DRAFT INITIAL STUDY/ MITIGATED NEGATIVE DECLARATION

FOR THE

PARSONS AVENUE APARTMENTS

1808 Parsons Avenue, Merced, CA

March 2, 2022

Prepared for:
City of Merced
Planning and Permitting
678 W. 18th Street
Merced, CA 95340

Prepared by:
BaseCamp Environmental, Inc.
802 W. Lodi Avenue
Lodi, CA 95240

BaseCamp Environmental, Inc.

ATTACHMENT G

INITIAL STUDY/
MITIGATED NEGATIVE DECLARATION

FOR THE

PARSONS AVENUE APARTMENTS

1808 Parsons Avenue, Merced, CA

March 2, 2022

Prepared for:

CITY OF MERCED
Planning and Permitting
678 W. 18th Street
Merced, CA 95340
209-385-6858

Prepared by:

BASECAMP ENVIRONMENTAL, INC.
802 W. Lodi Avenue
Lodi, CA 95240
209-224-8213
www.basecampenv.com

Public Hearing Notice

NOTICE OF PUBLIC HEARING
FOR GENERAL PLAN AMENDMENT #22-02, ZONE CHANGE #430
AND NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION

A public hearing will be held by the Merced City Planning Commission on Wednesday, March 23, 2022, at 7:00 p.m., or as soon thereafter as may be heard, concerning General Plan Amendment #22-02 and Zone Change #430, initiated by Visionary Homes on behalf of Evan R. Rahilly and Marlea Massey, Trustees, property owners, for approximately 4.59 acres of land generally located on the east side of Parsons Avenue, approximately 300 feet south of Yosemite Parkway. The General Plan Amendment would change the General Plan land use designation from Thoroughfare Commercial (CT) to High-Medium Density (HMD) Residential. The Zone Change would change the Zoning designation from Throughfare Commercial (C-T) to Medium Density Residential (R-3-1.5). These changes would allow the construction of a 108-unit apartment complex, including a community building for the tenants, and associated parking. The property is more particularly described as Lot 15 as shown on the map entitled "Map of Merced Colony" recorded in Book 4, Page 24 of Merced County Records; also known as Assessor's Parcel Number (APN) 061-390-027.

An environmental review checklist has been filed for this project, and a draft mitigated negative declaration has been prepared under the California Environmental Quality Act. A copy of this staff evaluation (Initial Study #22-14) is available for public inspection at the City of Merced Planning Department or City Clerk's office during regular business hours, at 678 West 18th Street, Merced, CA, or on the City's website, or by request by emailing planningweb@cityofmerced.org. A copy of this document can also be purchased at the Planning Department for the price of reproduction.

All persons in favor of, opposed to, or in any manner interested in this request for a General Plan Amendment and Zone Change are invited to attend the meeting or comment via email or voicemail (see instructions below). The public review period for the environmental determination begins on March 3, 2022, and ends on March 23, 2022. Please feel free to call the Planning Department at (209) 385-6858 for additional information. If you challenge the decision of the Planning Commission in court, you may be limited to raising only those issues you or someone else raised at the public hearing described in this notice, or in written correspondence delivered to the City of Merced at, or prior to, the public hearing.

After the Planning Commission makes its decision on this matter, the matter will also be considered at a public hearing before the City Council. A separate notice of that public hearing will also be given.

For at-risk individuals or those not wanting to attend an in-person meeting during the COVID-19 pandemic, please submit your public comment to the Planning Commission electronically no later than 1:00 PM on the day of the meeting. Comments received before the deadline will become part of the record. Material may be emailed

to planningweb@cityofmerced.org and should be limited to 300 words or less. Please specify which portion of the agenda you are commenting on, i.e. item # or Oral Communications. Your comments will be provided to the Planning Commission at the appropriate time. Any correspondence received before, during, or after the meeting will be distributed to the Planning Commission and retained for the official record.

You may provide telephonic comments via voicemail by calling (209) 388-7390 by no later than 1:00 PM on the day of the meeting to be added to the public comment. Voicemails will be limited to a length of three (3) minutes. Please specify which portion of the agenda you are commenting on, i.e. item # or Oral Communications. Your comments will be provided to the Planning Commission at the appropriate time.

