000e-004	44.4988

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

**5.2 Energy by Land Use - Natural Gas**

**Unmitigated**

	Natural Gas 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					
Apartments Low Rise	828950	4.4700e-003	0.0382	0.0163	2.4000e-004		3.0900e-003	3.0900e-003		3.0900e-003	3.0900e-003	0.0000	44.2359	44.2359	8.5000e-004	8.1000e-004	44.4988
<b>Total</b>		<b>4.4700e-003</b>	<b>0.0382</b>	<b>0.0163</b>	<b>2.4000e-004</b>		<b>3.0900e-003</b>	<b>3.0900e-003</b>		<b>3.0900e-003</b>	<b>3.0900e-003</b>	<b>0.0000</b>	<b>44.2359</b>	<b>44.2359</b>	<b>8.5000e-004</b>	<b>8.1000e-004</b>	<b>44.4988</b>

**Mitigated**

	Natural Gas 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					
Apartments Low Rise	787602	4.2500e-003	0.0363	0.0154	2.3000e-004		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003	0.0000	42.0295	42.0295	8.1000e-004	7.7000e-004	42.2792
<b>Total</b>		<b>4.2500e-003</b>	<b>0.0363</b>	<b>0.0154</b>	<b>2.3000e-004</b>		<b>2.9300e-003</b>	<b>2.9300e-003</b>		<b>2.9300e-003</b>	<b>2.9300e-003</b>	<b>0.0000</b>	<b>42.0295</b>	<b>42.0295</b>	<b>8.1000e-004</b>	<b>7.7000e-004</b>	<b>42.2792</b>



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**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			
Apartments Low Rise	263724	24.4007	3.9500e-003	4.8000e-004	24.6420
<b>Total</b>		<b>24.4007</b>	<b>3.9500e-003</b>	<b>4.8000e-004</b>	<b>24.6420</b>

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	173849	16.0852	2.6000e-003	3.2000e-004	16.2443
<b>Total</b>		<b>16.0852</b>	<b>2.6000e-003</b>	<b>3.2000e-004</b>	<b>16.2443</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

Use Low VOC Paint - Residential Interior

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

Use Low VOC Paint - Residential Exterior

No Hearths Installed

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2656	5.4700e-003	0.4750	3.0000e-005		2.6300e-003	2.6300e-003		2.6300e-003	2.6300e-003	0.0000	0.7762	0.7762	7.4000e-004	0.0000	0.7949
Unmitigated	0.3271	0.0294	0.4852	1.8000e-004		4.5700e-003	4.5700e-003		4.5700e-003	4.5700e-003	0.0000	28.5015	28.5015	1.2800e-003	5.1000e-004	28.6849

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

**6.2 Area by SubCategory**

**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0601					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2500					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.8000e-003	0.0239	0.0102	1.5000e-004		1.9400e-003	1.9400e-003		1.9400e-003	1.9400e-003	0.0000	27.7253	27.7253	5.3000e-004	5.1000e-004	27.8900
Landscaping	0.0143	5.4700e-003	0.4750	3.0000e-005		2.6300e-003	2.6300e-003		2.6300e-003	2.6300e-003	0.0000	0.7762	0.7762	7.4000e-004	0.0000	0.7949
<b>Total</b>	<b>0.3271</b>	<b>0.0294</b>	<b>0.4852</b>	<b>1.8000e-004</b>		<b>4.5700e-003</b>	<b>4.5700e-003</b>		<b>4.5700e-003</b>	<b>4.5700e-003</b>	<b>0.0000</b>	<b>28.5015</b>	<b>28.5015</b>	<b>1.2700e-003</b>	<b>5.1000e-004</b>	<b>28.6849</b>

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**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	0.0200					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2313					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0143	5.4700e-003	0.4750	3.0000e-005		2.6300e-003	2.6300e-003		2.6300e-003	2.6300e-003	0.0000	0.7762	0.7762	7.4000e-004	0.0000	0.7949
<b>Total</b>	<b>0.2656</b>	<b>5.4700e-003</b>	<b>0.4750</b>	<b>3.0000e-005</b>		<b>2.6300e-003</b>	<b>2.6300e-003</b>		<b>2.6300e-003</b>	<b>2.6300e-003</b>	<b>0.0000</b>	<b>0.7762</b>	<b>0.7762</b>	<b>7.4000e-004</b>	<b>0.0000</b>	<b>0.7949</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

- Apply Water Conservation Strategy
- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	4.1311	0.1363	3.2600e-003	8.5118
Unmitigated	4.1937	0.1363	3.2600e-003	8.5751

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	4.16986 / 2.41852	4.1937	0.1363	3.2600e-003	8.5751
<b>Total</b>		<b>4.1937</b>	<b>0.1363</b>	<b>3.2600e-003</b>	<b>8.5751</b>

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**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			
Apartments Low Rise	4.16986 / 2.22504	4.1311	0.1363	3.2600e-003	8.5118
<b>Total</b>		<b>4.1311</b>	<b>0.1363</b>	<b>3.2600e-003</b>	<b>8.5118</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2.9880	0.1766	0.0000	7.4027
Unmitigated	5.9761	0.3532	0.0000	14.8054

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

**8.2 Waste by Land Use**

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	29.44	5.9761	0.3532	0.0000	14.8054
<b>Total</b>		<b>5.9761</b>	<b>0.3532</b>	<b>0.0000</b>	<b>14.8054</b>

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	14.72	2.9880	0.1766	0.0000	7.4027
<b>Total</b>		<b>2.9880</b>	<b>0.1766</b>	<b>0.0000</b>	<b>7.4027</b>

**9.0 Operational Offroad**

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Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

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

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

Equipment Type	Number
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**11.0 Vegetation**

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

**Armstrong Apartments - 2030**

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**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	64.00	Dwelling Unit	4.20	64,000.00	203

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.7	<b>Precipitation Freq (Days)</b>	45
<b>Climate Zone</b>	3			<b>Operational Year</b>	2030
<b>Utility Company</b>	Pacific Gas and Electric Company				
<b>CO2 Intensity (lb/MWhr)</b>	203.98	<b>CH4 Intensity (lb/MWhr)</b>	0.033	<b>N2O Intensity (lb/MWhr)</b>	0.004

**1.3 User Entered Comments & Non-Default Data**

- Project Characteristics -
- Land Use - total acreage of project site is 4.2 ac
- Architectural Coating - standard effective January 1, 2022
- Vehicle Trips - Trip Rate per ITE 11th ed.
- Area Coating - Standard effective January 1, 2022
- Energy Use - see analysis for assumptions
- Water And Wastewater - see analysis for assumptions
- Mobile Land Use Mitigation -
- Mobile Commute Mitigation -
- Area Mitigation - Standard effective January 1, 2022
- Energy Mitigation -
- Water Mitigation -

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

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblEnergyUse	T24E	147.91	137.56
tblEnergyUse	T24NG	9,924.02	9,229.34
tblLandUse	LotAcreage	4.00	4.20
tblVehicleTrips	HO_TL	7.50	1.00
tblVehicleTrips	HS_TL	7.30	2.00
tblVehicleTrips	HW_TL	10.80	9.50
tblVehicleTrips	ST_TR	8.14	4.55
tblVehicleTrips	SU_TR	6.28	3.86
tblVehicleTrips	WD_TR	7.32	6.74
tblWater	OutdoorWaterUseRate	2,628,823.29	2,418,517.43
tblWoodstoves	NumberCatalytic	4.20	0.00
tblWoodstoves	NumberNoncatalytic	4.20	0.00

**2.0 Emissions Summary**

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

**2.1 Overall Construction**

**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2029	0.2011	1.7784	2.2345	4.1400e-003	0.1267	0.0743	0.2010	0.0522	0.0697	0.1218	0.0000	362.0863	362.0863	0.0784	2.7600e-003	364.8702
2030	0.6142	0.0724	0.1553	2.8000e-004	2.5000e-003	2.6200e-003	5.1200e-003	6.7000e-004	2.6200e-003	3.2800e-003	0.0000	24.3442	24.3442	1.0800e-003	6.0000e-005	24.3879
<b>Maximum</b>	<b>0.6142</b>	<b>1.7784</b>	<b>2.2345</b>	<b>4.1400e-003</b>	<b>0.1267</b>	<b>0.0743</b>	<b>0.2010</b>	<b>0.0522</b>	<b>0.0697</b>	<b>0.1218</b>	<b>0.0000</b>	<b>362.0863</b>	<b>362.0863</b>	<b>0.0784</b>	<b>2.7600e-003</b>	<b>364.8702</b>

**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					
2029	0.2011	1.7784	2.2345	4.1400e-003	0.1267	0.0743	0.2010	0.0522	0.0697	0.1218	0.0000	362.0859	362.0859	0.0784	2.7600e-003	364.8698
2030	0.6142	0.0724	0.1553	2.8000e-004	2.5000e-003	2.6200e-003	5.1200e-003	6.7000e-004	2.6200e-003	3.2800e-003	0.0000	24.3442	24.3442	1.0800e-003	6.0000e-005	24.3878
<b>Maximum</b>	<b>0.6142</b>	<b>1.7784</b>	<b>2.2345</b>	<b>4.1400e-003</b>	<b>0.1267</b>	<b>0.0743</b>	<b>0.2010</b>	<b>0.0522</b>	<b>0.0697</b>	<b>0.1218</b>	<b>0.0000</b>	<b>362.0859</b>	<b>362.0859</b>	<b>0.0784</b>	<b>2.7600e-003</b>	<b>364.8698</b>

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**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
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2029	3-31-2029	0.5699	0.5699
2	4-1-2029	6-30-2029	0.4644	0.4644
3	7-1-2029	9-30-2029	0.4695	0.4695
4	10-1-2029	12-31-2029	0.4701	0.4701
5	1-1-2030	3-31-2030	0.6569	0.6569
		Highest	0.6569	0.6569

**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	0.3270	0.0294	0.4841	1.8000e-004		4.5700e-003	4.5700e-003		4.5700e-003	4.5700e-003	0.0000	28.5015	28.5015	1.2700e-003	5.1000e-004	28.6848
Energy	4.4700e-003	0.0382	0.0163	2.4000e-004		3.0900e-003	3.0900e-003		3.0900e-003	3.0900e-003	0.0000	68.6366	68.6366	4.8000e-003	1.2900e-003	69.1408
Mobile	0.1177	0.1751	0.9590	2.1100e-003	0.2363	1.7900e-003	0.2381	0.0632	1.6800e-003	0.0649	0.0000	205.3447	205.3447	0.0117	0.0120	209.2121
Waste						0.0000	0.0000		0.0000	0.0000	5.9761	0.0000	5.9761	0.3532	0.0000	14.8054
Water						0.0000	0.0000		0.0000	0.0000	1.3229	2.8708	4.1937	0.1363	3.2600e-003	8.5751
<b>Total</b>	<b>0.4492</b>	<b>0.2427</b>	<b>1.4594</b>	<b>2.5300e-003</b>	<b>0.2363</b>	<b>9.4500e-003</b>	<b>0.2458</b>	<b>0.0632</b>	<b>9.3400e-003</b>	<b>0.0726</b>	<b>7.2990</b>	<b>305.3537</b>	<b>312.6526</b>	<b>0.5072</b>	<b>0.0171</b>	<b>330.4181</b>

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**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	0.3055	5.4600e-003	0.4740	3.0000e-005		2.6400e-003	2.6400e-003		2.6400e-003	2.6400e-003	0.0000	0.7762	0.7762	7.4000e-004	0.0000	0.7947
Energy	4.2500e-003	0.0363	0.0154	2.3000e-004		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003	0.0000	51.6326	51.6326	2.3600e-003	9.6000e-004	51.9773
Mobile	0.1012	0.1286	0.7027	1.2900e-003	0.1393	1.1500e-003	0.1404	0.0372	1.0800e-003	0.0383	0.0000	125.5312	125.5312	9.1100e-003	8.5000e-003	128.2921
Waste						0.0000	0.0000		0.0000	0.0000	2.9880	0.0000	2.9880	0.1766	0.0000	7.4027
Water						0.0000	0.0000		0.0000	0.0000	1.3229	2.8082	4.1311	0.1363	3.2600e-003	8.5118
<b>Total</b>	<b>0.4110</b>	<b>0.1703</b>	<b>1.1920</b>	<b>1.5500e-003</b>	<b>0.1393</b>	<b>6.7200e-003</b>	<b>0.1460</b>	<b>0.0372</b>	<b>6.6500e-003</b>	<b>0.0439</b>	<b>4.3109</b>	<b>180.7482</b>	<b>185.0591</b>	<b>0.3251</b>	<b>0.0127</b>	<b>196.9786</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>8.50</b>	<b>29.80</b>	<b>18.32</b>	<b>38.74</b>	<b>41.08</b>	<b>28.89</b>	<b>40.61</b>	<b>41.08</b>	<b>28.80</b>	<b>39.50</b>	<b>40.94</b>	<b>40.81</b>	<b>40.81</b>	<b>35.90</b>	<b>25.44</b>	<b>40.39</b>

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2029	1/26/2029	5	20	
2	Site Preparation	Site Preparation	1/27/2029	2/2/2029	5	5	
3	Grading	Grading	2/3/2029	2/14/2029	5	8	

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4	Building Construction	Building Construction	2/15/2029	1/2/2030	5	230
5	Paving	Paving	1/3/2030	1/28/2030	5	18
6	Architectural Coating	Architectural Coating	1/29/2030	2/21/2030	5	18

**Acres of Grading (Site Preparation Phase): 7.5**

**Acres of Grading (Grading Phase): 8**

**Acres of Paving: 0**

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

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	7.00	231	0.29
Demolition	Excavators	3	8.00	158	0.38
Grading	Excavators	1	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37

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Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	46.00	7.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

**3.2 Demolition - 2029**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0209	0.1920	0.1942	3.9000e-004		8.5300e-003	8.5300e-003		7.9200e-003	7.9200e-003	0.0000	33.9977	33.9977	9.4900e-003	0.0000	34.2350
<b>Total</b>	<b>0.0209</b>	<b>0.1920</b>	<b>0.1942</b>	<b>3.9000e-004</b>		<b>8.5300e-003</b>	<b>8.5300e-003</b>		<b>7.9200e-003</b>	<b>7.9200e-003</b>	<b>0.0000</b>	<b>33.9977</b>	<b>33.9977</b>	<b>9.4900e-003</b>	<b>0.0000</b>	<b>34.2350</b>

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

**3.2 Demolition - 2029**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	1.7000e-004	2.5600e-003	1.0000e-005	1.2000e-003	0.0000	1.2000e-003	3.2000e-004	0.0000	3.2000e-004	0.0000	0.8495	0.8495	2.0000e-005	2.0000e-005	0.8558
<b>Total</b>	<b>3.1000e-004</b>	<b>1.7000e-004</b>	<b>2.5600e-003</b>	<b>1.0000e-005</b>	<b>1.2000e-003</b>	<b>0.0000</b>	<b>1.2000e-003</b>	<b>3.2000e-004</b>	<b>0.0000</b>	<b>3.2000e-004</b>	<b>0.0000</b>	<b>0.8495</b>	<b>0.8495</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.8558</b>

**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	0.0209	0.1920	0.1942	3.9000e-004		8.5300e-003	8.5300e-003		7.9200e-003	7.9200e-003	0.0000	33.9976	33.9976	9.4900e-003	0.0000	34.2349
<b>Total</b>	<b>0.0209</b>	<b>0.1920</b>	<b>0.1942</b>	<b>3.9000e-004</b>		<b>8.5300e-003</b>	<b>8.5300e-003</b>		<b>7.9200e-003</b>	<b>7.9200e-003</b>	<b>0.0000</b>	<b>33.9976</b>	<b>33.9976</b>	<b>9.4900e-003</b>	<b>0.0000</b>	<b>34.2349</b>



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**3.2 Demolition - 2029**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	1.7000e-004	2.5600e-003	1.0000e-005	1.2000e-003	0.0000	1.2000e-003	3.2000e-004	0.0000	3.2000e-004	0.0000	0.8495	0.8495	2.0000e-005	2.0000e-005	0.8558
<b>Total</b>	<b>3.1000e-004</b>	<b>1.7000e-004</b>	<b>2.5600e-003</b>	<b>1.0000e-005</b>	<b>1.2000e-003</b>	<b>0.0000</b>	<b>1.2000e-003</b>	<b>3.2000e-004</b>	<b>0.0000</b>	<b>3.2000e-004</b>	<b>0.0000</b>	<b>0.8495</b>	<b>0.8495</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.8558</b>

**3.3 Site Preparation - 2029**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0491	0.0000	0.0491	0.0253	0.0000	0.0253	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1800e-003	0.0631	0.0448	1.0000e-004		2.7200e-003	2.7200e-003		2.5000e-003	2.5000e-003	0.0000	8.3668	8.3668	2.7100e-003	0.0000	8.4344
<b>Total</b>	<b>6.1800e-003</b>	<b>0.0631</b>	<b>0.0448</b>	<b>1.0000e-004</b>	<b>0.0491</b>	<b>2.7200e-003</b>	<b>0.0519</b>	<b>0.0253</b>	<b>2.5000e-003</b>	<b>0.0278</b>	<b>0.0000</b>	<b>8.3668</b>	<b>8.3668</b>	<b>2.7100e-003</b>	<b>0.0000</b>	<b>8.4344</b>

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**3.3 Site Preparation - 2029**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	5.0000e-005	7.7000e-004	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2549	0.2549	1.0000e-005	1.0000e-005	0.2567
<b>Total</b>	<b>9.0000e-005</b>	<b>5.0000e-005</b>	<b>7.7000e-004</b>	<b>0.0000</b>	<b>3.6000e-004</b>	<b>0.0000</b>	<b>3.6000e-004</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>0.2549</b>	<b>0.2549</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.2567</b>

**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					0.0491	0.0000	0.0491	0.0253	0.0000	0.0253	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1800e-003	0.0631	0.0448	1.0000e-004		2.7200e-003	2.7200e-003		2.5000e-003	2.5000e-003	0.0000	8.3667	8.3667	2.7100e-003	0.0000	8.4344
<b>Total</b>	<b>6.1800e-003</b>	<b>0.0631</b>	<b>0.0448</b>	<b>1.0000e-004</b>	<b>0.0491</b>	<b>2.7200e-003</b>	<b>0.0519</b>	<b>0.0253</b>	<b>2.5000e-003</b>	<b>0.0278</b>	<b>0.0000</b>	<b>8.3667</b>	<b>8.3667</b>	<b>2.7100e-003</b>	<b>0.0000</b>	<b>8.4344</b>

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**3.3 Site Preparation - 2029**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	5.0000e-005	7.7000e-004	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2549	0.2549	1.0000e-005	1.0000e-005	0.2567
<b>Total</b>	<b>9.0000e-005</b>	<b>5.0000e-005</b>	<b>7.7000e-004</b>	<b>0.0000</b>	<b>3.6000e-004</b>	<b>0.0000</b>	<b>3.6000e-004</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>0.2549</b>	<b>0.2549</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.2567</b>

**3.4 Grading - 2029**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0283	0.0000	0.0283	0.0137	0.0000	0.0137	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0900e-003	0.0613	0.0582	1.2000e-004		2.4900e-003	2.4900e-003		2.2900e-003	2.2900e-003	0.0000	10.4279	10.4279	3.3700e-003	0.0000	10.5122
<b>Total</b>	<b>6.0900e-003</b>	<b>0.0613</b>	<b>0.0582</b>	<b>1.2000e-004</b>	<b>0.0283</b>	<b>2.4900e-003</b>	<b>0.0308</b>	<b>0.0137</b>	<b>2.2900e-003</b>	<b>0.0160</b>	<b>0.0000</b>	<b>10.4279</b>	<b>10.4279</b>	<b>3.3700e-003</b>	<b>0.0000</b>	<b>10.5122</b>

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**3.4 Grading - 2029**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	7.0000e-005	1.0200e-003	0.0000	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3398	0.3398	1.0000e-005	1.0000e-005	0.3423
<b>Total</b>	<b>1.2000e-004</b>	<b>7.0000e-005</b>	<b>1.0200e-003</b>	<b>0.0000</b>	<b>4.8000e-004</b>	<b>0.0000</b>	<b>4.8000e-004</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>0.3398</b>	<b>0.3398</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.3423</b>

**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					0.0283	0.0000	0.0283	0.0137	0.0000	0.0137	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0900e-003	0.0613	0.0582	1.2000e-004		2.4900e-003	2.4900e-003		2.2900e-003	2.2900e-003	0.0000	10.4279	10.4279	3.3700e-003	0.0000	10.5122
<b>Total</b>	<b>6.0900e-003</b>	<b>0.0613</b>	<b>0.0582</b>	<b>1.2000e-004</b>	<b>0.0283</b>	<b>2.4900e-003</b>	<b>0.0308</b>	<b>0.0137</b>	<b>2.2900e-003</b>	<b>0.0160</b>	<b>0.0000</b>	<b>10.4279</b>	<b>10.4279</b>	<b>3.3700e-003</b>	<b>0.0000</b>	<b>10.5122</b>

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**3.4 Grading - 2029**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	7.0000e-005	1.0200e-003	0.0000	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3398	0.3398	1.0000e-005	1.0000e-005	0.3423
<b>Total</b>	<b>1.2000e-004</b>	<b>7.0000e-005</b>	<b>1.0200e-003</b>	<b>0.0000</b>	<b>4.8000e-004</b>	<b>0.0000</b>	<b>4.8000e-004</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>0.3398</b>	<b>0.3398</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.3423</b>

**3.5 Building Construction - 2029**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1559	1.4215	1.8337	3.0700e-003		0.0601	0.0601		0.0566	0.0566	0.0000	264.3882	264.3882	0.0622	0.0000	265.9419
<b>Total</b>	<b>0.1559</b>	<b>1.4215</b>	<b>1.8337</b>	<b>3.0700e-003</b>		<b>0.0601</b>	<b>0.0601</b>		<b>0.0566</b>	<b>0.0566</b>	<b>0.0000</b>	<b>264.3882</b>	<b>264.3882</b>	<b>0.0622</b>	<b>0.0000</b>	<b>265.9419</b>

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**3.5 Building Construction - 2029**

**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	7.8000e-004	0.0344	9.7700e-003	1.4000e-004	5.2900e-003	2.2000e-004	5.5200e-003	1.5300e-003	2.1000e-004	1.7400e-003	0.0000	13.7624	13.7624	5.0000e-005	2.0500e-003	14.3744
Worker	0.0107	5.8900e-003	0.0896	3.0000e-004	0.0419	1.6000e-004	0.0421	0.0111	1.5000e-004	0.0113	0.0000	29.6992	29.6992	6.0000e-004	6.8000e-004	29.9175
<b>Total</b>	<b>0.0115</b>	<b>0.0403</b>	<b>0.0993</b>	<b>4.4000e-004</b>	<b>0.0472</b>	<b>3.8000e-004</b>	<b>0.0476</b>	<b>0.0127</b>	<b>3.6000e-004</b>	<b>0.0130</b>	<b>0.0000</b>	<b>43.4616</b>	<b>43.4616</b>	<b>6.5000e-004</b>	<b>2.7300e-003</b>	<b>44.2919</b>

**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	0.1559	1.4215	1.8337	3.0700e-003		0.0601	0.0601		0.0566	0.0566	0.0000	264.3879	264.3879	0.0622	0.0000	265.9416
<b>Total</b>	<b>0.1559</b>	<b>1.4215</b>	<b>1.8337</b>	<b>3.0700e-003</b>		<b>0.0601</b>	<b>0.0601</b>		<b>0.0566</b>	<b>0.0566</b>	<b>0.0000</b>	<b>264.3879</b>	<b>264.3879</b>	<b>0.0622</b>	<b>0.0000</b>	<b>265.9416</b>

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**3.5 Building Construction - 2029**

**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	7.8000e-004	0.0344	9.7700e-003	1.4000e-004	5.2900e-003	2.2000e-004	5.5200e-003	1.5300e-003	2.1000e-004	1.7400e-003	0.0000	13.7624	13.7624	5.0000e-005	2.0500e-003	14.3744
Worker	0.0107	5.8900e-003	0.0896	3.0000e-004	0.0419	1.6000e-004	0.0421	0.0111	1.5000e-004	0.0113	0.0000	29.6992	29.6992	6.0000e-004	6.8000e-004	29.9175
<b>Total</b>	<b>0.0115</b>	<b>0.0403</b>	<b>0.0993</b>	<b>4.4000e-004</b>	<b>0.0472</b>	<b>3.8000e-004</b>	<b>0.0476</b>	<b>0.0127</b>	<b>3.6000e-004</b>	<b>0.0130</b>	<b>0.0000</b>	<b>43.4616</b>	<b>43.4616</b>	<b>6.5000e-004</b>	<b>2.7300e-003</b>	<b>44.2919</b>

**3.5 Building Construction - 2030**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.3100e-003	7.9300e-003	0.0162	3.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	2.6286	2.6286	1.1000e-004	0.0000	2.6313
<b>Total</b>	<b>1.3100e-003</b>	<b>7.9300e-003</b>	<b>0.0162</b>	<b>3.0000e-005</b>		<b>1.5000e-004</b>	<b>1.5000e-004</b>		<b>1.5000e-004</b>	<b>1.5000e-004</b>	<b>0.0000</b>	<b>2.6286</b>	<b>2.6286</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>2.6313</b>

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**3.5 Building Construction - 2030**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-005	3.0000e-004	9.0000e-005	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.1185	0.1185	0.0000	2.0000e-005	0.1238
Worker	9.0000e-005	5.0000e-005	7.5000e-004	0.0000	3.7000e-004	0.0000	3.7000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2563	0.2563	0.0000	1.0000e-005	0.2581
<b>Total</b>	<b>1.0000e-004</b>	<b>3.5000e-004</b>	<b>8.4000e-004</b>	<b>0.0000</b>	<b>4.2000e-004</b>	<b>0.0000</b>	<b>4.2000e-004</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>0.3748</b>	<b>0.3748</b>	<b>0.0000</b>	<b>3.0000e-005</b>	<b>0.3819</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.3100e-003	7.9300e-003	0.0162	3.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	2.6286	2.6286	1.1000e-004	0.0000	2.6312
<b>Total</b>	<b>1.3100e-003</b>	<b>7.9300e-003</b>	<b>0.0162</b>	<b>3.0000e-005</b>		<b>1.5000e-004</b>	<b>1.5000e-004</b>		<b>1.5000e-004</b>	<b>1.5000e-004</b>	<b>0.0000</b>	<b>2.6286</b>	<b>2.6286</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>2.6312</b>



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**3.5 Building Construction - 2030**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-005	3.0000e-004	9.0000e-005	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.1185	0.1185	0.0000	2.0000e-005	0.1238
Worker	9.0000e-005	5.0000e-005	7.5000e-004	0.0000	3.7000e-004	0.0000	3.7000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2563	0.2563	0.0000	1.0000e-005	0.2581
<b>Total</b>	<b>1.0000e-004</b>	<b>3.5000e-004</b>	<b>8.4000e-004</b>	<b>0.0000</b>	<b>4.2000e-004</b>	<b>0.0000</b>	<b>4.2000e-004</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>0.3748</b>	<b>0.3748</b>	<b>0.0000</b>	<b>3.0000e-005</b>	<b>0.3819</b>

**3.6 Paving - 2030**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0104	0.0561	0.1178	2.1000e-004		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003	0.0000	17.5888	17.5888	8.4000e-004	0.0000	17.6099
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0104</b>	<b>0.0561</b>	<b>0.1178</b>	<b>2.1000e-004</b>		<b>2.2800e-003</b>	<b>2.2800e-003</b>		<b>2.2800e-003</b>	<b>2.2800e-003</b>	<b>0.0000</b>	<b>17.5888</b>	<b>17.5888</b>	<b>8.4000e-004</b>	<b>0.0000</b>	<b>17.6099</b>

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**3.6 Paving - 2030**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5000e-004	1.9000e-004	2.9500e-003	1.0000e-005	1.4400e-003	1.0000e-005	1.4400e-003	3.8000e-004	0.0000	3.9000e-004	0.0000	1.0028	1.0028	2.0000e-005	2.0000e-005	1.0100
<b>Total</b>	<b>3.5000e-004</b>	<b>1.9000e-004</b>	<b>2.9500e-003</b>	<b>1.0000e-005</b>	<b>1.4400e-003</b>	<b>1.0000e-005</b>	<b>1.4400e-003</b>	<b>3.8000e-004</b>	<b>0.0000</b>	<b>3.9000e-004</b>	<b>0.0000</b>	<b>1.0028</b>	<b>1.0028</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>1.0100</b>

**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	0.0104	0.0561	0.1178	2.1000e-004		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003	0.0000	17.5888	17.5888	8.4000e-004	0.0000	17.6099
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0104</b>	<b>0.0561</b>	<b>0.1178</b>	<b>2.1000e-004</b>		<b>2.2800e-003</b>	<b>2.2800e-003</b>		<b>2.2800e-003</b>	<b>2.2800e-003</b>	<b>0.0000</b>	<b>17.5888</b>	<b>17.5888</b>	<b>8.4000e-004</b>	<b>0.0000</b>	<b>17.6099</b>

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**3.6 Paving - 2030**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5000e-004	1.9000e-004	2.9500e-003	1.0000e-005	1.4400e-003	1.0000e-005	1.4400e-003	3.8000e-004	0.0000	3.9000e-004	0.0000	1.0028	1.0028	2.0000e-005	2.0000e-005	1.0100
<b>Total</b>	<b>3.5000e-004</b>	<b>1.9000e-004</b>	<b>2.9500e-003</b>	<b>1.0000e-005</b>	<b>1.4400e-003</b>	<b>1.0000e-005</b>	<b>1.4400e-003</b>	<b>3.8000e-004</b>	<b>0.0000</b>	<b>3.9000e-004</b>	<b>0.0000</b>	<b>1.0028</b>	<b>1.0028</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>1.0100</b>

**3.7 Architectural Coating - 2030**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6007					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1800e-003	7.7100e-003	0.0162	3.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.2979	2.2979	9.0000e-005	0.0000	2.3003
<b>Total</b>	<b>0.6019</b>	<b>7.7100e-003</b>	<b>0.0162</b>	<b>3.0000e-005</b>		<b>1.8000e-004</b>	<b>1.8000e-004</b>		<b>1.8000e-004</b>	<b>1.8000e-004</b>	<b>0.0000</b>	<b>2.2979</b>	<b>2.2979</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>2.3003</b>

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**3.7 Architectural Coating - 2030**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	8.0000e-005	1.3300e-003	0.0000	6.5000e-004	0.0000	6.5000e-004	1.7000e-004	0.0000	1.7000e-004	0.0000	0.4513	0.4513	1.0000e-005	1.0000e-005	0.4545
<b>Total</b>	<b>1.6000e-004</b>	<b>8.0000e-005</b>	<b>1.3300e-003</b>	<b>0.0000</b>	<b>6.5000e-004</b>	<b>0.0000</b>	<b>6.5000e-004</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>0.4513</b>	<b>0.4513</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.4545</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6007					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1800e-003	7.7100e-003	0.0162	3.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.2979	2.2979	9.0000e-005	0.0000	2.3003
<b>Total</b>	<b>0.6019</b>	<b>7.7100e-003</b>	<b>0.0162</b>	<b>3.0000e-005</b>		<b>1.8000e-004</b>	<b>1.8000e-004</b>		<b>1.8000e-004</b>	<b>1.8000e-004</b>	<b>0.0000</b>	<b>2.2979</b>	<b>2.2979</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>2.3003</b>

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**3.7 Architectural Coating - 2030**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	8.0000e-005	1.3300e-003	0.0000	6.5000e-004	0.0000	6.5000e-004	1.7000e-004	0.0000	1.7000e-004	0.0000	0.4513	0.4513	1.0000e-005	1.0000e-005	0.4545
<b>Total</b>	<b>1.6000e-004</b>	<b>8.0000e-005</b>	<b>1.3300e-003</b>	<b>0.0000</b>	<b>6.5000e-004</b>	<b>0.0000</b>	<b>6.5000e-004</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>0.4513</b>	<b>0.4513</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.4545</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

Increase Density

Increase Diversity

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

Implement NEV Network

Implement Trip Reduction Program

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1012	0.1286	0.7027	1.2900e-003	0.1393	1.1500e-003	0.1404	0.0372	1.0800e-003	0.0383	0.0000	125.5312	125.5312	9.1100e-003	8.5000e-003	128.2921
Unmitigated	0.1177	0.1751	0.9590	2.1100e-003	0.2363	1.7900e-003	0.2381	0.0632	1.6800e-003	0.0649	0.0000	205.3447	205.3447	0.0117	0.0120	209.2121

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	431.36	291.20	247.04	630,510	371,513
Total	431.36	291.20	247.04	630,510	371,513

**4.3 Trip Type Information**

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	9.50	2.00	1.00	45.60	19.00	35.40	86	11	3

**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.539927	0.053807	0.173545	0.136624	0.023267	0.006448	0.013553	0.025992	0.000624	0.000304	0.021845	0.001297	0.002766

**5.0 Energy Detail**

Historical Energy Use: N

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

**5.1 Mitigation Measures Energy**

Exceed Title 24

Install High Efficiency Lighting

Percent of Electricity Use Generated with Renewable 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	9.6031	9.6031	1.5500e-003	1.9000e-004	9.6981
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	24.4007	24.4007	3.9500e-003	4.8000e-004	24.6420
NaturalGas Mitigated	4.2500e-003	0.0363	0.0154	2.3000e-004		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003	0.0000	42.0295	42.0295	8.1000e-004	7.7000e-004	42.2792
NaturalGas Unmitigated	4.4700e-003	0.0382	0.0163	2.4000e-004		3.0900e-003	3.0900e-003		3.0900e-003	3.0900e-003	0.0000	44.2359	44.2359	8.5000e-004	8.1000e-004	44.4988

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**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					
Apartments Low Rise	828950	4.4700e-003	0.0382	0.0163	2.4000e-004		3.0900e-003	3.0900e-003		3.0900e-003	3.0900e-003	0.0000	44.2359	44.2359	8.5000e-004	8.1000e-004	44.4988
<b>Total</b>		<b>4.4700e-003</b>	<b>0.0382</b>	<b>0.0163</b>	<b>2.4000e-004</b>		<b>3.0900e-003</b>	<b>3.0900e-003</b>		<b>3.0900e-003</b>	<b>3.0900e-003</b>	<b>0.0000</b>	<b>44.2359</b>	<b>44.2359</b>	<b>8.5000e-004</b>	<b>8.1000e-004</b>	<b>44.4988</b>

**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					
Apartments Low Rise	787602	4.2500e-003	0.0363	0.0154	2.3000e-004		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003	0.0000	42.0295	42.0295	8.1000e-004	7.7000e-004	42.2792
<b>Total</b>		<b>4.2500e-003</b>	<b>0.0363</b>	<b>0.0154</b>	<b>2.3000e-004</b>		<b>2.9300e-003</b>	<b>2.9300e-003</b>		<b>2.9300e-003</b>	<b>2.9300e-003</b>	<b>0.0000</b>	<b>42.0295</b>	<b>42.0295</b>	<b>8.1000e-004</b>	<b>7.7000e-004</b>	<b>42.2792</b>



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**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	263724	24.4007	3.9500e-003	4.8000e-004	24.6420
<b>Total</b>		<b>24.4007</b>	<b>3.9500e-003</b>	<b>4.8000e-004</b>	<b>24.6420</b>

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	103791	9.6031	1.5500e-003	1.9000e-004	9.6981
<b>Total</b>		<b>9.6031</b>	<b>1.5500e-003</b>	<b>1.9000e-004</b>	<b>9.6981</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

Use Low VOC Paint - Residential Interior

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Use Low VOC Paint - Residential Exterior

No Hearths Installed

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3055	5.4600e-003	0.4740	3.0000e-005		2.6400e-003	2.6400e-003		2.6400e-003	2.6400e-003	0.0000	0.7762	0.7762	7.4000e-004	0.0000	0.7947
Unmitigated	0.3270	0.0294	0.4841	1.8000e-004		4.5700e-003	4.5700e-003		4.5700e-003	4.5700e-003	0.0000	28.5015	28.5015	1.2700e-003	5.1000e-004	28.6848

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

**6.2 Area by SubCategory**

**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0601					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2500					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.8000e-003	0.0239	0.0102	1.5000e-004		1.9400e-003	1.9400e-003		1.9400e-003	1.9400e-003	0.0000	27.7253	27.7253	5.3000e-004	5.1000e-004	27.8900
Landscaping	0.0142	5.4600e-003	0.4740	3.0000e-005		2.6400e-003	2.6400e-003		2.6400e-003	2.6400e-003	0.0000	0.7762	0.7762	7.4000e-004	0.0000	0.7947
<b>Total</b>	<b>0.3270</b>	<b>0.0294</b>	<b>0.4841</b>	<b>1.8000e-004</b>		<b>4.5800e-003</b>	<b>4.5800e-003</b>		<b>4.5800e-003</b>	<b>4.5800e-003</b>	<b>0.0000</b>	<b>28.5015</b>	<b>28.5015</b>	<b>1.2700e-003</b>	<b>5.1000e-004</b>	<b>28.6848</b>

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**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	0.0601					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2313					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0142	5.4600e-003	0.4740	3.0000e-005		2.6400e-003	2.6400e-003		2.6400e-003	2.6400e-003	0.0000	0.7762	0.7762	7.4000e-004	0.0000	0.7947
<b>Total</b>	<b>0.3055</b>	<b>5.4600e-003</b>	<b>0.4740</b>	<b>3.0000e-005</b>		<b>2.6400e-003</b>	<b>2.6400e-003</b>		<b>2.6400e-003</b>	<b>2.6400e-003</b>	<b>0.0000</b>	<b>0.7762</b>	<b>0.7762</b>	<b>7.4000e-004</b>	<b>0.0000</b>	<b>0.7947</b>

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

- Apply Water Conservation Strategy
- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	4.1311	0.1363	3.2600e-003	8.5118
Unmitigated	4.1937	0.1363	3.2600e-003	8.5751

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	4.16986 / 2.41852	4.1937	0.1363	3.2600e-003	8.5751
<b>Total</b>		<b>4.1937</b>	<b>0.1363</b>	<b>3.2600e-003</b>	<b>8.5751</b>

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**7.2 Water by Land Use**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	4.16986 / 2.22504	4.1311	0.1363	3.2600e-003	8.5118
<b>Total</b>		<b>4.1311</b>	<b>0.1363</b>	<b>3.2600e-003</b>	<b>8.5118</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2.9880	0.1766	0.0000	7.4027
Unmitigated	5.9761	0.3532	0.0000	14.8054

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

**8.2 Waste by Land Use**

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	29.44	5.9761	0.3532	0.0000	14.8054
<b>Total</b>		<b>5.9761</b>	<b>0.3532</b>	<b>0.0000</b>	<b>14.8054</b>

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	14.72	2.9880	0.1766	0.0000	7.4027
<b>Total</b>		<b>2.9880</b>	<b>0.1766</b>	<b>0.0000</b>	<b>7.4027</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

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

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

Equipment Type	Number
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**11.0 Vegetation**

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

**Armstrong Apartments - Maximum buildout of the existing designation**  
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**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	14.00	Dwelling Unit	4.20	25,200.00	44

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.7	<b>Precipitation Freq (Days)</b>	45
<b>Climate Zone</b>	3			<b>Operational Year</b>	2024
<b>Utility Company</b>	Pacific Gas and Electric Company				
<b>CO2 Intensity (lb/MWhr)</b>	203.98	<b>CH4 Intensity (lb/MWhr)</b>	0.033	<b>N2O Intensity (lb/MWhr)</b>	0.004

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - Net acreage of the project site is 4.2 acres.

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	4.55	4.20
tblWoodstoves	NumberCatalytic	4.20	0.00
tblWoodstoves	NumberNoncatalytic	4.20	0.00

**2.0 Emissions Summary**

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**2.1 Overall Construction**

**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.2174	1.9948	2.1668	3.7400e-003	0.0848	0.0957	0.1805	0.0409	0.0898	0.1308	0.0000	323.3964	323.3964	0.0784	4.8000e-004	325.4994
2024	0.2489	0.1060	0.1551	2.5000e-004	1.5800e-003	5.0600e-003	6.6500e-003	4.2000e-004	4.7400e-003	5.1600e-003	0.0000	21.7867	21.7867	5.6200e-003	4.0000e-005	21.9387
<b>Maximum</b>	<b>0.2489</b>	<b>1.9948</b>	<b>2.1668</b>	<b>3.7400e-003</b>	<b>0.0848</b>	<b>0.0957</b>	<b>0.1805</b>	<b>0.0409</b>	<b>0.0898</b>	<b>0.1308</b>	<b>0.0000</b>	<b>323.3964</b>	<b>323.3964</b>	<b>0.0784</b>	<b>4.8000e-004</b>	<b>325.4994</b>

**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					
2023	0.2174	1.9948	2.1668	3.7400e-003	0.0848	0.0957	0.1805	0.0409	0.0898	0.1308	0.0000	323.3961	323.3961	0.0784	4.8000e-004	325.4990
2024	0.2489	0.1060	0.1551	2.5000e-004	1.5800e-003	5.0600e-003	6.6500e-003	4.2000e-004	4.7400e-003	5.1600e-003	0.0000	21.7867	21.7867	5.6200e-003	4.0000e-005	21.9387
<b>Maximum</b>	<b>0.2489</b>	<b>1.9948</b>	<b>2.1668</b>	<b>3.7400e-003</b>	<b>0.0848</b>	<b>0.0957</b>	<b>0.1805</b>	<b>0.0409</b>	<b>0.0898</b>	<b>0.1308</b>	<b>0.0000</b>	<b>323.3961</b>	<b>323.3961</b>	<b>0.0784</b>	<b>4.8000e-004</b>	<b>325.4990</b>

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2023	3-31-2023	0.6420	0.6420
2	4-1-2023	6-30-2023	0.5209	0.5209
3	7-1-2023	9-30-2023	0.5267	0.5267
4	10-1-2023	12-31-2023	0.5268	0.5268
5	1-1-2024	3-31-2024	0.3393	0.3393
		Highest	0.6420	0.6420

**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	0.1258	6.4300e-003	0.1061	4.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	6.2347	6.2347	2.8000e-004	1.1000e-004	6.2748
Energy	1.8100e-003	0.0155	6.6000e-003	1.0000e-004		1.2500e-003	1.2500e-003		1.2500e-003	1.2500e-003	0.0000	28.2872	28.2872	2.0200e-003	5.3000e-004	28.4961
Mobile	0.0660	0.1180	0.6223	1.4800e-003	0.1420	1.3300e-003	0.1433	0.0380	1.2500e-003	0.0393	0.0000	139.2605	139.2605	7.3000e-003	7.7700e-003	141.7587
Waste						0.0000	0.0000		0.0000	0.0000	3.3595	0.0000	3.3595	0.1985	0.0000	8.3230
Water						0.0000	0.0000		0.0000	0.0000	0.2894	0.6429	0.9323	0.0298	7.1000e-004	1.8908
<b>Total</b>	<b>0.1937</b>	<b>0.1400</b>	<b>0.7350</b>	<b>1.6200e-003</b>	<b>0.1420</b>	<b>3.5800e-003</b>	<b>0.1456</b>	<b>0.0380</b>	<b>3.5000e-003</b>	<b>0.0415</b>	<b>3.6489</b>	<b>174.4253</b>	<b>178.0742</b>	<b>0.2380</b>	<b>9.1200e-003</b>	<b>186.7435</b>

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**2.2 Overall Operational**

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1258	6.4300e-003	0.1061	4.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	6.2347	6.2347	2.8000e-004	1.1000e-004	6.2748
Energy	1.8100e-003	0.0155	6.6000e-003	1.0000e-004		1.2500e-003	1.2500e-003		1.2500e-003	1.2500e-003	0.0000	28.2872	28.2872	2.0200e-003	5.3000e-004	28.4961
Mobile	0.0660	0.1180	0.6223	1.4800e-003	0.1420	1.3300e-003	0.1433	0.0380	1.2500e-003	0.0393	0.0000	139.2605	139.2605	7.3000e-003	7.7700e-003	141.7587
Waste						0.0000	0.0000		0.0000	0.0000	3.3595	0.0000	3.3595	0.1985	0.0000	8.3230
Water						0.0000	0.0000		0.0000	0.0000	0.2894	0.6429	0.9323	0.0298	7.1000e-004	1.8908
<b>Total</b>	<b>0.1937</b>	<b>0.1400</b>	<b>0.7350</b>	<b>1.6200e-003</b>	<b>0.1420</b>	<b>3.5800e-003</b>	<b>0.1456</b>	<b>0.0380</b>	<b>3.5000e-003</b>	<b>0.0415</b>	<b>3.6489</b>	<b>174.4253</b>	<b>178.0742</b>	<b>0.2380</b>	<b>9.1200e-003</b>	<b>186.7435</b>

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

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2023	1/27/2023	5	20	
2	Site Preparation	Site Preparation	1/28/2023	2/3/2023	5	5	
3	Grading	Grading	2/4/2023	2/15/2023	5	8	

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4	Building Construction	Building Construction	2/16/2023	1/3/2024	5	230
5	Paving	Paving	1/4/2024	1/29/2024	5	18
6	Architectural Coating	Architectural Coating	1/30/2024	2/22/2024	5	18

**Acres of Grading (Site Preparation Phase): 7.5**

**Acres of Grading (Grading Phase): 8**

**Acres of Paving: 0**

**Residential Indoor: 51,030; Residential Outdoor: 17,010; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	7.00	231	0.29
Demolition	Excavators	3	8.00	158	0.38
Grading	Excavators	1	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37

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Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	5.00	1.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

**3.2 Demolition - 2023**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0227	0.2148	0.1964	3.9000e-004		9.9800e-003	9.9800e-003		9.2800e-003	9.2800e-003	0.0000	33.9921	33.9921	9.5200e-003	0.0000	34.2301
<b>Total</b>	<b>0.0227</b>	<b>0.2148</b>	<b>0.1964</b>	<b>3.9000e-004</b>		<b>9.9800e-003</b>	<b>9.9800e-003</b>		<b>9.2800e-003</b>	<b>9.2800e-003</b>	<b>0.0000</b>	<b>33.9921</b>	<b>33.9921</b>	<b>9.5200e-003</b>	<b>0.0000</b>	<b>34.2301</b>