To view video (if available) or listen to the Planning Commission meeting live, go to the City's website www.cityofmerced.org, Facebook Live, or Comcast Public Access Channel 96.

February 28, 2022

/s/Kim Espinosa
KIM ESPINOSA,
Planning Manager

N:\SHARED\PLANNING\PHN\2022\GPA-SUP\GPA 22-02 & ZC 430\PC PHN- GPA #22-02_ZC #430.docx

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ACRONYMS AND ABBREVIATIONS USED IN THIS DOCUMENT

AB	Assembly Bill
APN	Assessor's Parcel Number
ARB	California Air Resources Board
BMP	Best Management Practice
CalEEMod	California Emissions Estimator Model
CalEnviroScreen	California Communities Environmental Health Screening Tool
CALGreen	California Green Building Standards Code
CAP	Climate Action Plan
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CO	carbon monoxide
CO_2e	carbon dioxide equivalent
dB	decibel
EIR	Environmental Impact Report
EPA	U. S. Environmental Protection Agency
FEMA	Federal Emergency Management Agency
GHG	greenhouse gas
gpm	gallons per minute
HCP	Habitat Conservation Plan
IS/MND	Initial Study/Mitigated Negative Declaration
kWh	kilowatt hours
L_{dn}	Day-Night Average Sound Level
L_{eq}	Equivalent Sound Level
LOS	Level of Service
MCAG	Merced County Association of Governments
mgd	million gallons per day
MS4	Municipal Separate Storm Sewer System
MUHSD	Merced Union High School District
NO_x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
PG&E	Pacific Gas and Electric Company
PM_{10}	particulate matter 10 micrometers or less in diameter
$PM_{2.5}$	particulate matter 2.5 micrometers or less in diameter
ROG	reactive organic gases

RTP	Regional Transportation Plan
SB	Senate Bill
SCS	Sustainable Communities Strategy
SJVAPCD	San Joaquin Valley Air Pollution Control District
SR	State Route
SWMP	Storm Water Management Program
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
USFWS	U.S. Fish and Wildlife Service
VMT	vehicle miles traveled

NEGATIVE DECLARATION

A. General Project Information

Project Title:	Parsons Avenue Apartments
Date Received:	February 25, 2022
Lead Agency Name and Address:	City of Merced 678 W. 18th Street Merced, CA 95340
Contact Person and Phone Number:	Julie Nelson, Senior Planner 209-385-6858
Project Location:	1808 Parsons Avenue, Merced, California
Project Sponsor Name and Address:	Visionary Home Builders of California, Inc. 315 N. San Joaquin Street Stockton, CA 95202
General Plan Designation:	Thoroughfare Commercial (CT)
Zoning:	C-T – Thoroughfare Commercial
Project Description:	The project site is an approximately 4.7-acre parcel adjacent to and east of Parsons Avenue in the City of Merced. The project proposes the development of an apartment complex consisting of five three-story residential buildings containing a total of 108 affordable housing units and a community center building for apartment residents. City approval of a General Plan Amendment to High-Medium Density (HMD) Residential and rezoning to the R-3-1.5 (Medium Density Residential) zoning district would be required, along with a Density Bonus application, possible Site Plan Review and a development permit for construction within a Special Flood Hazard Area.
Surrounding Land Uses and Setting:	The project site is vacant land largely surrounded by existing urban and active open space. The site is in the southeastern area of the City Merced, about 300 feet south of State Route (SR) 140 (Yosemite Parkway). The project site is adjacent to Joe Herb Park, a City park which borders the project site to

	the east and south. Commercial development along SR 140 and vacant land border the project site to the north, and a supermarket-anchored shopping center is west of the project site across Parsons Avenue. Existing single-family residential areas are located to the southwest of the site across Parsons Avenue.
Other Public Agencies Whose Approval is Required:	None
Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, has consultation begun?	No Native American Tribes have requested consultation.

B. 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" prior to mitigation, as indicated by the checklist on the following pages.

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

C. Lead Agency Determination

On the basis of this initial evaluation:

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

✓

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

I find that the proposed project MAY have a "potentially significant 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 ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier 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.

CITY OF MERCED

for

Kim Espinosa, Planning Manager
Environmental Coordinator

3/2/2022
Date

1.0 INTRODUCTION

1.1 Project Brief

This document is an Initial Study/Mitigated Negative Declaration (IS/MND) for the Parsons Avenue Apartments Project (project) in Merced, California. The 4.7-acre project site is located at 1808 Parsons Avenue (Figures 1-1 to 1-5). This IS/MND has been prepared in compliance with the requirements of the California Environmental Quality Act (CEQA). For the purposes of CEQA, the City of Merced (City) is the Lead Agency for the project.

The project applicant, Visionary Home Builders (VHB) proposes to construct a 108-unit residential apartment complex consisting entirely of affordable units. The complex would consist of five three-story buildings: four would include 21 apartment units, and one would have 24 apartment units. All units would be affordable for low-income households. The complex would also include a one-story community center building for apartment residents with space for staff and leasing offices, a childcare facility, and other activities. A total of 183 parking spaces would be provided for residents and visitors. Access to the site would be provided by a main entrance off Parsons Avenue, with secondary access for emergency vehicles. The project would connect to existing adjacent City and private utilities.

The proposed project would require approval of a General Plan Amendment to amend the General Plan Land Use designation from Thoroughfare Commercial (CT) to High-Medium Density (HMD) Residential, and a Zone Change to change the zoning from Thoroughfare Commercial (C-T) to R-3-1.5. This approval requires a recommendation by the Planning Commission with final action by the City Council.

1.2 Purpose of Initial Study

CEQA requires that public agencies consider and document the potential environmental effects of the agency's actions that meet CEQA's definition of a "project." Briefly summarized, a "project" is an action that has the potential to result in direct or indirect physical changes in the environment. A project includes the agency's direct activities as well as activities that involve public agency approvals or funding. Guidelines for an agency's implementation of CEQA are found in the CEQA Guidelines (Title 14, Chapter 3 of the California Code of Regulations).

Provided that a project is not exempt from CEQA, the first step in the agency's consideration of its potential environmental effects is the preparation of an Initial Study. The Initial Study evaluates whether the project would involve "significant" environmental effects as defined by CEQA and identifies feasible mitigation measures that would avoid significant effects or reduce them to a level that would be less than significant. If the Initial Study does not identify significant effects, or if it identifies mitigation measures that would reduce all the significant effects of the project to a less-than-significant level, then the

agency prepares a Negative Declaration or Mitigated Negative Declaration. If the project would involve significant effects that cannot be readily mitigated, then the agency must prepare an Environmental Impact Report (EIR). The agency may also decide to proceed directly with the preparation of an EIR without preparation of an Initial Study.

The proposed project is a "project" as defined by CEQA and is not exempt from CEQA consideration. The City has determined that the project involves the potential for significant environmental effects and requires preparation of this Initial Study. The Initial Study describes the proposed project and its environmental setting, it discusses the potentially significant environmental effects of the project, and it identifies feasible mitigation measures that would avoid the potentially significant environmental effects of the project or reduce them to a level that would be less than significant. The Initial Study considers the project's potential for significant environmental effects in the following subject areas:

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

The Initial Study concluded that the project would have potentially significant environmental effects, but that recommended mitigation measures would reduce all these effects to a level that would be less than significant. As of the distribution of the IS/MND for public review, the applicant has accepted all the recommended mitigation measures. As a result, the City has prepared a Mitigated Negative Declaration and notified the public of the City's intent to adopt the Initial Study/Mitigated Negative Declaration. A copy of the Public Hearing Notice regarding the time available for review and comment is inside the cover of this document.

1.3 Project Background

The project site consists of vacant land in an area of southeastern Merced adjacent to and east of Parsons Avenue south of its intersection with State Route (SR) 140. The site is adjacent to and south of a commercial area along SR 140. The project vicinity contains a mix of commercial and residential land, along with Joe Herb Park, a City park that borders the project site on the south and east.