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

**3.2 Demolition - 2023**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.7000e-004	3.2000e-004	3.7300e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9711	0.9711	3.0000e-005	3.0000e-005	0.9803
<b>Total</b>	<b>4.7000e-004</b>	<b>3.2000e-004</b>	<b>3.7300e-003</b>	<b>1.0000e-005</b>	<b>1.2000e-003</b>	<b>1.0000e-005</b>	<b>1.2100e-003</b>	<b>3.2000e-004</b>	<b>1.0000e-005</b>	<b>3.2000e-004</b>	<b>0.0000</b>	<b>0.9711</b>	<b>0.9711</b>	<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>0.9803</b>

**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	0.0227	0.2148	0.1964	3.9000e-004		9.9800e-003	9.9800e-003		9.2800e-003	9.2800e-003	0.0000	33.9920	33.9920	9.5200e-003	0.0000	34.2300
<b>Total</b>	<b>0.0227</b>	<b>0.2148</b>	<b>0.1964</b>	<b>3.9000e-004</b>		<b>9.9800e-003</b>	<b>9.9800e-003</b>		<b>9.2800e-003</b>	<b>9.2800e-003</b>	<b>0.0000</b>	<b>33.9920</b>	<b>33.9920</b>	<b>9.5200e-003</b>	<b>0.0000</b>	<b>34.2300</b>

Armstrong Apartments - Maximum buildout of the existing designation - San Joaquin Valley Unified APCD Air District, Annual  
**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.2 Demolition - 2023**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.7000e-004	3.2000e-004	3.7300e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9711	0.9711	3.0000e-005	3.0000e-005	0.9803
<b>Total</b>	<b>4.7000e-004</b>	<b>3.2000e-004</b>	<b>3.7300e-003</b>	<b>1.0000e-005</b>	<b>1.2000e-003</b>	<b>1.0000e-005</b>	<b>1.2100e-003</b>	<b>3.2000e-004</b>	<b>1.0000e-005</b>	<b>3.2000e-004</b>	<b>0.0000</b>	<b>0.9711</b>	<b>0.9711</b>	<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>0.9803</b>

**3.3 Site Preparation - 2023**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0491	0.0000	0.0491	0.0253	0.0000	0.0253	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.6500e-003	0.0688	0.0456	1.0000e-004		3.1700e-003	3.1700e-003		2.9100e-003	2.9100e-003	0.0000	8.3627	8.3627	2.7000e-003	0.0000	8.4303
<b>Total</b>	<b>6.6500e-003</b>	<b>0.0688</b>	<b>0.0456</b>	<b>1.0000e-004</b>	<b>0.0491</b>	<b>3.1700e-003</b>	<b>0.0523</b>	<b>0.0253</b>	<b>2.9100e-003</b>	<b>0.0282</b>	<b>0.0000</b>	<b>8.3627</b>	<b>8.3627</b>	<b>2.7000e-003</b>	<b>0.0000</b>	<b>8.4303</b>



Armstrong Apartments - Maximum buildout of the existing designation - San Joaquin Valley Unified APCD Air District, Annual  
**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.3 Site Preparation - 2023**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	9.0000e-005	1.1200e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2913	0.2913	1.0000e-005	1.0000e-005	0.2941
<b>Total</b>	<b>1.4000e-004</b>	<b>9.0000e-005</b>	<b>1.1200e-003</b>	<b>0.0000</b>	<b>3.6000e-004</b>	<b>0.0000</b>	<b>3.6000e-004</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>0.2913</b>	<b>0.2913</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.2941</b>

**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					0.0491	0.0000	0.0491	0.0253	0.0000	0.0253	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.6500e-003	0.0688	0.0456	1.0000e-004		3.1700e-003	3.1700e-003		2.9100e-003	2.9100e-003	0.0000	8.3627	8.3627	2.7000e-003	0.0000	8.4303
<b>Total</b>	<b>6.6500e-003</b>	<b>0.0688</b>	<b>0.0456</b>	<b>1.0000e-004</b>	<b>0.0491</b>	<b>3.1700e-003</b>	<b>0.0523</b>	<b>0.0253</b>	<b>2.9100e-003</b>	<b>0.0282</b>	<b>0.0000</b>	<b>8.3627</b>	<b>8.3627</b>	<b>2.7000e-003</b>	<b>0.0000</b>	<b>8.4303</b>

Armstrong Apartments - Maximum buildout of the existing designation - San Joaquin Valley Unified APCD Air District, Annual

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

**3.3 Site Preparation - 2023**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	9.0000e-005	1.1200e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2913	0.2913	1.0000e-005	1.0000e-005	0.2941
<b>Total</b>	<b>1.4000e-004</b>	<b>9.0000e-005</b>	<b>1.1200e-003</b>	<b>0.0000</b>	<b>3.6000e-004</b>	<b>0.0000</b>	<b>3.6000e-004</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>0.2913</b>	<b>0.2913</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.2941</b>

**3.4 Grading - 2023**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0283	0.0000	0.0283	0.0137	0.0000	0.0137	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.8400e-003	0.0717	0.0590	1.2000e-004		3.1000e-003	3.1000e-003		2.8500e-003	2.8500e-003	0.0000	10.4243	10.4243	3.3700e-003	0.0000	10.5085
<b>Total</b>	<b>6.8400e-003</b>	<b>0.0717</b>	<b>0.0590</b>	<b>1.2000e-004</b>	<b>0.0283</b>	<b>3.1000e-003</b>	<b>0.0314</b>	<b>0.0137</b>	<b>2.8500e-003</b>	<b>0.0166</b>	<b>0.0000</b>	<b>10.4243</b>	<b>10.4243</b>	<b>3.3700e-003</b>	<b>0.0000</b>	<b>10.5085</b>

Armstrong Apartments - Maximum buildout of the existing designation - San Joaquin Valley Unified APCD Air District, Annual

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

**3.4 Grading - 2023**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	1.3000e-004	1.4900e-003	0.0000	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3884	0.3884	1.0000e-005	1.0000e-005	0.3921
<b>Total</b>	<b>1.9000e-004</b>	<b>1.3000e-004</b>	<b>1.4900e-003</b>	<b>0.0000</b>	<b>4.8000e-004</b>	<b>0.0000</b>	<b>4.8000e-004</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>0.3884</b>	<b>0.3884</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.3921</b>

**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					0.0283	0.0000	0.0283	0.0137	0.0000	0.0137	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.8400e-003	0.0717	0.0590	1.2000e-004		3.1000e-003	3.1000e-003		2.8500e-003	2.8500e-003	0.0000	10.4242	10.4242	3.3700e-003	0.0000	10.5085
<b>Total</b>	<b>6.8400e-003</b>	<b>0.0717</b>	<b>0.0590</b>	<b>1.2000e-004</b>	<b>0.0283</b>	<b>3.1000e-003</b>	<b>0.0314</b>	<b>0.0137</b>	<b>2.8500e-003</b>	<b>0.0166</b>	<b>0.0000</b>	<b>10.4242</b>	<b>10.4242</b>	<b>3.3700e-003</b>	<b>0.0000</b>	<b>10.5085</b>

Armstrong Apartments - Maximum buildout of the existing designation - San Joaquin Valley Unified APCD Air District, Annual

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

**3.4 Grading - 2023**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	1.3000e-004	1.4900e-003	0.0000	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3884	0.3884	1.0000e-005	1.0000e-005	0.3921
<b>Total</b>	<b>1.9000e-004</b>	<b>1.3000e-004</b>	<b>1.4900e-003</b>	<b>0.0000</b>	<b>4.8000e-004</b>	<b>0.0000</b>	<b>4.8000e-004</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>0.3884</b>	<b>0.3884</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.3921</b>

**3.5 Building Construction - 2023**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6327	1.8437	3.0600e-003		0.0794	0.0794		0.0747	0.0747	0.0000	263.0984	263.0984	0.0626	0.0000	264.6631
<b>Total</b>	<b>0.1785</b>	<b>1.6327</b>	<b>1.8437</b>	<b>3.0600e-003</b>		<b>0.0794</b>	<b>0.0794</b>		<b>0.0747</b>	<b>0.0747</b>	<b>0.0000</b>	<b>263.0984</b>	<b>263.0984</b>	<b>0.0626</b>	<b>0.0000</b>	<b>264.6631</b>

Armstrong Apartments - Maximum buildout of the existing designation - San Joaquin Valley Unified APCD Air District, Annual  
**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.5 Building Construction - 2023**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3000e-004	5.0200e-003	1.5400e-003	2.0000e-005	7.5000e-004	3.0000e-005	7.9000e-004	2.2000e-004	3.0000e-005	2.5000e-004	0.0000	2.1941	2.1941	1.0000e-005	3.3000e-004	2.2922
Worker	1.7800e-003	1.2000e-003	0.0141	4.0000e-005	4.5400e-003	2.0000e-005	4.5600e-003	1.2100e-003	2.0000e-005	1.2300e-003	0.0000	3.6740	3.6740	1.1000e-004	1.1000e-004	3.7087
<b>Total</b>	<b>1.9100e-003</b>	<b>6.2200e-003</b>	<b>0.0157</b>	<b>6.0000e-005</b>	<b>5.2900e-003</b>	<b>5.0000e-005</b>	<b>5.3500e-003</b>	<b>1.4300e-003</b>	<b>5.0000e-005</b>	<b>1.4800e-003</b>	<b>0.0000</b>	<b>5.8682</b>	<b>5.8682</b>	<b>1.2000e-004</b>	<b>4.4000e-004</b>	<b>6.0010</b>

**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	0.1785	1.6327	1.8437	3.0600e-003		0.0794	0.0794		0.0747	0.0747	0.0000	263.0981	263.0981	0.0626	0.0000	264.6628
<b>Total</b>	<b>0.1785</b>	<b>1.6327</b>	<b>1.8437</b>	<b>3.0600e-003</b>		<b>0.0794</b>	<b>0.0794</b>		<b>0.0747</b>	<b>0.0747</b>	<b>0.0000</b>	<b>263.0981</b>	<b>263.0981</b>	<b>0.0626</b>	<b>0.0000</b>	<b>264.6628</b>

Armstrong Apartments - Maximum buildout of the existing designation - San Joaquin Valley Unified APCD Air District, Annual

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

**3.5 Building Construction - 2023**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3000e-004	5.0200e-003	1.5400e-003	2.0000e-005	7.5000e-004	3.0000e-005	7.9000e-004	2.2000e-004	3.0000e-005	2.5000e-004	0.0000	2.1941	2.1941	1.0000e-005	3.3000e-004	2.2922
Worker	1.7800e-003	1.2000e-003	0.0141	4.0000e-005	4.5400e-003	2.0000e-005	4.5600e-003	1.2100e-003	2.0000e-005	1.2300e-003	0.0000	3.6740	3.6740	1.1000e-004	1.1000e-004	3.7087
<b>Total</b>	<b>1.9100e-003</b>	<b>6.2200e-003</b>	<b>0.0157</b>	<b>6.0000e-005</b>	<b>5.2900e-003</b>	<b>5.0000e-005</b>	<b>5.3500e-003</b>	<b>1.4300e-003</b>	<b>5.0000e-005</b>	<b>1.4800e-003</b>	<b>0.0000</b>	<b>5.8682</b>	<b>5.8682</b>	<b>1.2000e-004</b>	<b>4.4000e-004</b>	<b>6.0010</b>

**3.5 Building Construction - 2024**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.2100e-003	0.0202	0.0243	4.0000e-005		9.2000e-004	9.2000e-004		8.7000e-004	8.7000e-004	0.0000	3.4777	3.4777	8.2000e-004	0.0000	3.4983
<b>Total</b>	<b>2.2100e-003</b>	<b>0.0202</b>	<b>0.0243</b>	<b>4.0000e-005</b>		<b>9.2000e-004</b>	<b>9.2000e-004</b>		<b>8.7000e-004</b>	<b>8.7000e-004</b>	<b>0.0000</b>	<b>3.4777</b>	<b>3.4777</b>	<b>8.2000e-004</b>	<b>0.0000</b>	<b>3.4983</b>

Armstrong Apartments - Maximum buildout of the existing designation - San Joaquin Valley Unified APCD Air District, Annual  
**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.5 Building Construction - 2024**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	7.0000e-005	2.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0285	0.0285	0.0000	0.0000	0.0298
Worker	2.0000e-005	1.0000e-005	1.7000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0473	0.0473	0.0000	0.0000	0.0478
<b>Total</b>	<b>2.0000e-005</b>	<b>8.0000e-005</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>7.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0759</b>	<b>0.0759</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0776</b>

**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	2.2100e-003	0.0202	0.0243	4.0000e-005		9.2000e-004	9.2000e-004		8.7000e-004	8.7000e-004	0.0000	3.4777	3.4777	8.2000e-004	0.0000	3.4983
<b>Total</b>	<b>2.2100e-003</b>	<b>0.0202</b>	<b>0.0243</b>	<b>4.0000e-005</b>		<b>9.2000e-004</b>	<b>9.2000e-004</b>		<b>8.7000e-004</b>	<b>8.7000e-004</b>	<b>0.0000</b>	<b>3.4777</b>	<b>3.4777</b>	<b>8.2000e-004</b>	<b>0.0000</b>	<b>3.4983</b>

Armstrong Apartments - Maximum buildout of the existing designation - San Joaquin Valley Unified APCD Air District, Annual  
**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.5 Building Construction - 2024**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	7.0000e-005	2.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0285	0.0285	0.0000	0.0000	0.0298
Worker	2.0000e-005	1.0000e-005	1.7000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0473	0.0473	0.0000	0.0000	0.0478
<b>Total</b>	<b>2.0000e-005</b>	<b>8.0000e-005</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>7.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0759</b>	<b>0.0759</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0776</b>

**3.6 Paving - 2024**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.9300e-003	0.0745	0.1100	1.7000e-004		3.5900e-003	3.5900e-003		3.3200e-003	3.3200e-003	0.0000	14.7423	14.7423	4.6300e-003	0.0000	14.8581
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>7.9300e-003</b>	<b>0.0745</b>	<b>0.1100</b>	<b>1.7000e-004</b>		<b>3.5900e-003</b>	<b>3.5900e-003</b>		<b>3.3200e-003</b>	<b>3.3200e-003</b>	<b>0.0000</b>	<b>14.7423</b>	<b>14.7423</b>	<b>4.6300e-003</b>	<b>0.0000</b>	<b>14.8581</b>



Armstrong Apartments - Maximum buildout of the existing designation - San Joaquin Valley Unified APCD Air District, Annual

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

**3.6 Paving - 2024**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.3000e-004	4.1400e-003	1.0000e-005	1.4400e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1361	1.1361	3.0000e-005	3.0000e-005	1.1463
<b>Total</b>	<b>5.2000e-004</b>	<b>3.3000e-004</b>	<b>4.1400e-003</b>	<b>1.0000e-005</b>	<b>1.4400e-003</b>	<b>1.0000e-005</b>	<b>1.4500e-003</b>	<b>3.8000e-004</b>	<b>1.0000e-005</b>	<b>3.9000e-004</b>	<b>0.0000</b>	<b>1.1361</b>	<b>1.1361</b>	<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>1.1463</b>

**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	7.9300e-003	0.0745	0.1100	1.7000e-004		3.5900e-003	3.5900e-003		3.3200e-003	3.3200e-003	0.0000	14.7423	14.7423	4.6300e-003	0.0000	14.8581
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>7.9300e-003</b>	<b>0.0745</b>	<b>0.1100</b>	<b>1.7000e-004</b>		<b>3.5900e-003</b>	<b>3.5900e-003</b>		<b>3.3200e-003</b>	<b>3.3200e-003</b>	<b>0.0000</b>	<b>14.7423</b>	<b>14.7423</b>	<b>4.6300e-003</b>	<b>0.0000</b>	<b>14.8581</b>

Armstrong Apartments - Maximum buildout of the existing designation - San Joaquin Valley Unified APCD Air District, Annual

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

**3.6 Paving - 2024**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.3000e-004	4.1400e-003	1.0000e-005	1.4400e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1361	1.1361	3.0000e-005	3.0000e-005	1.1463
<b>Total</b>	<b>5.2000e-004</b>	<b>3.3000e-004</b>	<b>4.1400e-003</b>	<b>1.0000e-005</b>	<b>1.4400e-003</b>	<b>1.0000e-005</b>	<b>1.4500e-003</b>	<b>3.8000e-004</b>	<b>1.0000e-005</b>	<b>3.9000e-004</b>	<b>0.0000</b>	<b>1.1361</b>	<b>1.1361</b>	<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>1.1463</b>

**3.7 Architectural Coating - 2024**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2365					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6300e-003	0.0110	0.0163	3.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	2.2979	2.2979	1.3000e-004	0.0000	2.3012
<b>Total</b>	<b>0.2382</b>	<b>0.0110</b>	<b>0.0163</b>	<b>3.0000e-005</b>		<b>5.5000e-004</b>	<b>5.5000e-004</b>		<b>5.5000e-004</b>	<b>5.5000e-004</b>	<b>0.0000</b>	<b>2.2979</b>	<b>2.2979</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>2.3012</b>

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

**3.7 Architectural Coating - 2024**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.1000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0568	0.0568	0.0000	0.0000	0.0573
<b>Total</b>	<b>3.0000e-005</b>	<b>2.0000e-005</b>	<b>2.1000e-004</b>	<b>0.0000</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>7.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0568</b>	<b>0.0568</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0573</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2365					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6300e-003	0.0110	0.0163	3.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	2.2979	2.2979	1.3000e-004	0.0000	2.3012
<b>Total</b>	<b>0.2382</b>	<b>0.0110</b>	<b>0.0163</b>	<b>3.0000e-005</b>		<b>5.5000e-004</b>	<b>5.5000e-004</b>		<b>5.5000e-004</b>	<b>5.5000e-004</b>	<b>0.0000</b>	<b>2.2979</b>	<b>2.2979</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>2.3012</b>

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**3.7 Architectural Coating - 2024**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.1000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0568	0.0568	0.0000	0.0000	0.0573
<b>Total</b>	<b>3.0000e-005</b>	<b>2.0000e-005</b>	<b>2.1000e-004</b>	<b>0.0000</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>7.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0568</b>	<b>0.0568</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0573</b>

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**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0660	0.1180	0.6223	1.4800e-003	0.1420	1.3300e-003	0.1433	0.0380	1.2500e-003	0.0393	0.0000	139.2605	139.2605	7.3000e-003	7.7700e-003	141.7587
Unmitigated	0.0660	0.1180	0.6223	1.4800e-003	0.1420	1.3300e-003	0.1433	0.0380	1.2500e-003	0.0393	0.0000	139.2605	139.2605	7.3000e-003	7.7700e-003	141.7587

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	132.16	133.56	119.70	378,397	378,397
Total	132.16	133.56	119.70	378,397	378,397

**4.3 Trip Type Information**

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	45.60	19.00	35.40	86	11	3

**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.511221	0.052103	0.170611	0.160645	0.028932	0.007649	0.013284	0.025916	0.000654	0.000315	0.023645	0.001472	0.003552

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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	10.3289	10.3289	1.6700e-003	2.0000e-004	10.4311
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	10.3289	10.3289	1.6700e-003	2.0000e-004	10.4311
NaturalGas Mitigated	1.8100e-003	0.0155	6.6000e-003	1.0000e-004		1.2500e-003	1.2500e-003		1.2500e-003	1.2500e-003	0.0000	17.9583	17.9583	3.4000e-004	3.3000e-004	18.0650
NaturalGas Unmitigated	1.8100e-003	0.0155	6.6000e-003	1.0000e-004		1.2500e-003	1.2500e-003		1.2500e-003	1.2500e-003	0.0000	17.9583	17.9583	3.4000e-004	3.3000e-004	18.0650

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**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					
Single Family Housing	336526	1.8100e-003	0.0155	6.6000e-003	1.0000e-004		1.2500e-003	1.2500e-003		1.2500e-003	1.2500e-003	0.0000	17.9583	17.9583	3.4000e-004	3.3000e-004	18.0650
<b>Total</b>		<b>1.8100e-003</b>	<b>0.0155</b>	<b>6.6000e-003</b>	<b>1.0000e-004</b>		<b>1.2500e-003</b>	<b>1.2500e-003</b>		<b>1.2500e-003</b>	<b>1.2500e-003</b>	<b>0.0000</b>	<b>17.9583</b>	<b>17.9583</b>	<b>3.4000e-004</b>	<b>3.3000e-004</b>	<b>18.0650</b>

**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					
Single Family Housing	336526	1.8100e-003	0.0155	6.6000e-003	1.0000e-004		1.2500e-003	1.2500e-003		1.2500e-003	1.2500e-003	0.0000	17.9583	17.9583	3.4000e-004	3.3000e-004	18.0650
<b>Total</b>		<b>1.8100e-003</b>	<b>0.0155</b>	<b>6.6000e-003</b>	<b>1.0000e-004</b>		<b>1.2500e-003</b>	<b>1.2500e-003</b>		<b>1.2500e-003</b>	<b>1.2500e-003</b>	<b>0.0000</b>	<b>17.9583</b>	<b>17.9583</b>	<b>3.4000e-004</b>	<b>3.3000e-004</b>	<b>18.0650</b>

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**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	111635	10.3289	1.6700e-003	2.0000e-004	10.4311
<b>Total</b>		<b>10.3289</b>	<b>1.6700e-003</b>	<b>2.0000e-004</b>	<b>10.4311</b>

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	111635	10.3289	1.6700e-003	2.0000e-004	10.4311
<b>Total</b>		<b>10.3289</b>	<b>1.6700e-003</b>	<b>2.0000e-004</b>	<b>10.4311</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**



Armstrong Apartments - Maximum buildout of the existing designation - San Joaquin Valley Unified APCD Air District, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1258	6.4300e-003	0.1061	4.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	6.2347	6.2347	2.8000e-004	1.1000e-004	6.2748
Unmitigated	0.1258	6.4300e-003	0.1061	4.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	6.2347	6.2347	2.8000e-004	1.1000e-004	6.2748

**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	0.0237					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0984					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	6.1000e-004	5.2400e-003	2.2300e-003	3.0000e-005		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004	0.0000	6.0649	6.0649	1.2000e-004	1.1000e-004	6.1009
Landscaping	3.1200e-003	1.2000e-003	0.1039	1.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004	0.0000	0.1698	0.1698	1.6000e-004	0.0000	0.1739
<b>Total</b>	<b>0.1258</b>	<b>6.4400e-003</b>	<b>0.1061</b>	<b>4.0000e-005</b>		<b>1.0000e-003</b>	<b>1.0000e-003</b>		<b>1.0000e-003</b>	<b>1.0000e-003</b>	<b>0.0000</b>	<b>6.2347</b>	<b>6.2347</b>	<b>2.8000e-004</b>	<b>1.1000e-004</b>	<b>6.2748</b>

Armstrong Apartments - Maximum buildout of the existing designation - San Joaquin Valley Unified APCD Air District, 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	0.0237					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0984					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	6.1000e-004	5.2400e-003	2.2300e-003	3.0000e-005		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004	0.0000	6.0649	6.0649	1.2000e-004	1.1000e-004	6.1009
Landscaping	3.1200e-003	1.2000e-003	0.1039	1.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004	0.0000	0.1698	0.1698	1.6000e-004	0.0000	0.1739
<b>Total</b>	<b>0.1258</b>	<b>6.4400e-003</b>	<b>0.1061</b>	<b>4.0000e-005</b>		<b>1.0000e-003</b>	<b>1.0000e-003</b>		<b>1.0000e-003</b>	<b>1.0000e-003</b>	<b>0.0000</b>	<b>6.2347</b>	<b>6.2347</b>	<b>2.8000e-004</b>	<b>1.1000e-004</b>	<b>6.2748</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

Armstrong Apartments - Maximum buildout of the existing designation - San Joaquin Valley Unified APCD Air District, Annual  
**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	0.9323	0.0298	7.1000e-004	1.8908
Unmitigated	0.9323	0.0298	7.1000e-004	1.8908

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	0.912156 / 0.575055	0.9323	0.0298	7.1000e-004	1.8908
<b>Total</b>		<b>0.9323</b>	<b>0.0298</b>	<b>7.1000e-004</b>	<b>1.8908</b>

Armstrong Apartments - Maximum buildout of the existing designation - San Joaquin Valley Unified APCD Air District, Annual  
**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			
Single Family Housing	0.912156 / 0.575055	0.9323	0.0298	7.1000e-004	1.8908
<b>Total</b>		<b>0.9323</b>	<b>0.0298</b>	<b>7.1000e-004</b>	<b>1.8908</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	3.3595	0.1985	0.0000	8.3230
Unmitigated	3.3595	0.1985	0.0000	8.3230

Armstrong Apartments - Maximum buildout of the existing designation - San Joaquin Valley Unified APCD Air District, 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**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	16.55	3.3595	0.1985	0.0000	8.3230
<b>Total</b>		<b>3.3595</b>	<b>0.1985</b>	<b>0.0000</b>	<b>8.3230</b>

**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	16.55	3.3595	0.1985	0.0000	8.3230
<b>Total</b>		<b>3.3595</b>	<b>0.1985</b>	<b>0.0000</b>	<b>8.3230</b>

**9.0 Operational Offroad**

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Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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Armstrong Apartments - Maximum buildout of the existing designation - San Joaquin Valley Unified APCD Air District, Annual

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

**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

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

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

Equipment Type	Number
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**11.0 Vegetation**

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Armstrong Apartments - Maximum buildout of the proposed designation - San Joaquin Valley Unified APCD Air District, Annual

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

**Armstrong Apartments - Maximum buildout of the proposed designation**

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**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	67.00	Dwelling Unit	4.20	67,000.00	213

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.7	<b>Precipitation Freq (Days)</b>	45
<b>Climate Zone</b>	3			<b>Operational Year</b>	2024
<b>Utility Company</b>	Pacific Gas and Electric Company				
<b>CO2 Intensity (lb/MWhr)</b>	203.98	<b>CH4 Intensity (lb/MWhr)</b>	0.033	<b>N2O Intensity (lb/MWhr)</b>	0.004

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - Net acreage of the project site is 4.2 acres

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	4.19	4.20
tblWoodstoves	NumberCatalytic	4.20	0.00
tblWoodstoves	NumberNoncatalytic	4.20	0.00

**2.0 Emissions Summary**

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

**2.1 Overall Construction**

**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.2335	2.0352	2.2974	4.2200e-003	0.1283	0.0961	0.2245	0.0526	0.0902	0.1428	0.0000	368.1579	368.1579	0.0794	3.3700e-003	371.1478
2024	0.6416	0.1067	0.1585	2.6000e-004	2.8000e-003	5.0700e-003	7.8800e-003	7.5000e-004	4.7500e-003	5.4900e-003	0.0000	22.8763	22.8763	5.6500e-003	9.0000e-005	23.0441
<b>Maximum</b>	<b>0.6416</b>	<b>2.0352</b>	<b>2.2974</b>	<b>4.2200e-003</b>	<b>0.1283</b>	<b>0.0961</b>	<b>0.2245</b>	<b>0.0526</b>	<b>0.0902</b>	<b>0.1428</b>	<b>0.0000</b>	<b>368.1579</b>	<b>368.1579</b>	<b>0.0794</b>	<b>3.3700e-003</b>	<b>371.1478</b>

**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					
2023	0.2335	2.0352	2.2974	4.2200e-003	0.1283	0.0961	0.2245	0.0526	0.0902	0.1428	0.0000	368.1576	368.1576	0.0794	3.3700e-003	371.1474
2024	0.6416	0.1067	0.1585	2.6000e-004	2.8000e-003	5.0700e-003	7.8800e-003	7.5000e-004	4.7500e-003	5.4900e-003	0.0000	22.8763	22.8763	5.6500e-003	9.0000e-005	23.0441
<b>Maximum</b>	<b>0.6416</b>	<b>2.0352</b>	<b>2.2974</b>	<b>4.2200e-003</b>	<b>0.1283</b>	<b>0.0961</b>	<b>0.2245</b>	<b>0.0526</b>	<b>0.0902</b>	<b>0.1428</b>	<b>0.0000</b>	<b>368.1576</b>	<b>368.1576</b>	<b>0.0794</b>	<b>3.3700e-003</b>	<b>371.1474</b>



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**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
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2023	3-31-2023	0.6502	0.6502
2	4-1-2023	6-30-2023	0.5372	0.5372
3	7-1-2023	9-30-2023	0.5431	0.5431
4	10-1-2023	12-31-2023	0.5437	0.5437
5	1-1-2024	3-31-2024	0.7139	0.7139
		Highest	0.7139	0.7139

**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	0.3424	0.0308	0.5079	1.9000e-004		4.7800e-003	4.7800e-003		4.7800e-003	4.7800e-003	0.0000	29.8375	29.8375	1.3400e-003	5.3000e-004	30.0295
Energy	4.9300e-003	0.0421	0.0179	2.7000e-004		3.4100e-003	3.4100e-003		3.4100e-003	3.4100e-003	0.0000	74.4019	74.4019	5.0800e-003	1.4000e-003	74.9450
Mobile	0.2469	0.4415	2.3271	5.5400e-003	0.5311	4.9700e-003	0.5360	0.1421	4.6700e-003	0.1468	0.0000	520.7970	520.7970	0.0273	0.0291	530.1396
Waste						0.0000	0.0000		0.0000	0.0000	6.2562	0.0000	6.2562	0.3697	0.0000	15.4994
Water						0.0000	0.0000		0.0000	0.0000	1.3849	3.0767	4.4616	0.1427	3.4200e-003	9.0490
<b>Total</b>	<b>0.5943</b>	<b>0.5144</b>	<b>2.8530</b>	<b>6.0000e-003</b>	<b>0.5311</b>	<b>0.0132</b>	<b>0.5442</b>	<b>0.1421</b>	<b>0.0129</b>	<b>0.1550</b>	<b>7.6411</b>	<b>628.1131</b>	<b>635.7542</b>	<b>0.5462</b>	<b>0.0344</b>	<b>659.6626</b>

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**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	0.3424	0.0308	0.5079	1.9000e-004		4.7800e-003	4.7800e-003		4.7800e-003	4.7800e-003	0.0000	29.8375	29.8375	1.3400e-003	5.3000e-004	30.0295
Energy	4.9300e-003	0.0421	0.0179	2.7000e-004		3.4100e-003	3.4100e-003		3.4100e-003	3.4100e-003	0.0000	74.4019	74.4019	5.0800e-003	1.4000e-003	74.9450
Mobile	0.2469	0.4415	2.3271	5.5400e-003	0.5311	4.9700e-003	0.5360	0.1421	4.6700e-003	0.1468	0.0000	520.7970	520.7970	0.0273	0.0291	530.1396
Waste						0.0000	0.0000		0.0000	0.0000	6.2562	0.0000	6.2562	0.3697	0.0000	15.4994
Water						0.0000	0.0000		0.0000	0.0000	1.3849	3.0767	4.4616	0.1427	3.4200e-003	9.0490
<b>Total</b>	<b>0.5943</b>	<b>0.5144</b>	<b>2.8530</b>	<b>6.0000e-003</b>	<b>0.5311</b>	<b>0.0132</b>	<b>0.5442</b>	<b>0.1421</b>	<b>0.0129</b>	<b>0.1550</b>	<b>7.6411</b>	<b>628.1131</b>	<b>635.7542</b>	<b>0.5462</b>	<b>0.0344</b>	<b>659.6626</b>

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

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2023	1/27/2023	5	20	
2	Site Preparation	Site Preparation	1/28/2023	2/3/2023	5	5	
3	Grading	Grading	2/4/2023	2/15/2023	5	8	

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4	Building Construction	Building Construction	2/16/2023	1/3/2024	5	230
5	Paving	Paving	1/4/2024	1/29/2024	5	18
6	Architectural Coating	Architectural Coating	1/30/2024	2/22/2024	5	18

**Acres of Grading (Site Preparation Phase): 7.5**

**Acres of Grading (Grading Phase): 8**

**Acres of Paving: 0**

**Residential Indoor: 135,675; Residential Outdoor: 45,225; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	7.00	231	0.29
Demolition	Excavators	3	8.00	158	0.38
Grading	Excavators	1	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37

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Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	48.00	7.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

**3.2 Demolition - 2023**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0227	0.2148	0.1964	3.9000e-004		9.9800e-003	9.9800e-003		9.2800e-003	9.2800e-003	0.0000	33.9921	33.9921	9.5200e-003	0.0000	34.2301
<b>Total</b>	<b>0.0227</b>	<b>0.2148</b>	<b>0.1964</b>	<b>3.9000e-004</b>		<b>9.9800e-003</b>	<b>9.9800e-003</b>		<b>9.2800e-003</b>	<b>9.2800e-003</b>	<b>0.0000</b>	<b>33.9921</b>	<b>33.9921</b>	<b>9.5200e-003</b>	<b>0.0000</b>	<b>34.2301</b>

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

**3.2 Demolition - 2023**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.7000e-004	3.2000e-004	3.7300e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9711	0.9711	3.0000e-005	3.0000e-005	0.9803
<b>Total</b>	<b>4.7000e-004</b>	<b>3.2000e-004</b>	<b>3.7300e-003</b>	<b>1.0000e-005</b>	<b>1.2000e-003</b>	<b>1.0000e-005</b>	<b>1.2100e-003</b>	<b>3.2000e-004</b>	<b>1.0000e-005</b>	<b>3.2000e-004</b>	<b>0.0000</b>	<b>0.9711</b>	<b>0.9711</b>	<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>0.9803</b>

**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	0.0227	0.2148	0.1964	3.9000e-004		9.9800e-003	9.9800e-003		9.2800e-003	9.2800e-003	0.0000	33.9920	33.9920	9.5200e-003	0.0000	34.2300
<b>Total</b>	<b>0.0227</b>	<b>0.2148</b>	<b>0.1964</b>	<b>3.9000e-004</b>		<b>9.9800e-003</b>	<b>9.9800e-003</b>		<b>9.2800e-003</b>	<b>9.2800e-003</b>	<b>0.0000</b>	<b>33.9920</b>	<b>33.9920</b>	<b>9.5200e-003</b>	<b>0.0000</b>	<b>34.2300</b>

Armstrong Apartments - Maximum buildout of the proposed designation - San Joaquin Valley Unified APCD Air District, Annual

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

**3.2 Demolition - 2023**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.7000e-004	3.2000e-004	3.7300e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9711	0.9711	3.0000e-005	3.0000e-005	0.9803
<b>Total</b>	<b>4.7000e-004</b>	<b>3.2000e-004</b>	<b>3.7300e-003</b>	<b>1.0000e-005</b>	<b>1.2000e-003</b>	<b>1.0000e-005</b>	<b>1.2100e-003</b>	<b>3.2000e-004</b>	<b>1.0000e-005</b>	<b>3.2000e-004</b>	<b>0.0000</b>	<b>0.9711</b>	<b>0.9711</b>	<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>0.9803</b>

**3.3 Site Preparation - 2023**

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0491	0.0000	0.0491	0.0253	0.0000	0.0253	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.6500e-003	0.0688	0.0456	1.0000e-004		3.1700e-003	3.1700e-003		2.9100e-003	2.9100e-003	0.0000	8.3627	8.3627	2.7000e-003	0.0000	8.4303
<b>Total</b>	<b>6.6500e-003</b>	<b>0.0688</b>	<b>0.0456</b>	<b>1.0000e-004</b>	<b>0.0491</b>	<b>3.1700e-003</b>	<b>0.0523</b>	<b>0.0253</b>	<b>2.9100e-003</b>	<b>0.0282</b>	<b>0.0000</b>	<b>8.3627</b>	<b>8.3627</b>	<b>2.7000e-003</b>	<b>0.0000</b>	<b>8.4303</b>

Armstrong Apartments - Maximum buildout of the proposed designation - San Joaquin Valley Unified APCD Air District, Annual

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

**3.3 Site Preparation - 2023**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	9.0000e-005	1.1200e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2913	0.2913	1.0000e-005	1.0000e-005	0.2941
<b>Total</b>	<b>1.4000e-004</b>	<b>9.0000e-005</b>	<b>1.1200e-003</b>	<b>0.0000</b>	<b>3.6000e-004</b>	<b>0.0000</b>	<b>3.6000e-004</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>0.2913</b>	<b>0.2913</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.2941</b>

**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					0.0491	0.0000	0.0491	0.0253	0.0000	0.0253	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.6500e-003	0.0688	0.0456	1.0000e-004		3.1700e-003	3.1700e-003		2.9100e-003	2.9100e-003	0.0000	8.3627	8.3627	2.7000e-003	0.0000	8.4303
<b>Total</b>	<b>6.6500e-003</b>	<b>0.0688</b>	<b>0.0456</b>	<b>1.0000e-004</b>	<b>0.0491</b>	<b>3.1700e-003</b>	<b>0.0523</b>	<b>0.0253</b>	<b>2.9100e-003</b>	<b>0.0282</b>	<b>0.0000</b>	<b>8.3627</b>	<b>8.3627</b>	<b>2.7000e-003</b>	<b>0.0000</b>	<b>8.4303</b>

Armstrong Apartments - Maximum buildout of the proposed designation - San Joaquin Valley Unified APCD Air District, Annual

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

**3.3 Site Preparation - 2023**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	9.0000e-005	1.1200e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2913	0.2913	1.0000e-005	1.0000e-005	0.2941
<b>Total</b>	<b>1.4000e-004</b>	<b>9.0000e-005</b>	<b>1.1200e-003</b>	<b>0.0000</b>	<b>3.6000e-004</b>	<b>0.0000</b>	<b>3.6000e-004</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>0.2913</b>	<b>0.2913</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.2941</b>

**3.4 Grading - 2023**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0283	0.0000	0.0283	0.0137	0.0000	0.0137	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.8400e-003	0.0717	0.0590	1.2000e-004		3.1000e-003	3.1000e-003		2.8500e-003	2.8500e-003	0.0000	10.4243	10.4243	3.3700e-003	0.0000	10.5085
<b>Total</b>	<b>6.8400e-003</b>	<b>0.0717</b>	<b>0.0590</b>	<b>1.2000e-004</b>	<b>0.0283</b>	<b>3.1000e-003</b>	<b>0.0314</b>	<b>0.0137</b>	<b>2.8500e-003</b>	<b>0.0166</b>	<b>0.0000</b>	<b>10.4243</b>	<b>10.4243</b>	<b>3.3700e-003</b>	<b>0.0000</b>	<b>10.5085</b>



Armstrong Apartments - Maximum buildout of the proposed designation - San Joaquin Valley Unified APCD Air District, Annual

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

**3.4 Grading - 2023**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	1.3000e-004	1.4900e-003	0.0000	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3884	0.3884	1.0000e-005	1.0000e-005	0.3921
<b>Total</b>	<b>1.9000e-004</b>	<b>1.3000e-004</b>	<b>1.4900e-003</b>	<b>0.0000</b>	<b>4.8000e-004</b>	<b>0.0000</b>	<b>4.8000e-004</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>0.3884</b>	<b>0.3884</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.3921</b>

**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					0.0283	0.0000	0.0283	0.0137	0.0000	0.0137	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.8400e-003	0.0717	0.0590	1.2000e-004		3.1000e-003	3.1000e-003		2.8500e-003	2.8500e-003	0.0000	10.4242	10.4242	3.3700e-003	0.0000	10.5085
<b>Total</b>	<b>6.8400e-003</b>	<b>0.0717</b>	<b>0.0590</b>	<b>1.2000e-004</b>	<b>0.0283</b>	<b>3.1000e-003</b>	<b>0.0314</b>	<b>0.0137</b>	<b>2.8500e-003</b>	<b>0.0166</b>	<b>0.0000</b>	<b>10.4242</b>	<b>10.4242</b>	<b>3.3700e-003</b>	<b>0.0000</b>	<b>10.5085</b>

Armstrong Apartments - Maximum buildout of the proposed designation - San Joaquin Valley Unified APCD Air District, Annual

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

**3.4 Grading - 2023**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	1.3000e-004	1.4900e-003	0.0000	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3884	0.3884	1.0000e-005	1.0000e-005	0.3921
<b>Total</b>	<b>1.9000e-004</b>	<b>1.3000e-004</b>	<b>1.4900e-003</b>	<b>0.0000</b>	<b>4.8000e-004</b>	<b>0.0000</b>	<b>4.8000e-004</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>0.3884</b>	<b>0.3884</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.3921</b>

**3.5 Building Construction - 2023**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6327	1.8437	3.0600e-003		0.0794	0.0794		0.0747	0.0747	0.0000	263.0984	263.0984	0.0626	0.0000	264.6631
<b>Total</b>	<b>0.1785</b>	<b>1.6327</b>	<b>1.8437</b>	<b>3.0600e-003</b>		<b>0.0794</b>	<b>0.0794</b>		<b>0.0747</b>	<b>0.0747</b>	<b>0.0000</b>	<b>263.0984</b>	<b>263.0984</b>	<b>0.0626</b>	<b>0.0000</b>	<b>264.6631</b>

Armstrong Apartments - Maximum buildout of the proposed designation - San Joaquin Valley Unified APCD Air District, Annual

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

**3.5 Building Construction - 2023**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.8000e-004	0.0351	0.0108	1.6000e-004	5.2700e-003	2.3000e-004	5.5000e-003	1.5200e-003	2.2000e-004	1.7400e-003	0.0000	15.3590	15.3590	7.0000e-005	2.3000e-003	16.0455
Worker	0.0171	0.0115	0.1356	3.8000e-004	0.0436	2.3000e-004	0.0438	0.0116	2.1000e-004	0.0118	0.0000	35.2707	35.2707	1.1000e-003	1.0300e-003	35.6039
<b>Total</b>	<b>0.0180</b>	<b>0.0466</b>	<b>0.1463</b>	<b>5.4000e-004</b>	<b>0.0488</b>	<b>4.6000e-004</b>	<b>0.0493</b>	<b>0.0131</b>	<b>4.3000e-004</b>	<b>0.0135</b>	<b>0.0000</b>	<b>50.6297</b>	<b>50.6297</b>	<b>1.1700e-003</b>	<b>3.3300e-003</b>	<b>51.6493</b>

**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	0.1785	1.6327	1.8437	3.0600e-003		0.0794	0.0794		0.0747	0.0747	0.0000	263.0981	263.0981	0.0626	0.0000	264.6628
<b>Total</b>	<b>0.1785</b>	<b>1.6327</b>	<b>1.8437</b>	<b>3.0600e-003</b>		<b>0.0794</b>	<b>0.0794</b>		<b>0.0747</b>	<b>0.0747</b>	<b>0.0000</b>	<b>263.0981</b>	<b>263.0981</b>	<b>0.0626</b>	<b>0.0000</b>	<b>264.6628</b>

Armstrong Apartments - Maximum buildout of the proposed designation - San Joaquin Valley Unified APCD Air District, Annual

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

**3.5 Building Construction - 2023**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.8000e-004	0.0351	0.0108	1.6000e-004	5.2700e-003	2.3000e-004	5.5000e-003	1.5200e-003	2.2000e-004	1.7400e-003	0.0000	15.3590	15.3590	7.0000e-005	2.3000e-003	16.0455
Worker	0.0171	0.0115	0.1356	3.8000e-004	0.0436	2.3000e-004	0.0438	0.0116	2.1000e-004	0.0118	0.0000	35.2707	35.2707	1.1000e-003	1.0300e-003	35.6039
<b>Total</b>	<b>0.0180</b>	<b>0.0466</b>	<b>0.1463</b>	<b>5.4000e-004</b>	<b>0.0488</b>	<b>4.6000e-004</b>	<b>0.0493</b>	<b>0.0131</b>	<b>4.3000e-004</b>	<b>0.0135</b>	<b>0.0000</b>	<b>50.6297</b>	<b>50.6297</b>	<b>1.1700e-003</b>	<b>3.3300e-003</b>	<b>51.6493</b>

**3.5 Building Construction - 2024**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.2100e-003	0.0202	0.0243	4.0000e-005		9.2000e-004	9.2000e-004		8.7000e-004	8.7000e-004	0.0000	3.4777	3.4777	8.2000e-004	0.0000	3.4983
<b>Total</b>	<b>2.2100e-003</b>	<b>0.0202</b>	<b>0.0243</b>	<b>4.0000e-005</b>		<b>9.2000e-004</b>	<b>9.2000e-004</b>		<b>8.7000e-004</b>	<b>8.7000e-004</b>	<b>0.0000</b>	<b>3.4777</b>	<b>3.4777</b>	<b>8.2000e-004</b>	<b>0.0000</b>	<b>3.4983</b>

Armstrong Apartments - Maximum buildout of the proposed designation - San Joaquin Valley Unified APCD Air District, Annual

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

**3.5 Building Construction - 2024**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-005	4.6000e-004	1.4000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.1997	0.1997	0.0000	3.0000e-005	0.2087
Worker	2.1000e-004	1.3000e-004	1.6600e-003	0.0000	5.8000e-004	0.0000	5.8000e-004	1.5000e-004	0.0000	1.6000e-004	0.0000	0.4544	0.4544	1.0000e-005	1.0000e-005	0.4585
<b>Total</b>	<b>2.2000e-004</b>	<b>5.9000e-004</b>	<b>1.8000e-003</b>	<b>0.0000</b>	<b>6.5000e-004</b>	<b>0.0000</b>	<b>6.5000e-004</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>1.8000e-004</b>	<b>0.0000</b>	<b>0.6542</b>	<b>0.6542</b>	<b>1.0000e-005</b>	<b>4.0000e-005</b>	<b>0.6672</b>

**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	2.2100e-003	0.0202	0.0243	4.0000e-005		9.2000e-004	9.2000e-004		8.7000e-004	8.7000e-004	0.0000	3.4777	3.4777	8.2000e-004	0.0000	3.4983
<b>Total</b>	<b>2.2100e-003</b>	<b>0.0202</b>	<b>0.0243</b>	<b>4.0000e-005</b>		<b>9.2000e-004</b>	<b>9.2000e-004</b>		<b>8.7000e-004</b>	<b>8.7000e-004</b>	<b>0.0000</b>	<b>3.4777</b>	<b>3.4777</b>	<b>8.2000e-004</b>	<b>0.0000</b>	<b>3.4983</b>

Armstrong Apartments - Maximum buildout of the proposed designation - San Joaquin Valley Unified APCD Air District, Annual