The proposed project is intended to provide multifamily rental units for lower-income households in the City in accordance with the objectives of the Merced General Plan

Housing Element, adopted on July 16, 2016. The Housing Element is intended to provide citizens and public officials with an understanding of the housing needs in the community and to set forth an integrated set of policies and programs aimed at the attainment of defined goals. As of the adoption of the Housing Element, there were 3,464 households with an income that is less than or equal to 30 percent of the area's median income. Of that number, 82.9 percent experience housing problems, which are defined as a cost burden greater than 30 percent of income and/or overcrowding and/or without complete kitchen or plumbing facilities. Approximately 89.3 percent of these households report a housing burden of more than 30% of their income and 80.3 percent have a housing burden greater than 50% of their income (City of Merced 2016). Additionally, rents in Merced have steadily increased. The Housing Element indicated that approximately 56 percent of renters were estimated to be paying 30 percent or more of their income for rent, with approximately 43 percent paying 35 percent or more. (City of Merced 2016).

The Merced General Plan, adopted in 2012, has designated the project site for Thoroughfare Commercial use. The Thoroughfare Commercial designation accommodates auto-oriented commerce and the needs of people traveling on highways. Large recreational facilities and some "heavy commercial" uses are also common. Typical uses include motels, gas stations, truck stops, restaurants, automobile sales, auto repair shops, bowling alleys, driving ranges, skating rinks, souvenir shops, car washes, and plant nurseries (City of Merced 2012). The zoning for the project site is C-T, Thoroughfare Commercial, which is consistent with the General Plan designation.

The site has remained vacant of the planned thoroughfare commercial uses since its annexation in mid-1950's. However, there was a single-family home on the site until it was demolished in 2010. The site provides an excellent location for affordable multifamily residential development. The project as proposed would not be consistent with the existing General Plan designation or zoning. The project, however, includes a request for City approval of a General Plan Amendment and Zone Change that would be consistent with the proposed project.

1.4 Environmental Evaluation Checklist Terminology

The project's potential environmental effects are evaluated in the Environmental Evaluation Checklist shown in Chapter 3.0. The checklist includes a list of environmental considerations against which the project is evaluated. For each question, the City determines whether the project would involve: 1) a Potentially Significant Impact, 2) a Less Than Significant Impact with Mitigation Incorporated, 3) a Less Than Significant Impact, or 4) No Impact.

> A Potentially Significant Impact occurs when there is substantial evidence that the project could involve a substantial adverse change to the physical environment; i.e., that the environmental effect may be significant, and mitigation measures have not been defined that would reduce the impact to a less than significant level. If there are one or more Potentially Significant Impact identified in the Initial Study, an EIR is required.

An environmental effect that is Less Than Significant with Mitigation Incorporated is a Potentially Significant Impact that can be avoided or reduced to a level that is less than significant with the application of mitigation measures.

A Less Than Significant Impact occurs when the project would involve effects on an area of environmental concern, but the project would not involve a substantial adverse change to the physical environment and no mitigation measures are required.

A determination of No Impact is self-explanatory.

Some existing regulatory requirements, established by the City and other agencies with jurisdiction, that are routinely implemented in conjunction with new development function as measures that mitigate environmental impacts. These requirements are described in this IS/MND as a part of the existing regulatory setting, along with how these requirements would tend to reduce or avoid the project's environmental effects.

Where existing regulatory requirements are not adequate to reduce the project's environmental impacts to a level that would be less than significant, this IS/MND describes additional non-regulatory mitigation measures that are needed. These mitigation measures are described in the appropriate technical section of Chapter 3.0 and are summarized in Table 1-1. As of the publication of the Notice of Intent for this project, these measures have been accepted by the project applicant. In all cases, these mitigation measures would avoid potentially significant impacts of the project or would reduce them to a level that would be less than significant.

1.5 Summary of Environmental Effects and Mitigation Measures

The pages following the figures contain Table 1-1, Summary of Impacts and Mitigation Measures. The table summarizes the results of the Environmental Checklist Form and associated narrative discussion of the project's potential environmental effects in Chapter 3.0. The potential environmental impacts of the proposed project are summarized in the left-most column of this table. The projected level of significance of each impact without mitigation is indicated in the second column. Mitigation measures proposed to avoid or minimize significant environmental effects are shown in the third column, and the significance of the impact after mitigation measures are applied is shown in the fourth column.