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

**3.5 Building Construction - 2024**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-005	4.6000e-004	1.4000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.1997	0.1997	0.0000	3.0000e-005	0.2087
Worker	2.1000e-004	1.3000e-004	1.6600e-003	0.0000	5.8000e-004	0.0000	5.8000e-004	1.5000e-004	0.0000	1.6000e-004	0.0000	0.4544	0.4544	1.0000e-005	1.0000e-005	0.4585
<b>Total</b>	<b>2.2000e-004</b>	<b>5.9000e-004</b>	<b>1.8000e-003</b>	<b>0.0000</b>	<b>6.5000e-004</b>	<b>0.0000</b>	<b>6.5000e-004</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>1.8000e-004</b>	<b>0.0000</b>	<b>0.6542</b>	<b>0.6542</b>	<b>1.0000e-005</b>	<b>4.0000e-005</b>	<b>0.6672</b>

**3.6 Paving - 2024**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.9300e-003	0.0745	0.1100	1.7000e-004		3.5900e-003	3.5900e-003		3.3200e-003	3.3200e-003	0.0000	14.7423	14.7423	4.6300e-003	0.0000	14.8581
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>7.9300e-003</b>	<b>0.0745</b>	<b>0.1100</b>	<b>1.7000e-004</b>		<b>3.5900e-003</b>	<b>3.5900e-003</b>		<b>3.3200e-003</b>	<b>3.3200e-003</b>	<b>0.0000</b>	<b>14.7423</b>	<b>14.7423</b>	<b>4.6300e-003</b>	<b>0.0000</b>	<b>14.8581</b>

Armstrong Apartments - Maximum buildout of the proposed designation - San Joaquin Valley Unified APCD Air District, Annual

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

**3.6 Paving - 2024**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.3000e-004	4.1400e-003	1.0000e-005	1.4400e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1361	1.1361	3.0000e-005	3.0000e-005	1.1463
<b>Total</b>	<b>5.2000e-004</b>	<b>3.3000e-004</b>	<b>4.1400e-003</b>	<b>1.0000e-005</b>	<b>1.4400e-003</b>	<b>1.0000e-005</b>	<b>1.4500e-003</b>	<b>3.8000e-004</b>	<b>1.0000e-005</b>	<b>3.9000e-004</b>	<b>0.0000</b>	<b>1.1361</b>	<b>1.1361</b>	<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>1.1463</b>

**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	7.9300e-003	0.0745	0.1100	1.7000e-004		3.5900e-003	3.5900e-003		3.3200e-003	3.3200e-003	0.0000	14.7423	14.7423	4.6300e-003	0.0000	14.8581
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>7.9300e-003</b>	<b>0.0745</b>	<b>0.1100</b>	<b>1.7000e-004</b>		<b>3.5900e-003</b>	<b>3.5900e-003</b>		<b>3.3200e-003</b>	<b>3.3200e-003</b>	<b>0.0000</b>	<b>14.7423</b>	<b>14.7423</b>	<b>4.6300e-003</b>	<b>0.0000</b>	<b>14.8581</b>

Armstrong Apartments - Maximum buildout of the proposed designation - San Joaquin Valley Unified APCD Air District, Annual

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

**3.6 Paving - 2024**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.3000e-004	4.1400e-003	1.0000e-005	1.4400e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1361	1.1361	3.0000e-005	3.0000e-005	1.1463
<b>Total</b>	<b>5.2000e-004</b>	<b>3.3000e-004</b>	<b>4.1400e-003</b>	<b>1.0000e-005</b>	<b>1.4400e-003</b>	<b>1.0000e-005</b>	<b>1.4500e-003</b>	<b>3.8000e-004</b>	<b>1.0000e-005</b>	<b>3.9000e-004</b>	<b>0.0000</b>	<b>1.1361</b>	<b>1.1361</b>	<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>1.1463</b>

**3.7 Architectural Coating - 2024**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6289					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6300e-003	0.0110	0.0163	3.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	2.2979	2.2979	1.3000e-004	0.0000	2.3012
<b>Total</b>	<b>0.6305</b>	<b>0.0110</b>	<b>0.0163</b>	<b>3.0000e-005</b>		<b>5.5000e-004</b>	<b>5.5000e-004</b>		<b>5.5000e-004</b>	<b>5.5000e-004</b>	<b>0.0000</b>	<b>2.2979</b>	<b>2.2979</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>2.3012</b>



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

**3.7 Architectural Coating - 2024**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	1.7000e-004	2.0700e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5681	0.5681	2.0000e-005	2.0000e-005	0.5731
<b>Total</b>	<b>2.6000e-004</b>	<b>1.7000e-004</b>	<b>2.0700e-003</b>	<b>1.0000e-005</b>	<b>7.2000e-004</b>	<b>0.0000</b>	<b>7.2000e-004</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>0.5681</b>	<b>0.5681</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.5731</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6289					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6300e-003	0.0110	0.0163	3.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	2.2979	2.2979	1.3000e-004	0.0000	2.3012
<b>Total</b>	<b>0.6305</b>	<b>0.0110</b>	<b>0.0163</b>	<b>3.0000e-005</b>		<b>5.5000e-004</b>	<b>5.5000e-004</b>		<b>5.5000e-004</b>	<b>5.5000e-004</b>	<b>0.0000</b>	<b>2.2979</b>	<b>2.2979</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>2.3012</b>

Armstrong Apartments - Maximum buildout of the proposed designation - San Joaquin Valley Unified APCD Air District, Annual

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

**3.7 Architectural Coating - 2024**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	1.7000e-004	2.0700e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5681	0.5681	2.0000e-005	2.0000e-005	0.5731
<b>Total</b>	<b>2.6000e-004</b>	<b>1.7000e-004</b>	<b>2.0700e-003</b>	<b>1.0000e-005</b>	<b>7.2000e-004</b>	<b>0.0000</b>	<b>7.2000e-004</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>0.5681</b>	<b>0.5681</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.5731</b>

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

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2469	0.4415	2.3271	5.5400e-003	0.5311	4.9700e-003	0.5360	0.1421	4.6700e-003	0.1468	0.0000	520.7970	520.7970	0.0273	0.0291	530.1396
Unmitigated	0.2469	0.4415	2.3271	5.5400e-003	0.5311	4.9700e-003	0.5360	0.1421	4.6700e-003	0.1468	0.0000	520.7970	520.7970	0.0273	0.0291	530.1396

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	490.44	545.38	420.76	1,415,103	1,415,103
Total	490.44	545.38	420.76	1,415,103	1,415,103

**4.3 Trip Type Information**

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	45.60	19.00	35.40	86	11	3

**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.511221	0.052103	0.170611	0.160645	0.028932	0.007649	0.013284	0.025916	0.000654	0.000315	0.023645	0.001472	0.003552

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

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	25.6086	25.6086	4.1400e-003	5.0000e-004	25.8619
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	25.6086	25.6086	4.1400e-003	5.0000e-004	25.8619
NaturalGas Mitigated	4.9300e-003	0.0421	0.0179	2.7000e-004		3.4100e-003	3.4100e-003		3.4100e-003	3.4100e-003	0.0000	48.7932	48.7932	9.4000e-004	8.9000e-004	49.0832
NaturalGas Unmitigated	4.9300e-003	0.0421	0.0179	2.7000e-004		3.4100e-003	3.4100e-003		3.4100e-003	3.4100e-003	0.0000	48.7932	48.7932	9.4000e-004	8.9000e-004	49.0832

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**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					
Apartments Low Rise	914350	4.9300e-003	0.0421	0.0179	2.7000e-004		3.4100e-003	3.4100e-003		3.4100e-003	3.4100e-003	0.0000	48.7932	48.7932	9.4000e-004	8.9000e-004	49.0832
<b>Total</b>		<b>4.9300e-003</b>	<b>0.0421</b>	<b>0.0179</b>	<b>2.7000e-004</b>		<b>3.4100e-003</b>	<b>3.4100e-003</b>		<b>3.4100e-003</b>	<b>3.4100e-003</b>	<b>0.0000</b>	<b>48.7932</b>	<b>48.7932</b>	<b>9.4000e-004</b>	<b>8.9000e-004</b>	<b>49.0832</b>

**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					
Apartments Low Rise	914350	4.9300e-003	0.0421	0.0179	2.7000e-004		3.4100e-003	3.4100e-003		3.4100e-003	3.4100e-003	0.0000	48.7932	48.7932	9.4000e-004	8.9000e-004	49.0832
<b>Total</b>		<b>4.9300e-003</b>	<b>0.0421</b>	<b>0.0179</b>	<b>2.7000e-004</b>		<b>3.4100e-003</b>	<b>3.4100e-003</b>		<b>3.4100e-003</b>	<b>3.4100e-003</b>	<b>0.0000</b>	<b>48.7932</b>	<b>48.7932</b>	<b>9.4000e-004</b>	<b>8.9000e-004</b>	<b>49.0832</b>

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**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			
Apartments Low Rise	276779	25.6086	4.1400e-003	5.0000e-004	25.8619
<b>Total</b>		<b>25.6086</b>	<b>4.1400e-003</b>	<b>5.0000e-004</b>	<b>25.8619</b>

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	276779	25.6086	4.1400e-003	5.0000e-004	25.8619
<b>Total</b>		<b>25.6086</b>	<b>4.1400e-003</b>	<b>5.0000e-004</b>	<b>25.8619</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

Armstrong Apartments - Maximum buildout of the proposed designation - San Joaquin Valley Unified APCD Air District, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3424	0.0308	0.5079	1.9000e-004		4.7800e-003	4.7800e-003		4.7800e-003	4.7800e-003	0.0000	29.8375	29.8375	1.3400e-003	5.3000e-004	30.0295
Unmitigated	0.3424	0.0308	0.5079	1.9000e-004		4.7800e-003	4.7800e-003		4.7800e-003	4.7800e-003	0.0000	29.8375	29.8375	1.3400e-003	5.3000e-004	30.0295

**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	0.0629					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2617					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.9300e-003	0.0251	0.0107	1.6000e-004		2.0300e-003	2.0300e-003		2.0300e-003	2.0300e-003	0.0000	29.0249	29.0249	5.6000e-004	5.3000e-004	29.1974
Landscaping	0.0150	5.7300e-003	0.4973	3.0000e-005		2.7600e-003	2.7600e-003		2.7600e-003	2.7600e-003	0.0000	0.8126	0.8126	7.8000e-004	0.0000	0.8321
<b>Total</b>	<b>0.3424</b>	<b>0.0308</b>	<b>0.5079</b>	<b>1.9000e-004</b>		<b>4.7900e-003</b>	<b>4.7900e-003</b>		<b>4.7900e-003</b>	<b>4.7900e-003</b>	<b>0.0000</b>	<b>29.8375</b>	<b>29.8375</b>	<b>1.3400e-003</b>	<b>5.3000e-004</b>	<b>30.0295</b>

Armstrong Apartments - Maximum buildout of the proposed designation - San Joaquin Valley Unified APCD Air District, 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	0.0629					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2617					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.9300e-003	0.0251	0.0107	1.6000e-004		2.0300e-003	2.0300e-003		2.0300e-003	2.0300e-003	0.0000	29.0249	29.0249	5.6000e-004	5.3000e-004	29.1974
Landscaping	0.0150	5.7300e-003	0.4973	3.0000e-005		2.7600e-003	2.7600e-003		2.7600e-003	2.7600e-003	0.0000	0.8126	0.8126	7.8000e-004	0.0000	0.8321
<b>Total</b>	<b>0.3424</b>	<b>0.0308</b>	<b>0.5079</b>	<b>1.9000e-004</b>		<b>4.7900e-003</b>	<b>4.7900e-003</b>		<b>4.7900e-003</b>	<b>4.7900e-003</b>	<b>0.0000</b>	<b>29.8375</b>	<b>29.8375</b>	<b>1.3400e-003</b>	<b>5.3000e-004</b>	<b>30.0295</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**



Armstrong Apartments - Maximum buildout of the proposed designation - San Joaquin Valley Unified APCD Air District, Annual

**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	4.4616	0.1427	3.4200e-003	9.0490
Unmitigated	4.4616	0.1427	3.4200e-003	9.0490

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	4.36532 / 2.75205	4.4616	0.1427	3.4200e-003	9.0490
<b>Total</b>		<b>4.4616</b>	<b>0.1427</b>	<b>3.4200e-003</b>	<b>9.0490</b>

Armstrong Apartments - Maximum buildout of the proposed designation - San Joaquin Valley Unified APCD Air District, Annual

**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			
Apartments Low Rise	4.36532 / 2.75205	4.4616	0.1427	3.4200e-003	9.0490
<b>Total</b>		<b>4.4616</b>	<b>0.1427</b>	<b>3.4200e-003</b>	<b>9.0490</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	6.2562	0.3697	0.0000	15.4994
Unmitigated	6.2562	0.3697	0.0000	15.4994

Armstrong Apartments - Maximum buildout of the proposed designation - San Joaquin Valley Unified APCD Air District, 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**

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	30.82	6.2562	0.3697	0.0000	15.4994
<b>Total</b>		<b>6.2562</b>	<b>0.3697</b>	<b>0.0000</b>	<b>15.4994</b>

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	30.82	6.2562	0.3697	0.0000	15.4994
<b>Total</b>		<b>6.2562</b>	<b>0.3697</b>	<b>0.0000</b>	<b>15.4994</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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Armstrong Apartments - Maximum buildout of the proposed designation - San Joaquin Valley Unified APCD Air District, Annual

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

**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

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

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

**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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## **6.2 Appendix B: CHRIS Record Search Results, NAHC Correspondence, Historic Review Report**

- *CHRIS Record Search Results: Prepared by Southern San Joaquin Information Center (SSJIC) on January 10, 2023 (Record Search File Number 22-321) and November 28, 2022 (Record Search File Number 22-481).*
- *NAHC Correspondence: Prepared by California Native American Heritage Commission (NAHC) on February 16, 2023.*
- *Historic Review Report: Prepared by Karana Hattersley-Drayton, M.A., Architectural Historian, dated February 12, 2023.*



**To:** Shin Tu  
Precision Civil Engineering, Inc.  
1234 O Street  
Fresno, CA 93721

**Record Search 22-481**

**Date:** January 10, 2023

**Re:** Armstrong Apartments (Development Permit No. P22-02376)

**County:** Fresno

**Map(s):** Clovis 7.5'

### **CULTURAL RESOURCES RECORDS SEARCH**

The California Office of Historic Preservation (OHP) contracts with the California Historical Resources Information System's (CHRIS) regional Information Centers (ICs) to maintain information in the CHRIS inventory and make it available to local, state, and federal agencies, cultural resource professionals, Native American tribes, researchers, and the public. Recommendations made by IC coordinators or their staff regarding the interpretation and application of this information are advisory only. Such recommendations do not necessarily represent the evaluation or opinion of the State Historic Preservation Officer in carrying out the OHP's regulatory authority under federal and state law.

The following are the results of a search of the cultural resource files at the Southern San Joaquin Valley Information Center. These files include known and recorded cultural resources sites, inventory and excavation reports filed with this office, and resources listed on the National Register of Historic Places, the OHP Built Environment Resources Directory, California State Historical Landmarks, California Register of Historical Resources, California Inventory of Historic Resources, and California Points of Historical Interest. Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the OHP are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area.

### **PRIOR CULTURAL RESOURCE STUDIES CONDUCTED WITHIN THE PROJECT AREA AND THE ONE-HALF MILE RADIUS**

According to the information in our files, there have been no previous cultural resource studies completed within the project area. Additionally, there have been four cultural resource studies conducted within the one-half mile radius: FR-01130, 03013, 03014, and 3016.

**KNOWN/RECORDED CULTURAL RESOURCES WITHIN THE PROJECT AREA AND THE ONE-HALF MILE RADIUS**

According to the information in our files, there are no recorded resources within the project area or within the one-half mile radius, and it is unknown if any exist there.

There are no recorded cultural resources within the project area or radius that are listed in the National Register of Historic Places, the California Register of Historical Resources, the California Points of Historical Interest, California Inventory of Historic Resources, for the California State Historic Landmarks.

**COMMENTS AND RECOMMENDATIONS**

We understand this project consists of construction of a 64-unit multi-family residential structure. Further, we understand the property is currently developed with five structures, built in 1962. According to our records, these structures have never been recorded or evaluated for historical significance. Therefore, prior to alteration or demolition of the existing structures, we recommend they first be recorded and evaluated for historical significance by a qualified, professional consultant. Additionally, if any cultural resources are unearthed during ground disturbance activities, all work must halt in the area of the find and a qualified, professional consultant should be called out to assess the findings and make the appropriate mitigation recommendations. A list of qualified consultants can be found at [www.chrisinfo.org](http://www.chrisinfo.org).

We also recommend that you contact the Native American Heritage Commission in Sacramento. They will provide you with a current list of Native American individuals/organizations that can assist you with information regarding cultural resources that may not be included in the CHRIS Inventory and that may be of concern to the Native groups in the area. The Commission can consult their "Sacred Lands Inventory" file to determine what sacred resources, if any, exist within this project area and the way in which these resources might be managed. Finally, please consult with the lead agency on this project to determine if any other cultural resource investigation is required. If you need any additional information or have any questions or concerns, please contact our office at (661) 654-2289.

By:



Celeste M. Thomson, Coordinator

**Date:** January 10, 2023

Please note that invoices for Information Center services will be sent under separate cover from the California State University, Bakersfield Accounting Office.

## NATIVE AMERICAN HERITAGE COMMISSION

February 16, 2023

Shin Tu  
Precision Civil Engineering

Via Email to: [stu@precisioneng.net](mailto:stu@precisioneng.net)

**Re: Native American Consultation, Pursuant to Senate Bill 18 (SB18), Government Codes §65352.3 and §65352.4, as well as Assembly Bill 52 (AB52), Public Resources Codes §21080.1, §21080.3.1 and §21080.3.2, Armstrong Apartments (Development Permit No. P22-02376) Project, Fresno County**

Dear Mr. Tu:

Attached is a consultation list of tribes with traditional lands or cultural places located within the boundaries of the above referenced counties or projects.

Government Codes §65352.3 and §65352.4 require local governments to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of avoiding, protecting, and/or mitigating impacts to cultural places when creating or amending General Plans, Specific Plans and Community Plans.

Public Resources Codes §21080.3.1 and §21080.3.2 requires public agencies to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of avoiding, protecting, and/or mitigating impacts to tribal cultural resources as defined, for California Environmental Quality Act (CEQA) projects.

The law does not preclude local governments and agencies from initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction. The NAHC believes that this is the best practice to ensure that tribes are consulted commensurate with the intent of the law.

Best practice for the AB52 process and in accordance with Public Resources Code §21080.3.1(d), is to do the following:

*Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section.*

The NAHC also recommends, but does not require that lead agencies include in their notification letters, information regarding any cultural resources assessment that has been completed on the area of potential affect (APE), such as:



CHAIRPERSON  
**Laura Miranda**  
Luiseño

VICE CHAIRPERSON  
**Reginald Pagaling**  
Chumash

SECRETARY  
**Sara Dutschke**  
Miwok

COMMISSIONER  
**Isaac Bojorquez**  
Ohlone-Costanoan

COMMISSIONER  
**Buffy McQuillen**  
Yokayo Pomo, Yuki,  
Nomlaki

COMMISSIONER  
**Wayne Nelson**  
Luiseño

COMMISSIONER  
**Stanley Rodriguez**  
Kumeyaay

COMMISSIONER  
**[Vacant]**

COMMISSIONER  
**[Vacant]**

EXECUTIVE SECRETARY  
**Raymond C. Hitchcock**  
Miwok/Nisenan

**NAHC HEADQUARTERS**  
1550 Harbor Boulevard  
Suite 100  
West Sacramento,  
California 95691  
(916) 373-3710  
[nahc@nahc.ca.gov](mailto:nahc@nahc.ca.gov)  
[NAHC.ca.gov](http://NAHC.ca.gov)



1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:
  - A listing of any and all known cultural resources have already been recorded on or adjacent to the APE, such as known archaeological sites;
  - Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
  - Whether the records search indicates a low, moderate or high probability that unrecorded cultural resources are located in the APE; and
  - If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.
2. The results of any archaeological inventory survey that was conducted, including:
  - Any report that may contain site forms, site significance, and suggested mitigation measures.  
  
All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code Section 6254.10.
3. The result of the Sacred Lands File (SFL) check conducted through the Native American Heritage Commission was negative.
4. Any ethnographic studies conducted for any area including all or part of the potential APE; and
5. Any geotechnical reports regarding all or part of the potential APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS is not exhaustive, and a negative response to these searches does not preclude the existence of a tribal cultural resource. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the event, that they do, having the information beforehand will help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance we can assure that our consultation list remains current.

If you have any questions, please contact me at my email address: [Cameron.vela@nahc.ca.gov](mailto:Cameron.vela@nahc.ca.gov).

Sincerely,

*Cameron Vela*

Cameron Vela  
Cultural Resources Analyst

Attachment

**Native American Heritage Commission  
Tribal Consultation List  
Fresno County  
2/16/2023**

**Big Sandy Rancheria of  
Western Mono Indians**

Elizabeth Kipp, Chairperson  
P.O. Box 337  
Western Mono  
Auberry, CA, 93602  
Phone: (559) 374 - 0066  
Fax: (559) 374-0055  
lkipp@bsrnation.com

**Cold Springs Rancheria of  
Mono Indians**

Carol Bill, Chairperson  
P.O. Box 209  
Mono  
Tollhouse, CA, 93667  
Phone: (559) 855 - 5043  
Fax: (559) 855-4445  
coldsprgstribe@netptc.net

**Dumna Wo-Wah Tribal  
Government**

Robert Ledger, Chairperson  
2191 West Pico Ave.  
Foothill Yokut  
Mono  
Fresno, CA, 93705  
Phone: (559) 540 - 6346  
ledgerrobert@ymail.com

**Kings River Choinumni Farm  
Tribe**

Stan Alec,  
Foothill Yokut  
3515 East Fedora Avenue  
Fresno, CA, 93726  
Phone: (559) 647 - 3227

**North Fork Mono Tribe**

Ron Goode, Chairperson  
Mono  
13396 Tollhouse Road  
Clovis, CA, 93619  
Phone: (559) 299 - 3729  
rwgoode911@hotmail.com

**North Valley Yokuts Tribe**

Katherine Perez, Chairperson  
Costanoan  
Northern Valley  
Yokut  
P.O. Box 717  
Linden, CA, 95236  
Phone: (209) 887 - 3415  
canutes@verizon.net

**North Valley Yokuts Tribe**

Timothy Perez,  
P.O. Box 717  
Linden, CA, 95236  
Phone: (209) 662 - 2788  
huskanam@gmail.com  
Costanoan  
Northern Valley  
Yokut

**Picayune Rancheria of  
Chukchansi Indians**

Claudia Gonzales, Chairwoman  
Foothill Yokut  
P.O. Box 2226  
Oakhurst, CA, 93644  
Phone: (559) 412 - 5590  
cgonzales@chukchansitribe.net

**Table Mountain Rancheria**

Brenda Lavell, Chairperson  
Yokut  
P.O. Box 410  
Friant, CA, 93626  
Phone: (559) 822 - 2587  
Fax: (559) 822-2693  
rpennell@tmr.org

**Traditional Choinumni Tribe**

David Alvarez, Chairperson  
Foothill Yokut  
2415 E. Houston Avenue  
Fresno, CA, 93720  
Phone: (559) 217 - 0396  
Fax: (559) 292-5057  
davealvarez@sbcglobal.net

**Tule River Indian Tribe**

Neil Peyron, Chairperson  
Yokut  
P.O. Box 589  
Porterville, CA, 93258  
Phone: (559) 781 - 4271  
Fax: (559) 781-4610  
neil.peyron@tulerivertribe-nsn.gov

**Wuksache Indian Tribe/Eshom  
Valley Band**

Kenneth Woodrow, Chairperson  
Foothill Yokut  
Mono  
1179 Rock Haven Ct.  
Salinas, CA, 93906  
Phone: (831) 443 - 9702  
kwood8934@aol.com

This list is current only as of the date of this document and is based on the information available to the Commission on the date it was produced. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable only for consultation with Native American tribes under Government Code Sections 65352.3, 65352.4 et seq. and Public Resources Code Sections 21080.3.1 for the proposed Armstrong Apartments (Development Permit No. P22-02376) Project, Fresno County.



**February 12, 2023**

**To:** Scott Vincent  
The Vincent Company  
1500 Shaw Avenue Suite 304  
Fresno, CA 93711

via e-mail

**From:** Karana Hattersley-Drayton, M.A.  
Architectural Historian  
karanadrayton@comcast.net  
4110 N. Maroa Avenue  
Fresno, CA 93704

**Re: Historic Review, (for) Proposed Multi-family Residential Development Located at 2594 N. Armstrong Avenue 93727 (APN: 310-250-13).**

**Summary:** Karana Hattersley-Drayton, M.A. who meets the Secretary of the Interior's Professional Qualifications as both an architectural historian and historian, was contracted on January 26, 2023 to provide a historic review pursuant to the California Environmental Quality Act of buildings located on the 4.39-acre parcel at 2594 N. Armstrong Avenue in southeast Fresno. The four buildings are slated for demolition for a proposed multi-family development of 64 units.

Ms. Drayton visited the site on February 4<sup>th</sup> to photograph and record the buildings (see attached State of California DPR forms). Ms. Drayton then researched the history of the site using County Atlases, local histories and an interview with the current owner, Bob Duley on 8 February.

This report documents the efforts to identify historic properties that may be affected directly or indirectly by the proposed project pursuant to 36 CFR 800.4 (d) (1). The report also fulfills California Environmental Quality Act (CEQA) requirements that mandate public agencies determine whether a project will have a significant impact on important historical resources. A substantial adverse change in the significant qualities of a historical resource is considered a significant impact. As defined by CEQA, in part, a "historical resource" is a resource listed in, or determined to be eligible for listing in, the California Register

of Historical Resources (CRHR) [14 California Code of Regulations (CCR) 15064.5 (a)(3)].

**Findings:** Pursuant to 36 CFR 800.4 (d) (1) none of the four buildings located on this 4.39-acre parcel appear to meet eligibility for the California Register (or Fresno's Local Register of Historic Resources). There is no evidence that the c1962 residence, garage and office building are associated with significant historic events (Criterion 1) or are associated with persons of importance in local or regional history (Criterion 2). All are typical mid-century rural buildings (Criterion 3). Additionally, there is no evidence that the buildings may yield information important in prehistory (Criterion 4). Although the owner of the property in 1891, George Eggers, was important in early farming and viticulture in the Fresno area, none of the extant buildings are attributed to his tenure. The shed outbuilding on site appears to predate the 1962 residence, based on its materials and construction, however, it has lost any historic context and thus is also not a historic resource. **The demolition of these buildings will therefore not create a substantial adverse change to a historic resource.**

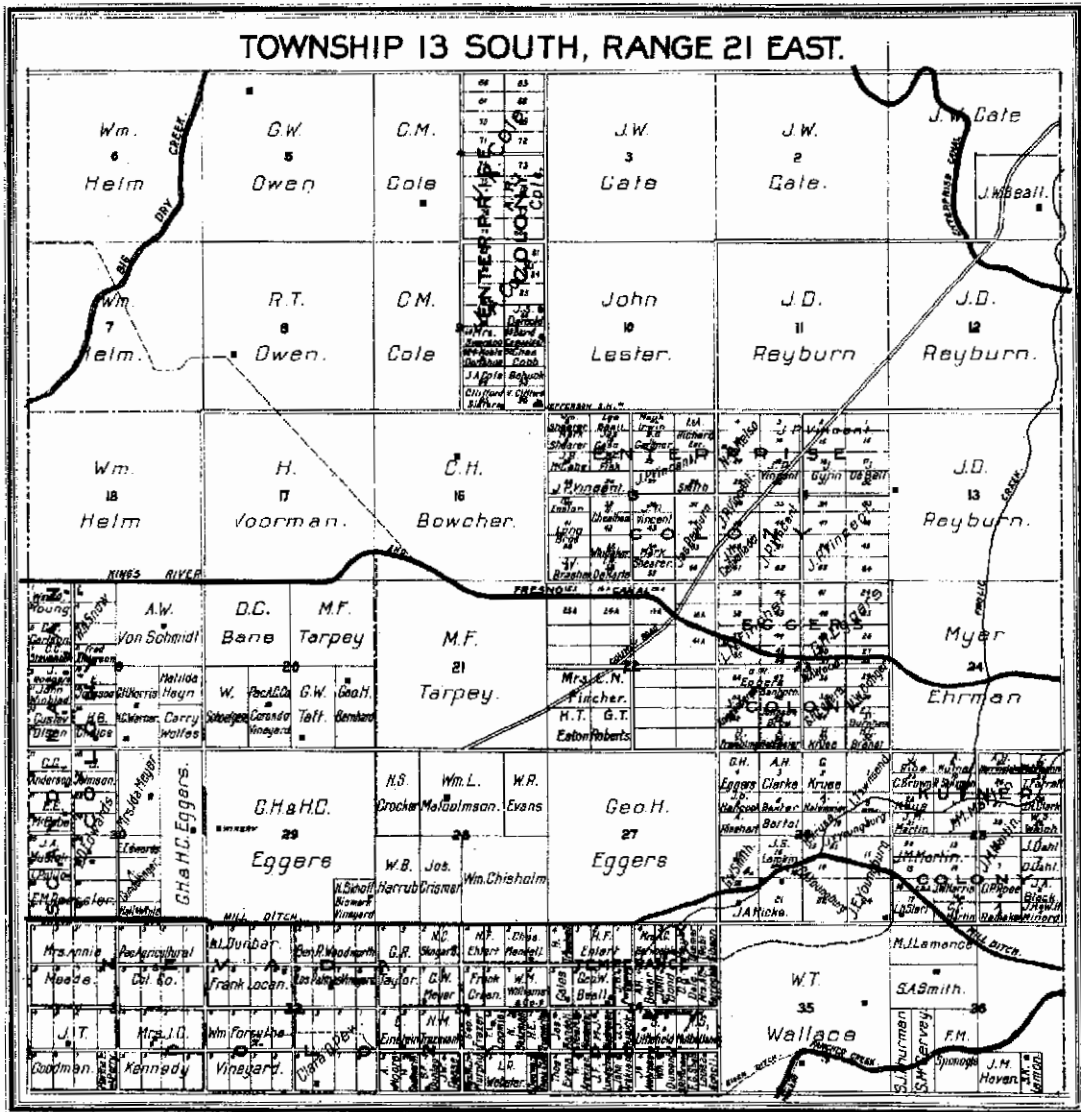
**History of the Site:** The City of Fresno was founded in 1872 by the Central Pacific Railroad. The Contract and Finance Company, a subsidiary of the Railroad, bought 4,480 acres in a desolate area where Dry Creek drained into the plains. Surveyor Edward H. Mix laid out the new town in blocks 320 feet by 400 feet, with 20 foot alleys, with lots 25×150 feet fronting on 80-foot wide streets parallel to and on both sides of the tracks (Clough and Secret 1984:121). Fresno's location was uninviting at best, with barren sand plains in all directions. Fresno grew slowly but in 1874 it was able to wrestle the county seat away from the former mining town of Millerton (Hoover 1990:88).

The 1880s, however, were prosperous years and the desert was turned into profitable farmland with the introduction of irrigation and agricultural colonies. By 1903 there were 48 separate colonies or tracts in Fresno County representing approximately 71,080 acres (Panter 1994:9). These colonies helped to break up the vast estates and initiated what agricultural historian Donald Pisani has termed "the horticultural small-farm phase" of California agriculture (Datel 1999:97). Several agricultural colonies were located near to the project site---for example, the Temperance Colony was located due south, the Eggers Colony was adjacent to it---however, ownership of the parcels in this section (Section 27 T13S R21E) were small independent landowners.

The earliest known owner of the parcel was George H. Eggers, who owned the entirety of Section 27 in 1891 (Thompson 1891:60). Eggers and his brother were early Fresno area wheat and barley farmers who by the 1880s were growing grapes for their winery located west on Sections 29 T13S R21E. The winery produced 65,000 gallons in 1884 and 125,000 in 1886, of all the typical wines---Claret, Angelicas, Ports and white. The Egger's Vineyard Company Winery did not turn a profit until 1885 (Clough and Secret 1984: 149; Sanborn

Fire Insurance Maps 1888, 1898, 1906, 1918 -1919). The Eggers Ranch house was located on the current site of the Fresno Air Terminal (Rehart 1996:58).

By 1907 Section 27 was subdivided into 40-acre parcels. In 1907 Lot 7 was owned by an R. M. Nill. From 1909-1913 S. E. Nill is listed as the owner. By 1935 O.K. Cushing owned the property. The residence on site was constructed circa 1962 according to various realty listings (redfin.com). Circa 1992 to circa 1999 the property operated as a nursery, Fresno Tree Farm (Duley 8 February 2023).



Thompson Atlas 1891:60



Pursuant to 36 CFR 800.4 (d) (1) none of the four buildings located on this 4.39-acre parcel appear to meet eligibility for the California Register (or Fresno's Local Register of Historic Resources). Although the owner of the property in 1891, George Eggers, was important in early farming and viticulture in the Fresno area, none of the extant buildings are attributed to his tenure. The shed outbuilding on site appears to predate the 1962 residence, based on its materials and construction, however, it has lost any historic context and thus is also not a historic resource. The demolition of these buildings will therefore not create a substantial adverse change to a historic resource.

**Karana Hattersley-Drayton** has a B.A., M.A. and completed three years of coursework for a Ph. D. in architectural history, all at U.C. Berkeley. Ms. Drayton moved to Fresno in 1999 to work as an architectural historian for Caltrans, District 06, and in 2002 she was hired by the City of Fresno as the Historic Preservation Project Manager. She retired from the City in 2017 and currently teaches architectural history at California State University, Fresno.



***Rear Elevation of Office (Map Reference #3)***

## **References:**

Clough, Charles W. and William B. Secrest, Jr.

1984 Fresno County---The Pioneer Years: From the Beginnings to 1900. Panorama West Books, Fresno, California.

Datel, Robin Elisabeth

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**PRIMARY RECORD**

Primary # \_\_\_\_\_

HRI # \_\_\_\_\_

Trinomial \_\_\_\_\_

NRHP Status Code \_\_\_\_\_

Other Listings \_\_\_\_\_

Review Code \_\_\_\_\_ Reviewer \_\_\_\_\_ Date \_\_\_\_\_

**P1. Resource Name(s) or Number:** (Former) Fresno Tree Farm

**\*P2. Location:** \*a. County: Fresno

\*b. **USGS 7.5' Quad:** Clovis 1964 Photorevised 1981, Parcel located in the West ½ of Lot 7 Section 27 T13S R21E

c. **Address:** 2594 North Armstrong Avenue, Fresno 93727

d. **Assessor's Parcel Number:** 310-250-13

**\*P3a. Description:** Four buildings are located on this 4.39-acre parcel. **Map Reference #1** is a 3 bedroom, 1 story, 1918 sf single-family residence on a raised concrete foundation. The building faces south on the parcel and has a cross gabled low pitched roof with exposed rafter tails. The frame constructed building has an irregular plan and is clad with vertical wood siding. All windows are 2 pane vinyl clad horizontal or vertical sliders. An external brick chimney is on the east elevation. The front door is located in the center of the facade and has a heavy security screen door. A single mature palm tree is located in front of the home, outside the yard's perimeter fence. **Map Reference #2** is a detached 2-car garage. It is located off the northwest corner of the residence and faces north onto a gravel driveway. The building is framed construction with vertical wood siding. The front gabled roof has a medium pitch of asbestos shingles with a boxed cornice. A door to the garage is located on the east elevation and there is one vinyl sash window on the south end of the building. **Continued**

**\*P3b. Resource Attributes:** HP2 (Single family residence), HP4 (ancillary buildings)

**\*P4. Resources Present:** ● Building



**P5b Photo date:** 4 February 2023

**\*P6. Date Constructed/Age and Sources:** 1962 redfin.com

**\*P7. Owner and Address:**  
Armstrong LLC  
978 W. Alluvial, Suite 101  
Fresno, CA 93711

**\*P8. Recorded by:** Karana Hattersley-Drayton, M.A.  
(for) The Vincent Company  
1500 Shaw Avenue Suite 304  
Fresno, CA 93711

**\*P9. Date Recorded:** 4 February 2023

**\*P10. Survey Type:** Intensive

**\*P11. Report Citation:** "Historic Evaluation for Proposed Demolition of Property Located at 2594 North Armstrong Avenue, Fresno, as part of an Initial Study for Armstrong Apartments (P22-02376)"

**\*Attachments:** ● Building, Structure and Object Report; ● Continuation Sheet



State of California — The Resources Agency  
DEPARTMENT OF PARKS AND RECREATION  
**PRIMARY RECORD**

Primary # \_\_\_\_\_  
HRI # \_\_\_\_\_  
Trinomial \_\_\_\_\_  
NRHP Status Code \_\_\_\_\_

Other Listings \_\_\_\_\_  
Review Code \_\_\_\_\_ Reviewer \_\_\_\_\_ Date \_\_\_\_\_

**P1. Resource Name(s) or Number:** Fresno Tree Farm

**\*P2. Location:** \*a. County: Fresno

\*b. USGS 7.5' Quad: Clovis 1964 Photorevised 1981, Parcel located in West ½ of Lot 7 Section 27 T13S R21E

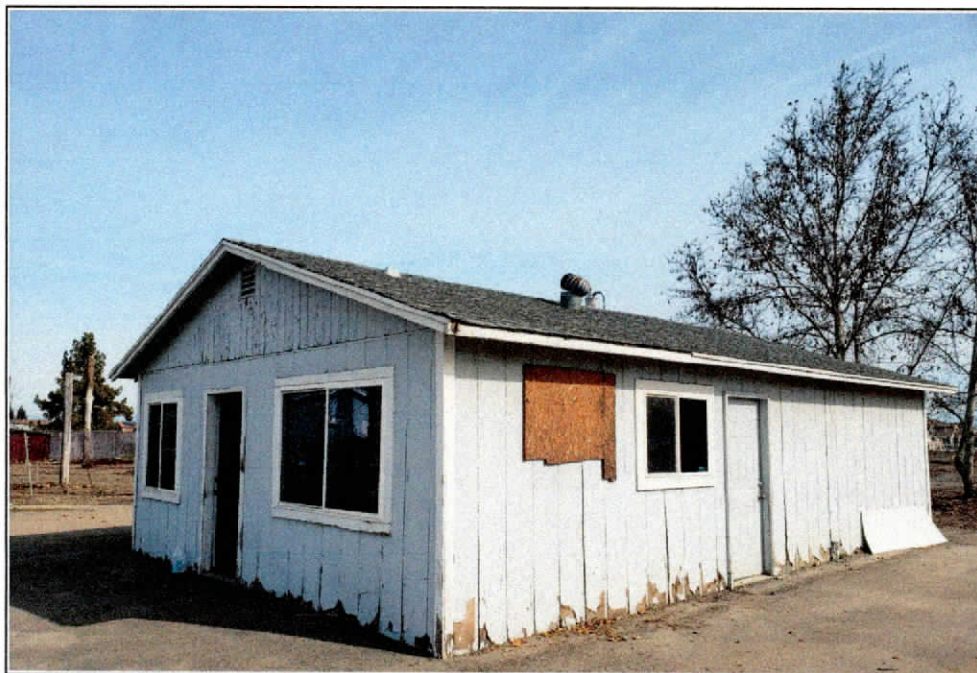
c. Address: 2594 North Armstrong Avenue, Fresno 93727

d. Assessor's Parcel Number: 310-250-13

**\*P3a. Description: Map Reference #3:** Located south of the residence is a one-story gable end building formerly used by the company as an office (Jeff Noble, 4 February 2023). The rectangular plan frame building has vertical board siding with decorative scalloped-edged boards under the facade roof ridge. The medium pitch roof has a boxed cornice with a simple fascia board trim. A solid wood door is located on the gable entrance, as well as on the south elevation. A former entrance has been sealed off on the north side of the building although the shed roof porch covering is still in place. Windows on the facade and side elevations are vinyl sliders.

**\*P3b. Resource Attributes:** HP4 (Outbuilding/former office)

**\*P4. Resources Present:** ● Building



**P5b Photo date:** 4 February 2023

**\*P6. Date Constructed/Age and Sources:** Circa 1962, per information from realtor on house.

**\*P7. Owner and Address:**  
Armstrong LLC  
978 W. Alluvial, Suite 101  
Fresno, CA 93711

**\*P8. Recorded by:** Karana Hattersley-Drayton, M.A. (for) The Vincent Company  
1500 Shaw Avenue Suite 304  
Fresno, CA 93711

**\*P9. Date Recorded:** 4 February 2023

**\*P10. Survey Type:** Intensive

**\*P11. Report Citation:** "Historic/CEQA Evaluation for Proposed Demolition of Property Located at 2594 North Armstrong Avenue, Fresno as part of an Initial Study for Armstrong Apartments (P22-02376)."

**\*Attachments:** ● Building, Structure and Object Report; ● Continuation Sheet

DPR 523A (1/95)

**\*Required information**



State of California — The Resources Agency  
DEPARTMENT OF PARKS AND RECREATION  
**PRIMARY RECORD**

Primary # \_\_\_\_\_  
HRI # \_\_\_\_\_  
Trinomial \_\_\_\_\_  
NRHP Status Code \_\_\_\_\_

Other Listings \_\_\_\_\_  
Review Code \_\_\_\_\_ Reviewer \_\_\_\_\_ Date \_\_\_\_\_

**P1. Resource Name(s) or Number:** (Former) Fresno Tree Farm

**\*P2. Location:** \*a. County: Fresno

\*b. USGS 7.5' Quad: Clovis 1964 Photorevised 1981, Parcel located in in the West ½ of Lot 7 Section 27 T13S R21E

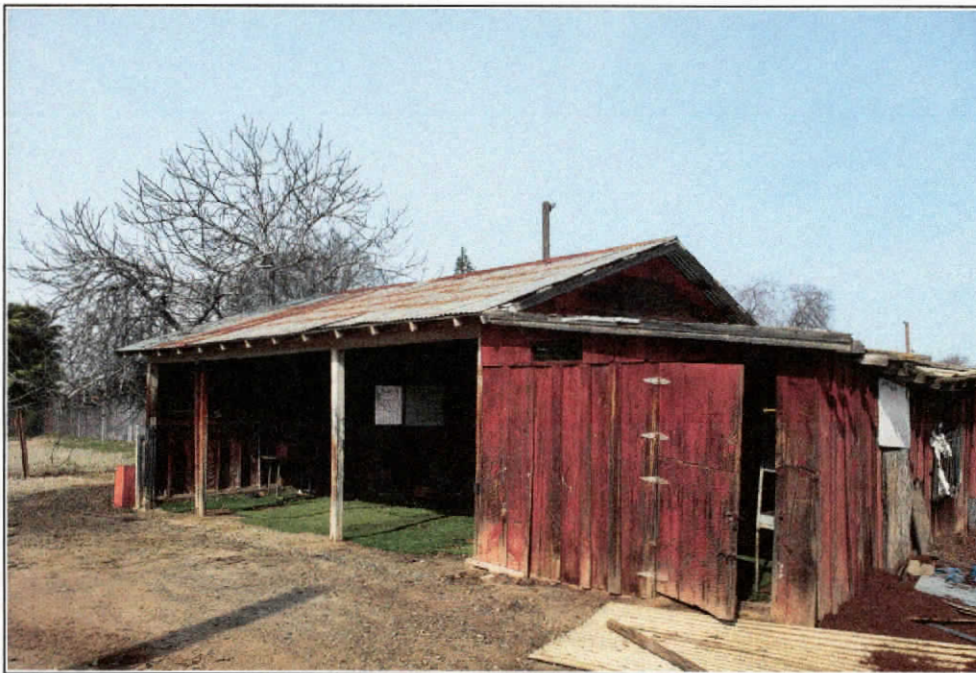
c. Address: 2594 North Armstrong Avenue, Fresno 93727

d. Assessor's Parcel Number: 310-250-13

**\*P3a. Description: Map Reference #4:** Located north of the residence is a side gabled three bay shed which is open on the south elevation. The corrugated sheet metal roof has a medium pitch and exposed rafter tails. The building is constructed of wide vertical wood boards, with horizontal boarding under the roof ridge. A shed roof addition on the east elevation is enclosed and the cladding is vertical board and batten. A door of vertical boards with hinges is located on the southeast end of this addition. One single pane casement window is located on the west side of the shed.

**\*P3b. Resource Attributes:** HP4 (outbuilding/shed)

**\*P4. Resources Present:** ● Building



**P5b Photo date:** 4 February 2023

**\*P6. Date Constructed/Age and Sources:** circa 1940, estimated guess based on construction and materials

**\*P7. Owner and Address:**  
Armstrong LLC  
978 W. Alluvial, Suite 101  
Fresno, CA 93711

**\*P8. Recorded by:** Karana Hattersley-Drayton, M.A. (for) The Vincent Company  
1500 Shaw Avenue Suite 304  
Fresno, CA 93711

**\*P9. Date Recorded:** 4 February 2023

**\*P10. Survey Type:** Intensive

**\*P11. Report Citation:** "Historic/CEQA Evaluation for Proposed Demolition of Property Located at 2594 North Armstrong Avenue, Fresno, as part of an Initial Study for Armstrong Apartments (P22-02376)."

**\*Attachments:** ● Building, Structure and Object Report; ● Continuation Sheet



**BUILDING, STRUCTURE, AND OBJECT RECORD**

\*NRHP Status Code: 6Z

\*Resource Name: (Former) Fresno Tree Farm, 2594 North Armstrong Avenue, Fresno 93727

**B3. Original Use:** Farmland/Rural Residential/Nursery

**B4. Present Use:** Vacant

\***B5. Architectural Style:** Vernacular ranch

\***B6. Construction History:** The residence on the parcel was built in 1962 according to the realty listing. The shed structure may well be a vestige from an earlier period, due to the building materials and construction.

\***B7. Moved?**  No

\***B8. Related Features:** The

**B9a. Architect:** N/A

**B9b. Builder:** Unknown

\***B10. Significance: Theme:** Rural Residential **Area:** Southeast Fresno

**Period of Significance:** N/A

**Property Type:** Rural Residential/Vernacular **Applicable Criteria:** N/A

Four buildings are located on this 4.39-acre rural parcel: a 1962 residence and detached garage, a former office and a 3-bay implement shed. The property operated as a nursery, Fresno Tree Farm, from circa 1992 to circa 1999 (Duley 8 February 2023). The home on site was a rental for the company. The earliest known owner of the parcel was George H. Eggers, who owned the entirety of Section 27 in 1891 (Thompson 1891:60). Eggers and his brother were early Fresno area wheat and barley farmers who by the 1880s were growing grapes for their winery located west on Sections 29 T13S R21E. The winery produced 65,000 gallons in 1884 and 125,000 in 1886, of all the typical wines---Claret, Angelicas, Ports and white. The Egger's Vineyard Company Winery did not turn a profit until 1885 (Clough and Secret 1984: 149; Sanborn Fire Insurance Maps 1888, 1898, 1906, 1918 -1919). The Eggers Ranchhouse was located on the current site of the Fresno Air Terminal (Rehart 1996:58).

Section 27 was subdivided by 1907 into 40-acre parcels. Although Southeast Fresno included numerous agricultural colonies---for example, the Temperance Colony was located due south, the Eggers Colony was adjacent to it--- ownership of the parcels in this section appeared to be small independent landowners. **(Continued).**

\***B12. References:** Thompson County Atlas 1891; Harvey County Atlas 1907; Guard, W.C. County Atlas 1909, 1911, 1913; Progressive Atlas 1935; Clough and Secret *Fresno County: The Pioneer Years...*1984; Rehart, *The Valley's Legends and Legacies* 1996; Personal communication with Bob Duley 8 February 2023;

\***B14. Evaluator:** Karana Hattersley-Drayton, M.A.  
4110 N. Maroa Avenue Fresno, CA 93704

\***Date of Evaluation:** 11 February 2023

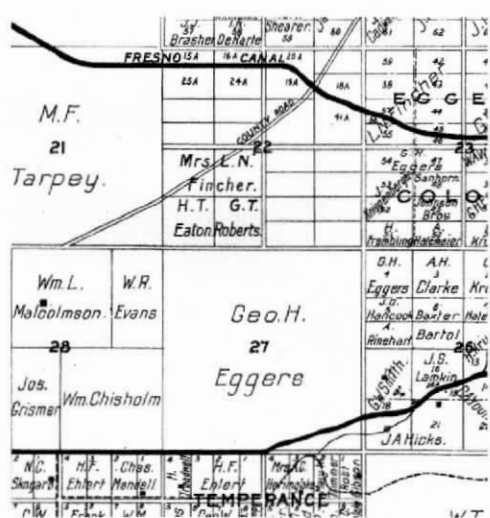
(This space reserved for official comments.)



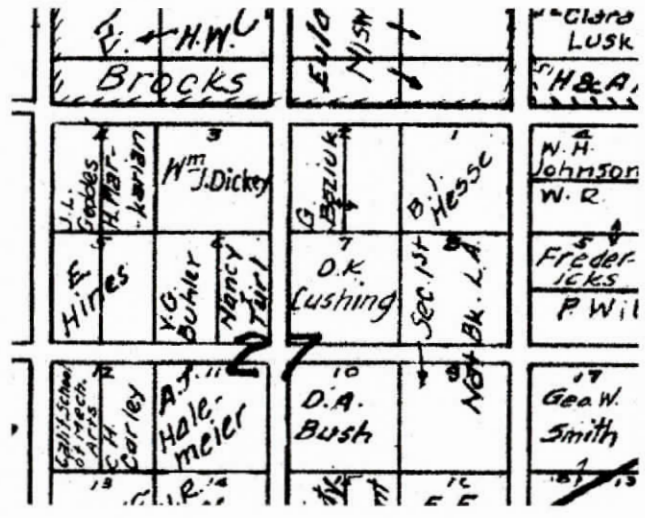


Page 5 of 6 Resource: (Former) Fresno Tree Farm (2594 North Armstrong Avenue, Fresno 93727)  
 Recorded by: Karana Hattersley-Drayton, M.A. \*Date: 4 February 2023 ■ Continuation  
 DPR 523L (1/95) \*Required information

**BSO continued:** 1907 Lot 7 was owned by an R. M. Nill. From 1909-1913 S. E. Nill is listed as the owner. By 1935 O.K. Cushing owned the property.



Thompson Atlas 1891:60



Progressive Atlas 1935:41



Map Ref. #2 Garage

**Findings:** Pursuant to 36 CFR 800.4 (d) (1) the four buildings located on this 4.39-acre parcel have been evaluated for their potential eligibility to the California Register of Historical Resources. None of the 4 buildings on the property appear to meet eligibility for the California Register (or even Fresno's Local Register of Historic Resources). There is no evidence that the c1962 residence, garage and office building on site are associated with significant historic events (Criterion 1) or are associated with persons of importance in local or regional history (Criterion 2). All are typical mid-century rural buildings (Criterion 3). Additionally, there is no evidence that the buildings may yield information important in prehistory (Criterion 4). Although the owner of the property in 1891, George Eggere, was important in early farming and viticulture in the Fresno area, none of the extant buildings are attributed to his tenure. The shed outbuilding on site appears to predate the 1962 residence, based on its materials and construction, however, it has lost any historic context and thus is also not a historic resource. The demolition of these buildings will therefore not create a substantial adverse change to a historic resource.



2594 North Armstrong Avenue, Fresno  
93727

#4

#2

#1

#3

Google

Imagery ©2023 CNES / Airbus, Maxar Technologies, U.S. Geological Survey

Figure 1: Historic Review Armstrong Apartments Proposed Project



### **6.3 Appendix C: Acoustical Analysis**

Prepared by WJV Acoustics, Inc., on December 22, 2022.



**ACOUSTICAL ANALYSIS**

**ARMSTRONG APARTMENTS  
FRESNO, CALIFORNIA**

**WJVA Project No. 22-62**

**PREPARED FOR**

**PRECISION ENGINEERING  
1234 O STREET  
FRESNO, CALIFORNIA 93721**

**PREPARED BY**

**WJV ACOUSTICS, INC.  
VISALIA, CALIFORNIA**



**wjv acoustics**

**FEBRUARY 21, 2023**



## INTRODUCTION

The project is a proposed 64-unit multi-family residential development to be located in Fresno, California. The project site is located along the east side of N. Armstrong Avenue, approximately 375 feet north of E. Clinton Avenue. The City of Fresno has requested an acoustical analysis to quantify project site noise exposure and determine noise mitigation requirements. This analysis, prepared by WJV Acoustics, Inc. (WJVA), is based upon a project site plan prepared by The Vincent Company Architects (dated 6-20-22), traffic data provided by the Fresno Council of Governments (Fresno COG) and the findings of on-site noise level measurements. Revisions to the site plan may affect the findings and recommendations of this report. The site plan is provided as Figure 1.

Appendix A provides a description of the acoustical terminology used in this report. Unless otherwise stated, all sound levels reported are in A-weighted decibels (dB). A-weighting de-emphasizes the very low and very high frequencies of sound in a manner similar to the human ear. Most community noise standards utilize A-weighting, as it provides a high degree of correlation with human annoyance and health effects. Appendix B provides typical A-weighted sound levels for common noise sources.

## NOISE EXPOSURE CRITERIA

### General Plan

The City of Fresno General Plan Noise Element provides noise level criteria for land use compatibility for both transportation and non-transportation noise sources. The General Plan sets noise compatibility standards for transportation noise sources in terms of the Day-Night Average Level ( $L_{dn}$ ). The  $L_{dn}$  represents the time-weighted energy average noise level for a 24-hour day, with a 10 dB penalty added to noise levels occurring during the nighttime hours (10:00 p.m.-7:00 a.m.). The  $L_{dn}$  represents cumulative exposure to noise over an extended period of time and are therefore calculated based upon *annual average* conditions.

Table I provides the General Plan noise level standards for transportation noise sources. Exterior noise standards are to be applied at the outdoor activity areas of residential land uses. Outdoor activity areas are generally considered to be backyards of single-family residential uses and common use outdoor areas (such as pool areas, BBQ and picnic areas, playground areas, etc.) as well as individual unit decks, patios and balconies of multi-family residential uses.

**TABLE I**  
**CITY OF FRESNO GENERAL PLAN NOISE LEVEL STANDARDS**  
**TRANSPORTATION (NON-AIRCRAFT) NOISE SOURCES**

Noise-Sensitive Land Use	Outdoor Activity Areas <sup>1</sup>	Interior Spaces	
	$L_{dn}$ /CNEL, dB	$L_{dn}$ /CNEL, dB	$L_{eq}$ dB <sup>2</sup>
Residential	65	45	---
Transient Lodging	65	45	---
Hospitals, Nursing Homes	65	45	---
Theaters, Auditoriums, Music Halls	---	---	35
Churches, Meeting Halls	65	---	45
Office Buildings	---	---	45
Schools, Libraries, Museums	---	---	45

<sup>1</sup> Where the location of the outdoor activity areas is unknown or is not applicable, the exterior noise level standard shall be applied to the property line of the receiving land use.

<sup>2</sup> As determined for a typical worst-case hour during periods of use.

Source: City of Fresno General Plan

**Implementation Policy NS-1-a** of the General Plan provides guidance in regards to the development of new noise sensitive land uses (including residential developments).

***Desirable and Generally Acceptable Exterior Noise Environment.*** Establish 65 dBA  $L_{dn}$  or CNEL as the standard for the desirable maximum average exterior noise levels for defined usable exterior areas of residential and noise-sensitive uses for noise, but designate 60 dBA  $L_{dn}$  or CNEL (measured at the property line) for noise generated by stationary sources impinging upon residential and noise-sensitive uses. Maintain 65 dBA  $L_{dn}$  or CNEL as the maximum average exterior noise levels

*for non-sensitive commercial land uses, and maintain 70 dBA L<sub>dn</sub> or CNEL as maximum average exterior noise level for industrial land uses, both to be measured at the property line of parcels where noise is generated which may impinge on neighboring properties.*

The General Plan also provides noise level standards for non-transportation (stationary) noise sources. The General Plan noise level standards for non-transportation noise sources are identical to those provided in the City's Municipal code, provided below in Table II.

**Implementation Policy NS-1-i** of the General Plan Noise Element provides guidance in regards to mitigation for new developments and projects that have potential to result in a noise-related impact at existing noise-sensitive land uses.

***Mitigation by New Development.*** *Require an acoustical analysis where new development of industrial, commercial or other noise generating land uses (including transportation facilities such as roadways, railroads, and airports) may result in noise levels that exceed the noise level exposure criteria established by [Table I] and [Table II] to determine impacts, and require developers to mitigate these impacts in conformance with Tables 9-2 and 9-3 as a condition of permit approval through appropriate means.*

*Noise mitigation measures may include:*

- *The screening of noise sources such as parking and loading facilities, outdoor activities, and mechanical equipment;*
- *Providing increased setbacks for noise sources from adjacent dwellings;*
- *Installation of walls and landscaping that serve as noise buffers;*
- *Installation of soundproofing materials and double-glazed windows; and*
- *Regulating operations, such as hours of operation, including deliveries and trash pickup.*

*Alternative acoustical designs that achieve the prescribed noise level reduction may be approved by the City, provided a qualified Acoustical Consultant submits information demonstrating that the alternative designs will achieve and maintain the specific targets for outdoor activity areas and interior spaces. As a last resort, developers may propose to construct noise walls along roadways when compatible with aesthetic concerns and neighborhood character. This would be a developer responsibility, with no City funding.*

**Implementation Policy NS-1-j** of the General Plan Noise Element provides guidance in regards to the establishment of a significance threshold when determining an increase in noise levels over existing ambient noise levels.

**Significance Threshold.** Establish, as a threshold of significance for the City's environmental review process, that a significant increase in ambient noise levels is assumed if the project would increase noise levels in the immediate vicinity by 3 dB  $L_{dn}$  or CNEL or more above the ambient noise limits established in this General Plan Update.

*Commentary: When an increase in noise would result in a "significant" impact (increase of three dBA or more) to residents or businesses, then noise mitigation would be required to reduce noise exposure. If the increase in noise is less than three dBA, then the noise impact is considered insignificant and no noise mitigation is needed. By setting a specific threshold of significance in the General Plan, this policy facilitates making a determination of environmental impact, as required by the California Environmental Quality Act. It helps the City determine whether (1) the potential impact of a development project on the noise environment warrants mitigation, or (2) a statement of overriding considerations will be required.*

**Municipal Code**

Section 15-2506 of the City of Fresno Municipal code establishes hourly acoustical performance standards for non-transportation noise sources. The standards, provided in Table II, are made more restrictive during the nighttime hours of 10:00 p.m. to 7:00 a.m. Additionally, the municipal code states that when ambient noise levels exceed or equal the levels described in Table II, mitigation shall only be required to limit noise to the existing ambient noise levels, plus five (5) dB. Section 15-2506 of the Municipal Code is consistent with Implementing Policy NS-1-I of the Noise Element of the City of Fresno General Plan (adopted 12/18/14).

TABLE II NON-TRANSPORTATION NOISE LEVEL STANDARDS, dBA CITY OF FRESNO MUNICIPAL CODE, SECTION 15-2506			
Daytime (7 a.m.-10 p.m.)		Nighttime (10 p.m.-7 a.m.)	
$L_{eq}$	$L_{max}$	$L_{eq}$	$L_{max}$
50	70	45	60

Source: City of Fresno Municipal Code

Additional guidance is provided in Section 10-102(b) of the City's Municipal Code. Section 10 provides existing ambient noise levels to be applied to various districts, further divided into various hours of the day. Table III describes the assumed minimum ambient noise levels by district and time. Section 10-102(b) states "For the purpose of this ordinance, ambient noise level

is the level obtained when the noise level is averaged over a period of fifteen minutes, without inclusion of the offending noise, at the location and time of day at which a comparison with the offending noise is to be made. Where the ambient noise level is less than that designated in this section, however, the noise level specified herein shall be deemed to be the ambient noise level for that location”.

TABLE III ASSUMED MINIMUM AMBIENT NOISE LEVEL, dBA CITY OF FRESNO MUNICIPAL CODE, SECTION 10-102(B)		
DISTRICT	TIME	SOUND LEVEL, dB $L_{eq}$
RESIDENTIAL	10 PM TO 7 AM	50
RESIDENTIAL	7 PM TO 10 PM	55
RESIDENTIAL	7 AM TO 7 PM	60
COMMERCIAL	10 PM TO 7 AM	60
COMMERCIAL	7 AM TO 10 PM	65
INDUSTRIAL	ANYTIME	70

Source: City of Fresno Municipal Code

Section 10-106 (Prima Facie Violation) States “Any noise or sound exceeding the ambient noise level at the properly line of any person offended thereby, or, if a condominium or apartment house, within any adjoining living unit, by more than five decibels shall be deemed to prima facie evidence of a violation of Section 8-305.”

For noise sources that are not transportation related, which usually includes commercial or industrial activities and other stationary noise sources (such as amplified music), it is common to assume that a 3-5 dB increase in noise levels represents a substantial increase in ambient noise levels. This is based on laboratory tests that indicate that a 3 dB increase is the minimum change perceptible to most people, and a 5 dB increase is perceived as a “definitely noticeable change.”

Appendix A provides definitions of the acoustical terminology used in this report. Unless otherwise stated, all sound levels reported in this analysis are A-weighted sound pressure levels in decibels (dB). A-weighting de-emphasizes the very low and very high frequencies of sound in a manner similar to the human ear. Most community noise standards utilize A-weighted sound levels, as they correlate well with public reaction to noise. Appendix B provides typical A-weighted sound levels for common noise sources.

### Construction

The City of Fresno Municipal Code does not explicitly provide guidance on construction noise or vibration. However, Section 10.109 (Exceptions) of the Municipal Code states that the noise provisions shall not apply to “Construction, repair or remodeling work accomplished pursuant to a building, electrical, plumbing, mechanical, or other construction permit issued by the city or

other governmental agency, or to site preparation and grading, provided such work takes place between the hours of 7:00 a.m. and 10:00 p.m. on any day except Sunday.” Although not specifically stated in the Noise Element or the Municipal Code, it is also a standard requirement of many jurisdictions that all construction equipment be properly maintained and muffled to minimize noise generation at the source.

The City of Fresno does not have regulations that define acceptable levels of vibration. One of the most recent references suggesting vibration guidelines is the California Department of Transportation (Caltrans) Transportation and Construction Vibration Guidance Manual. The Manual provides guidance for determining annoyance potential criteria and damage potential threshold criteria. These criteria are provided below in Table IV and Table V, and are presented in terms of peak particle velocity (PPV) in inches per second (in/sec). The PPV levels reported in Table IV and Table V represent those measured at the potential receiver location.

TABLE IV GUIDELINE VIBRATION ANNOYANCE POTENTIAL CRITERIA		
Human Response	Maximum PPV (in/sec) at Receiver	
	Transient Sources	Continuous/Frequent Intermittent Sources
Barely Perceptible	0.04	0.01
Distinctly Perceptible	0.25	0.04
Strongly Perceptible	0.9	0.1
Severe	2.0	0.4

Source: Caltrans

TABLE V GUIDELINE VIBRATION DAMAGE POTENTIAL THRESHOLD CRITERIA		
Structure and Condition	Maximum PPV (in/sec) at Receiver	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile, historic buildings, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: Caltrans

## **PROJECT SITE NOISE EXPOSURE**

The project site is located along the east side of N. Armstrong Avenue, approximately 375 north of E. Clinton Avenue, in Fresno, California. The project site is exposed traffic noise associated with vehicles on N. Armstrong Avenue. The distance from the closest proposed building façade (and individual patios/balconies) to the (future) centerline of N. Armstrong Avenue is approximately 65 feet.

### **Traffic Noise Exposure**

Noise exposure from traffic on N. Armstrong Avenue was calculated for existing and future (2046) conditions using the FHWA Traffic Noise Model and traffic data obtained from Fresno COG. A description of the noise model, applied data, methodology and findings is provided below.

WJVA utilized the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA-RD-77-108). The FHWA Model is a standard analytical method used for roadway traffic noise calculations. The model is based upon reference energy emission levels for automobiles, medium trucks (2 axles) and heavy trucks (3 or more axles), with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA Model was developed to predict hourly  $L_{eq}$  values for free-flowing traffic conditions, and is generally considered to be accurate within  $\pm 1.5$  dB. To predict  $L_{dn}$  values, it is necessary to determine the hourly distribution of traffic for a typical day and adjust the traffic volume input data to yield an equivalent hourly traffic volume.

Noise level measurements and concurrent traffic counts were conducted by WJVA staff within the project site on December 16, 2022, along N. Armstrong Avenue. The purpose of the measurement was to evaluate the accuracy of the FHWA Model in describing traffic noise exposure within the project site. The traffic noise measurement sites were each located at a setback distance of approximately 5 feet from the centerline the roadway. The posted speed limit in the project vicinity, for both roadways, was 45 mph (miles per hour). The project vicinity and noise monitoring site location are provided as Figure 2. Photographs showing the N. Armstrong Avenue noise measurement sites are provided as Figure 3.

Noise monitoring equipment consisted of Larson-Davis Laboratories Model LDL-820 sound level analyzer equipped with a B&K Type 4176 1/2" microphone. The equipment complies with the specifications of the American National Standards Institute (ANSI) for Type I (Precision) sound level meters. The meter was calibrated in the field prior to use with a B&K Type 4230 acoustic calibrator to ensure the accuracy of the measurements. The microphone was located on a tripod at 5 feet above the ground.

Noise measurements were conducted in terms of the equivalent energy sound level ( $L_{eq}$ ). Measured  $L_{eq}$  values were compared to  $L_{eq}$  values calculated (predicted) by the FHWA Model using as inputs the traffic volumes, truck mix and vehicle speed observed during the noise measurements. The results of the comparison are shown in Table VI.

From Table VI it may be determined that the traffic noise levels predicted by the FHWA Model were 1.9 dB higher than those measured for the conditions observed at the time of the noise measurements for N. Armstrong Avenue. This overprediction of the model is likely the result of vehicles traveling at slower speeds than the posted speed limit, in response to the controlled intersection at E. Clinton Avenue. No adjustment to the model was made, and therefore reported noise levels should be considered a worst-case assessment of project site noise exposure.

TABLE VI COMPARISON OF MEASURED AND PREDICTED (FHWA MODEL) NOISE LEVELS ARMSTRONG APARTMENTS, FRESNO	
	N. Armstrong Ave.
Measurement Start Time	4:00 p.m.
Observed # Autos/Hr.	480
Observed # Medium Trucks/Hr.	12
Observed # Heavy Trucks/Hr.	0
Observed Speed (MPH)	45
Distance, ft. (from center of roadway)	55
L <sub>eq</sub> , dBA (Measured)	61.2
L <sub>eq</sub> , dBA (Predicted)	63.1
<b>Difference between Predicted and Measured L<sub>eq</sub>, dBA</b>	<b>+1.9</b>

Note: FHWA "soft" site assumed for calculations.  
Source: WJV Acoustics, Inc.

Annual Average Daily Traffic (AADT) data for N. Armstrong Avenue, in the project vicinity was obtained from Fresno COG. Truck percentages and the day/night distribution of traffic were estimated by WJVA, based upon previous studies conducted in the project vicinity since project-specific data were not available from government sources. A speed limit of 45 mph was assumed for both roadways (as posted in the project vicinity). Table VII summarizes annual average traffic data used to model noise exposure within the project site.



**TABLE VII**  
**TRAFFIC NOISE MODELING ASSUMPTIONS**  
**ARMSTRONG APARTMENTS, FRESNO**

	N. ARMSTRONG AVE.	
	Existing	2046
Annual Avenue Daily Traffic (AADT)	3,482	3,453
Day/Night Split (%)	90/10	
Assumed Vehicle Speed (mph)	45	
% Medium Trucks (% AADT)	2	
% Heavy Trucks (% AADT)	1	

Sources: Fresno COG  
WJV Acoustics, Inc.

Using data from Table VII, the FHWA Model, annual average traffic noise exposure was calculated for the closest proposed residential setbacks to N. Armstrong Avenue. Table VIII provides the noise exposure levels for both existing and future (2046) roadway traffic conditions.

**TABLE VIII**  
**MODELED TRAFFIC NOISE LEVELS, dB, L<sub>dn</sub>**  
**ARMSTRONG APARTMENTS, FRESNO**

Roadway	Existing Conditions	2046 Conditions
N. Armstrong Avenue	60.0	60.0

Source: WJV Acoustics  
Fresno COG

Reference to Table VIII indicates that the traffic noise exposure at the closest proposed residential setbacks to N. Armstrong Avenue would be approximately 60 dB L<sub>dn</sub> for both existing conditions and future (2046) conditions, respectively.

Exterior noise standards are to be applied at outdoor activity areas of residential land uses. Outdoor activity areas for multi-family residential uses typically include common use outdoor areas (such as pool areas, BBQ and picnic areas, playground areas, etc.) as well as individual unit decks, patios, and balconies. The closest of these are represented by individual unit patios, setback approximately 65 feet from the centerline of N. Armstrong Avenue. All other applicable areas are located at a greater setback from the roadway. Therefore, all exterior spaces where the exterior noise level standard applies would have a noise exposure level of 60 dB L<sub>dn</sub> or less. Such levels are below the City’s applicable 65 dB L<sub>dn</sub> exterior noise level standard. Mitigation measures are not required for project exterior noise compliance.

### **Interior Noise Exposure:**

The City of Fresno interior noise level standard is 45 dB  $L_{dn}$ . The worst-case noise exposure within the proposed residential development would be approximately 60 dB  $L_{dn}$  (Existing and 2046 conditions). This means that the proposed residential construction must be capable of providing a minimum outdoor-to-indoor noise level reduction (NLR) of approximately 15 dB (60-45=20).

A specific analysis of interior noise levels was not performed. However, it may be assumed that residential construction methods complying with current building code requirements will reduce exterior noise levels by approximately 25 dB if windows and doors are closed. This will be sufficient for compliance with the City's 45 dB  $L_{dn}$  interior standard at all proposed units. Requiring that it be possible for windows and doors to remain closed for sound insulation means that air conditioning or mechanical ventilation will be required.

## **Construction Noise:**

Construction noise would occur at various locations within the project site through the buildout period. Existing sensitive receptors could be located as close as 75 feet from construction activities. Table IX provides typical construction-related noise levels at distances of 50, 100 feet, 200 feet, and 300 feet.

Construction noise is not considered to be a significant impact if construction is limited to daytime hours and construction equipment is adequately maintained and muffled. The City of Fresno limits hours of construction to occur only between the hours of 7:00 a.m. to 10:00 p.m., Monday through Saturday. Construction noise impacts could result in annoyance or sleep disruption for nearby residents if nighttime operations were to occur outside of the allowable construction hours, or if equipment is not properly muffled or maintained.

TABLE IX TYPICAL CONSTRUCTION EQUIPMENT MAXIMUM NOISE LEVELS, dBA				
Type of Equipment	50 Ft.	100 Ft.	200 Ft.	300 Ft.
Concrete Saw	90	84	78	74
Crane	81	75	69	65
Excavator	81	75	69	65
Front End Loader	79	73	67	63
Jackhammer	89	83	77	73
Paver	77	71	65	61
Pneumatic Tools	85	79	73	69
Dozer	82	76	70	66
Rollers	80	74	68	64
Trucks	86	80	72	70
Pumps	80	74	68	64
Scrapers	87	81	75	71
Portable Generators	80	74	68	64
Backhoe	86	80	74	70
Grader	86	80	74	70

Source: FHWA

*Noise Control for Buildings and Manufacturing Plants, Bolt, Beranek & Newman, 1987*

**Vibration:**

The dominant sources of man-made vibration are sonic booms, blasting, pile driving, pavement breaking, demolition, diesel locomotives, and rail-car coupling. Generalized vibration levels associated with typical residential construction activities at distances of 50 feet, 100 feet and 300 feet are summarized by Table X. These levels would not be expected to exceed any significant threshold levels for annoyance or damage, as provided above in Table IV and Table V.

TABLE X TYPICAL VIBRATION LEVELS DURING CONSTRUCTION			
Equipment	PPV (in/sec)		
	@ 50'	@ 100'	@ 300'
Bulldozer (Large)	0.042	0.019	0.006
Bulldozer (Small)	0.001	0.0006	0.0002
Loaded Truck	0.027	0.017	0.005
Jackhammer	0.012	0.008	0.002
Vibratory Roller	0.097	0.046	0.013
Caisson Drilling	0.042	0.019	0.006

Source: *Caltrans*

After full project build out, it is not expected that ongoing operational activities will result in any vibration impacts at nearby sensitive uses. Activities involved in trash bin collection could result in minor on-site vibrations as the bin is placed back onto the ground. Such vibrations would not be expected to be felt at off-site sensitive uses.

## CONCLUSIONS AND RECOMMENDATIONS

The proposed 64-unit multi-family residential development will comply with all City of Fresno exterior and interior noise level standards, provided the following mitigation measures are incorporated into final project design.

- Mechanical ventilation or air conditioning must be provided for all units so that windows and doors can remain closed for sound insulation purposes.

The conclusions and recommendations of this acoustical analysis are based upon the best information known to WJV Acoustics Inc. (WJVA) at the time the analysis was prepared concerning the proposed lot layout plan, project site elevation, traffic volumes and roadway configurations. Any significant changes in these factors will require a reevaluation of the findings of this report. Additionally, any significant future changes in motor vehicle technology, noise regulations or other factors beyond WJVA's control may result in long-term noise results different from those described by this analysis.

Respectfully submitted,



Walter J. Van Groningen  
President

WJV:wjv



**FIGURE 2: PROJECT SITE VICINITY AND NOISE MEASUREMENT LOCATION**





**FIGURE 3: N. ARMSTRONG AVENUE NOISE MEASUREMENT SITE**





## APPENDIX A

### ACOUSTICAL TERMINOLOGY

<b>AMBIENT NOISE LEVEL:</b>	The composite of noise from all sources near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.
<b>CNEL:</b>	Community Noise Equivalent Level. The average equivalent sound level during a 24-hour day, obtained after addition of approximately five decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and ten decibels to sound levels in the night before 7:00 a.m. and after 10:00 p.m.
<b>DECIBEL, dB:</b>	A unit for describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).
<b>DNL/L<sub>dn</sub>:</b>	Day/Night Average Sound Level. The average equivalent sound level during a 24-hour day, obtained after addition of ten decibels to sound levels in the night after 10:00 p.m. and before 7:00 a.m.
<b>L<sub>eq</sub>:</b>	Equivalent Sound Level. The sound level containing the same total energy as a time varying signal over a given sample period. L <sub>eq</sub> is typically computed over 1, 8 and 24-hour sample periods.
<b>NOTE:</b>	The CNEL and DNL represent daily levels of noise exposure averaged on an annual basis, while L <sub>eq</sub> represents the average noise exposure for a shorter time period, typically one hour.
<b>L<sub>max</sub>:</b>	The maximum noise level recorded during a noise event.
<b>L<sub>n</sub>:</b>	The sound level exceeded "n" percent of the time during a sample interval (L <sub>90</sub> , L <sub>50</sub> , L <sub>10</sub> , etc.). For example, L <sub>10</sub> equals the level exceeded 10 percent of the time.

## A-2

### ACOUSTICAL TERMINOLOGY

#### **NOISE EXPOSURE**

##### **CONTOURS:**

Lines drawn about a noise source indicating constant levels of noise exposure. CNEL and DNL contours are frequently utilized to describe community exposure to noise.

#### **NOISE LEVEL**

##### **REDUCTION (NLR):**

The noise reduction between indoor and outdoor environments or between two rooms that is the numerical difference, in decibels, of the average sound pressure levels in those areas or rooms. A measurement of “noise level reduction” combines the effect of the transmission loss performance of the structure plus the effect of acoustic absorption present in the receiving room.

##### **SEL or SENEL:**

Sound Exposure Level or Single Event Noise Exposure Level. The level of noise accumulated during a single noise event, such as an aircraft overflight, with reference to a duration of one second. More specifically, it is the time-integrated A-weighted squared sound pressure for a stated time interval or event, based on a reference pressure of 20 micropascals and a reference duration of one second.

##### **SOUND LEVEL:**

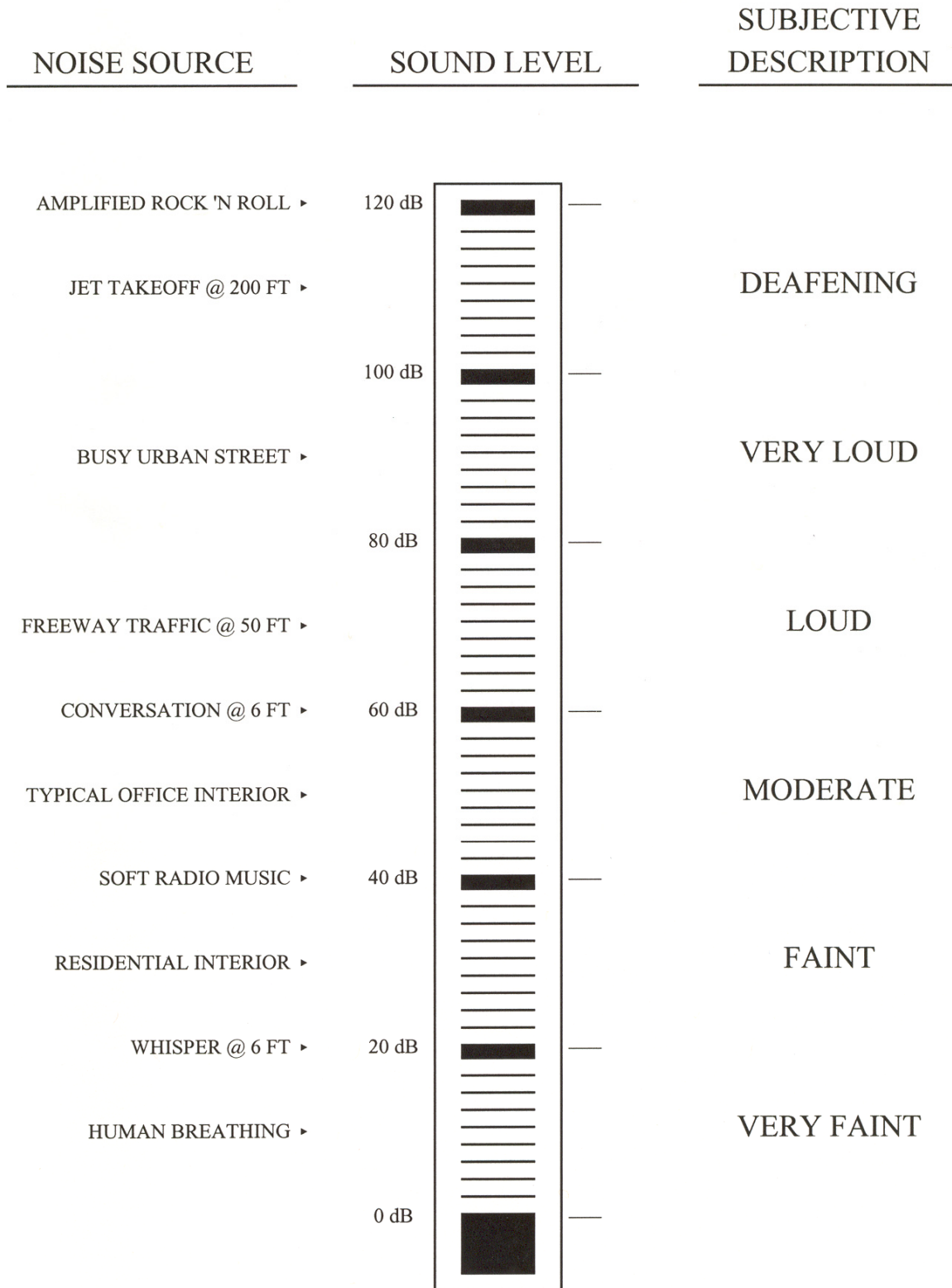
The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear and gives good correlation with subjective reactions to noise.

#### **SOUND TRANSMISSION**

##### **CLASS (STC):**

The single-number rating of sound transmission loss for a construction element (window, door, etc.) over a frequency range where speech intelligibility largely occurs.

APPENDIX B  
EXAMPLES OF SOUND LEVELS





## **6.4 Appendix D: Vehicle Miles Traveled Analysis**

Prepared by JLB Traffic Engineering, Inc., on November 21, 2022.

# Vehicle Miles Traveled Analysis

## Armstrong Apartments Vehicle Miles Traveled Analysis

Located on the Northeast Quadrant of Armstrong  
Avenue and Clinton Avenue

In the City of Fresno, California

*Prepared for:*

Precision Civil Engineering, Inc.  
1234 O Street  
Fresno, CA 93721

November 21, 2022

Project No. 004-180



*Traffic Engineering, Transportation Planning, & Parking Solutions*

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*Traffic Engineering, Transportation Planning, & Parking Solutions*

## Vehicle Miles Traveled Analysis

**For the Armstrong Apartments Project located on the Northeast Quadrant of  
Armstrong Avenue and Clinton Avenue**

In the City of Fresno, CA

November 21, 2022

This Vehicle Miles Traveled Analysis has been prepared under the direction of a licensed Traffic Engineer. The licensed Traffic Engineer attests to the technical information contained therein and has judged the qualifications of any technical specialists providing engineering data from which recommendations, conclusions and decisions are based.

Prepared by:

Jose Luis Benavides, P.E., T.E.

President



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**Appendix A: Fresno COG VMT Calculation Tool Output**

## Project Description

This report describes a Vehicle Miles Traveled (VMT) Analysis prepared by JLB Traffic Engineering, Inc. (JLB) for the Armstrong Apartments (Project) located on the northeast quadrant of Armstrong Avenue and Clinton Avenue in the City of Fresno. The project proposes to develop a 4.20 net acre site with 64 multi-family residential units. Based on information provided to JLB, the Project will undergo a General Plan Amendment through the City of Fresno to modify the land use designation from Single Family Residential to Multi-Family Residential.

## Project Trip Generation

Trip generation rates for the proposed Project were obtained from the 11th Edition of the Trip Generation Manual published by the Institute of Transportation Engineers (ITE). Table I presents the trip generation for the proposed Project with trip generation rates for Multi-Family Housing. At buildout, the proposed Project is estimated to generate approximately of 431 daily trips, 26 AM peak hour trips and 33 PM peak hour trips.

**Table I: Project Trip Generation**

Land Use (ITE Code)	Size	Unit	Daily		AM (7-9) Peak Hour						PM (4-6) Peak Hour					
			Rate	Total	Trip Rate	In	Out	In	Out	Total	Trip Rate	In	Out	In	Out	Total
						%						%				
Multi-Family Housing (Low-Rise) (220)	64	d.u.	6.74	431	0.40	24	76	6	20	26	0.51	63	37	21	12	33
<b>Total Project Trips</b>				<b>431</b>				<b>6</b>	<b>20</b>	<b>26</b>				<b>21</b>	<b>12</b>	<b>33</b>

Note: d.u. = Dwelling Units

## VMT Analysis

### Regulatory Setting

Senate Bill (SB) 743 requires that relevant California Environmental Quality Act (CEQA) analysis of transportation impacts be conducted using a metric known as VMT instead of level of service (LOS). VMT measures how much actual auto travel (additional miles driven) a proposed project would create on California roads. If the project adds excessive car travel onto our roads, the project may cause a significant transportation impact.

The State CEQA Guidelines were amended to implement SB 743, by adding Section 15064.3. Among its provisions, Section 15064.3 confirms that, except with respect to transportation projects, a project's effect on automobile delay shall not constitute a significant environmental impact. Therefore, LOS measures of impacts on traffic facilities are no longer a relevant CEQA criteria for transportation impacts.



CEQA Guidelines Section 15064.3(b)(4) states that “[a] lead agency has discretion to choose the most appropriate methodology to evaluate a project’s vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project’s vehicle miles traveled, and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revision to model outputs should be documented and explained in the environmental document prepared for the project. The standard of adequacy in Section 15151 shall apply to the analysis described in this section.”

On June 25, 2020, the City of Fresno adopted guidelines or thresholds for VMT pursuant to Senate Bill 743 to be effective July 1, 2020. The thresholds described therein are referred to herein as the City of Fresno VMT Thresholds. The City of Fresno VMT Thresholds document was prepared and adopted consistent with the requirements of CEQA Guidelines Sections 15064.3 and 15064.7. The December 2018 Technical Advisory on Evaluating Transportation Impacts in CEQA (TA) published by the Governor's Office of Planning and Research (OPR), was utilized as a reference and guidance document in the preparation of the Fresno VMT Thresholds.

The City of Fresno VMT Thresholds adopted a screening standard and criteria that can be used to screen out qualified development projects that meet the adopted criteria from needing to prepare a detailed VMT Analysis. These criteria may be size, location, proximity to transit, of trip making potential. In general development projects that are consistent with the City's General Plan and Zoning and that meet one or more of the following criteria can be screened out from a quantitative VMT analysis.

1. Project Located in a Transit Priority Area/High Quality Transit Corridor (within 0.5 miles of a transit stop).
2. Project is Local-serving Retail of less than 50,000 square feet.
3. Project is a Low Trip Generator (Less than 500 average daily trips)
4. Project has a High Level of Affordable Housing Units
5. Project is an institutional/Government and Public Service Uses
6. Project is located in a Low VMT Zone

This screening tool is consistent with the OPR December 2018 Guidance referenced above. The screening tool includes an analysis of those portions of the City that satisfy the standard of reducing VMT by 13% from existing per capita and per employee VMT averages within the relevant region. The relevant region adopted by the City of Fresno VMT Thresholds is Fresno County.

However, the City of Fresno VMT Thresholds Section 3.1 regarding Development Projects states that "If a project constitutes a General Plan Amendment (GPA) or a Zone Change (ZC), none of the screening criteria may apply". Since this particular Project includes a General Plan Amendment, it does not meet the screening criteria. As such, a quantitative VMT analysis is required, and such was prepared utilizing the Fresno COG VMT Calculation Tool.

For projects that are not screened out, a quantitative analysis of VMT impacts must be prepared and compared against the adopted VMT thresholds of significance. The Fresno VMT Thresholds document includes thresholds of significance for development projects, transportation projects, and land use plans.

These thresholds of significance were developed using the County of Fresno as the applicable region, and the required reduction of VMT (as adopted in the Fresno VMT Thresholds) corresponds to Fresno County's contribution to the statewide GHG emission reduction target. In order to reach the statewide GHG reduction target of 15%, Fresno County must reduce its GHG emissions by 13%. The method of reducing GHG by 13% is to reduce VMT by 13% as well.

## VMT Results

VMT is simply the product of a number of trips and those trips' lengths. The first step in a VMT analysis is to establish the baseline average VMT, which requires the definition of a region. The *CEQA Guidelines for Vehicle Miles Traveled Thresholds* for the City of Fresno provide that the Fresno County average VMT per Capita (appropriate for residential land uses) and Employee (appropriate for office/commercial non-retail land uses) are 16.1 and 25.6, respectively. The City's threshold targets a 13% reduction in VMT for residential and office/commercial non-retail land uses and a net zero (0) increase in regional VMT for commercial retail land uses.

The City's adopted thresholds for development projects correspond to the regional averages modeled by Fresno COG's ABM. For residential and non-residential (except retail) development projects, the adopted threshold of significance is a 13% reduction, which means that projects that generate VMT in excess of a 13% reduction from the existing regional VMT per capita or per employee would have a significant environmental impact. Projects that reduce VMT by 13% or more are less than significant. For retail projects, the adopted threshold is any net increase in Regional VMT compared to the existing Regional VMT. Quantitative assessments of the VMT generated by a development project are determined using the COG ABM, which is a tour-based model.

For mixed use projects, the City of Fresno VMT Thresholds state that the VMT can be estimated based on each component of the project, independently, after taking credit for internal trip capture. It also confirms that mixed use projects must use the Fresno COG's Activity Based Model. The VMT per capita (for the residential component) and the total VMT (for the retail component) is then compared against the relevant threshold.

The target VMT for residential and commercial non-retail land uses are  $(16.1 \times (1-.13) = 14.0)$  14.0 VMT per capita and  $(25.6 \times (1-.13) = 22.3)$  22.3 VMT per employee, respectively. In addition, for retail land uses the City's threshold targets a net zero (0) increase in regional VMT for retail land uses (City of Fresno, 2020).

The Project's dwelling units and the Traffic Area Zone (TAZ) were entered into the Fresno COG VMT Calculation Tool to conduct a Project-specific VMT analysis. The Assessor's Parcel Number (APN) was also utilized to output the VMT per capita of this Project and the output was determined to be the same as the TAZ output. Based on the Fresno COG VMT Calculation Tool results, the Project is expected to yield an average of 9.5 VMT per capita which is within the City of Fresno's VMT threshold of 14.0 VMT per capita for residential land uses. Therefore, there are no significant impacts to VMT associated with this Project. Appendix A presents the Project VMT output from the Fresno COG VMT Calculation Tool.

## Conclusion

As can be seen in Table II below, the Fresno COG VMT Calculation Tool output an average of 9.5 VMT per capita. This VMT is within the City of Fresno's Threshold of 14.0 VMT per capita for residential land uses. In conclusion, there are no significant impacts to VMT associated with this Project pursuant to the City of Fresno VMT Guidelines.

**Table II: VMT Results**

<i>Project Components</i>	<i>Fresno COG VMT Calculation Tool Results<sup>1</sup></i>	<i>City of Fresno Residential Threshold<sup>2</sup></i>	<i>Significant VMT Impact?</i>
Multi-Family Residential	9.5	14.0	No

Note: 1 = VMT Results per Fresno COG VMT Calculation Tool (Version 1.38)

2 = VMT Threshold per *CEQA Guidelines for Vehicle Miles Traveled Thresholds* for the City of Fresno

All VMT Outputs are measures as VMT per Employee

- Based on the Fresno COG VMT Calculation Tool, the Project's VMT is projected to be 9.5 VMT per capita.
- The City of Fresno VMT Threshold for residential land uses is 14.0 VMT per capita.
- As a result, there are no impacts to VMT associated with this Project.

## Study Participants

### JLB Traffic Engineering, Inc. Personnel

Jose Luis Benavides, PE, TE	Project Manager
Matthew Arndt, EIT	Engineer I/II
Adrian Benavides	Engineering Aide

### Persons Consulted:

Bonique Emerson	Precision Engineering, Inc.
-----------------	-----------------------------

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# Appendix A: Fresno COG VMT Calculation Tool Output



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App / A



# Fresno COG Vehicle Miles Traveled Analysis Tool Summary Report

Tool Version: Version 1.38 Report Date: 11/17/2022

## Project Information

Name:	Armstrong Apartments
Jurisdiction	Fresno
TAZ ID	1024

## Project Land Use

Residential	Single-family:	0	DU	Multi-family:	64	DU
	Total:	64	DU	Percent Affordable:	0	%
Non-Residential	Office:	0	EMP	Others:		TSF

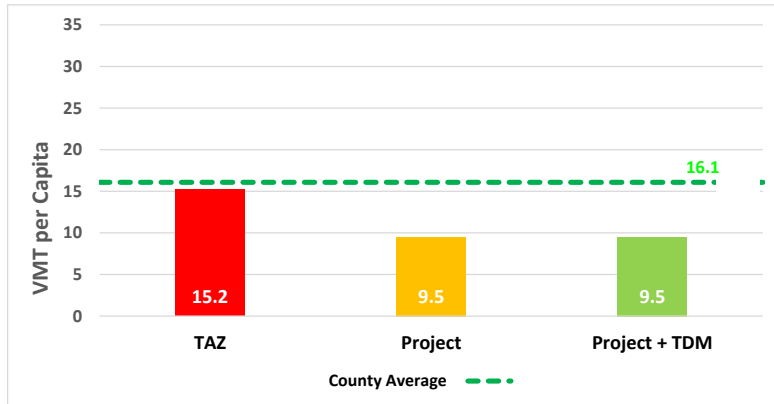
## Project TDM measures (VMT reduction strategies)

TDM Strategy	Included in the project	TDM Quantification	% VMT/Capita Reduction	% VMT/Employment Reduction	
Implement Project Specific Vanpool Program	No		N/A		
Implement Project Specific Carpool Program	No			N/A	

## Project VMT Results

### Residential

Project's VMT/Capita (9.5) is less than County VMT/Capita (14.0 using 13% as threshold)



Project VMT per Capita:	9.5
County VMT / Capita:	16.1
Significant Impact:	No
Project VMT per Capita with TDM Measures:	9.5
Significant Impact with TDM measures:	No