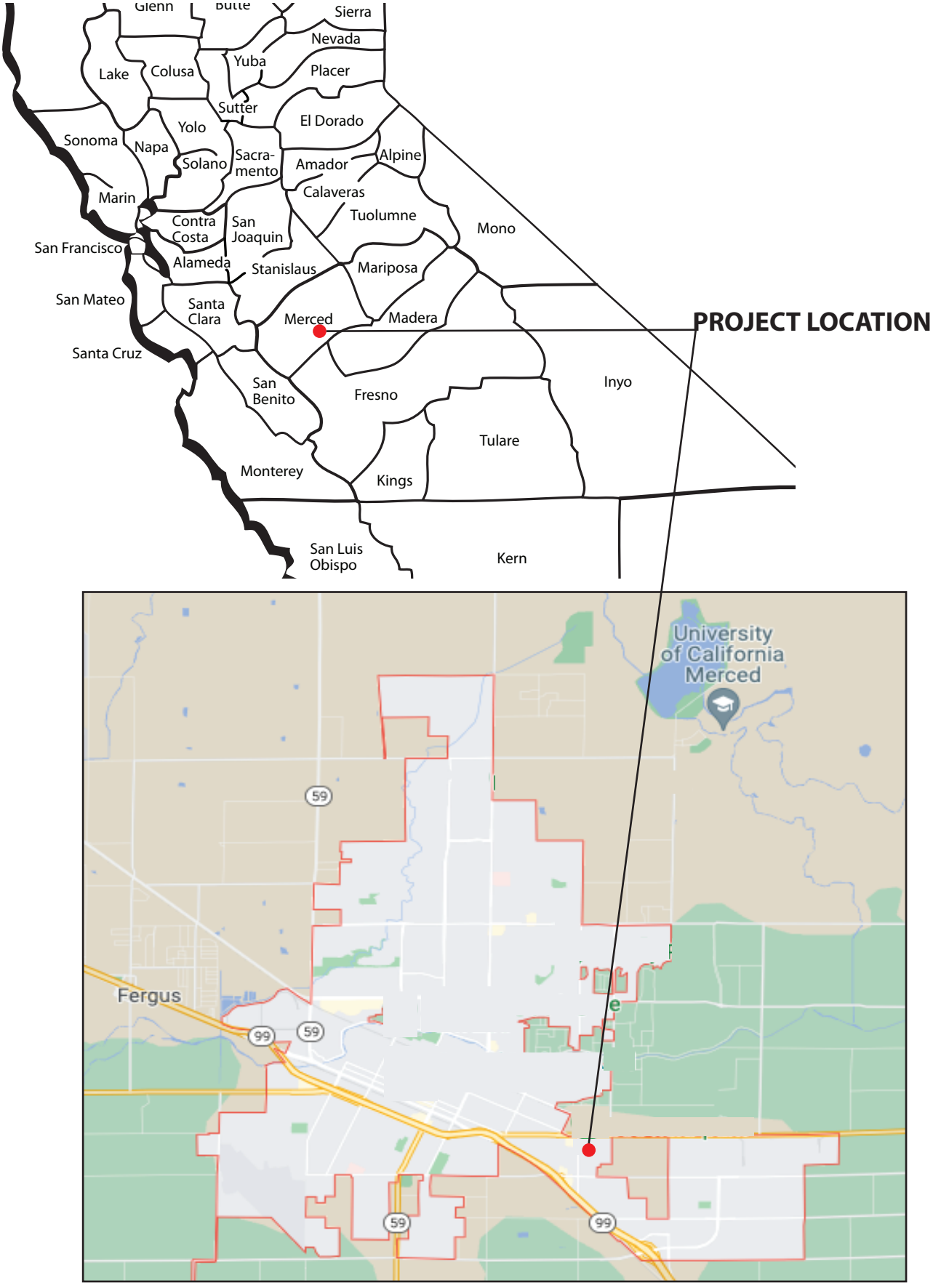


Figure 1-1
REGIONAL LOCATION MAP

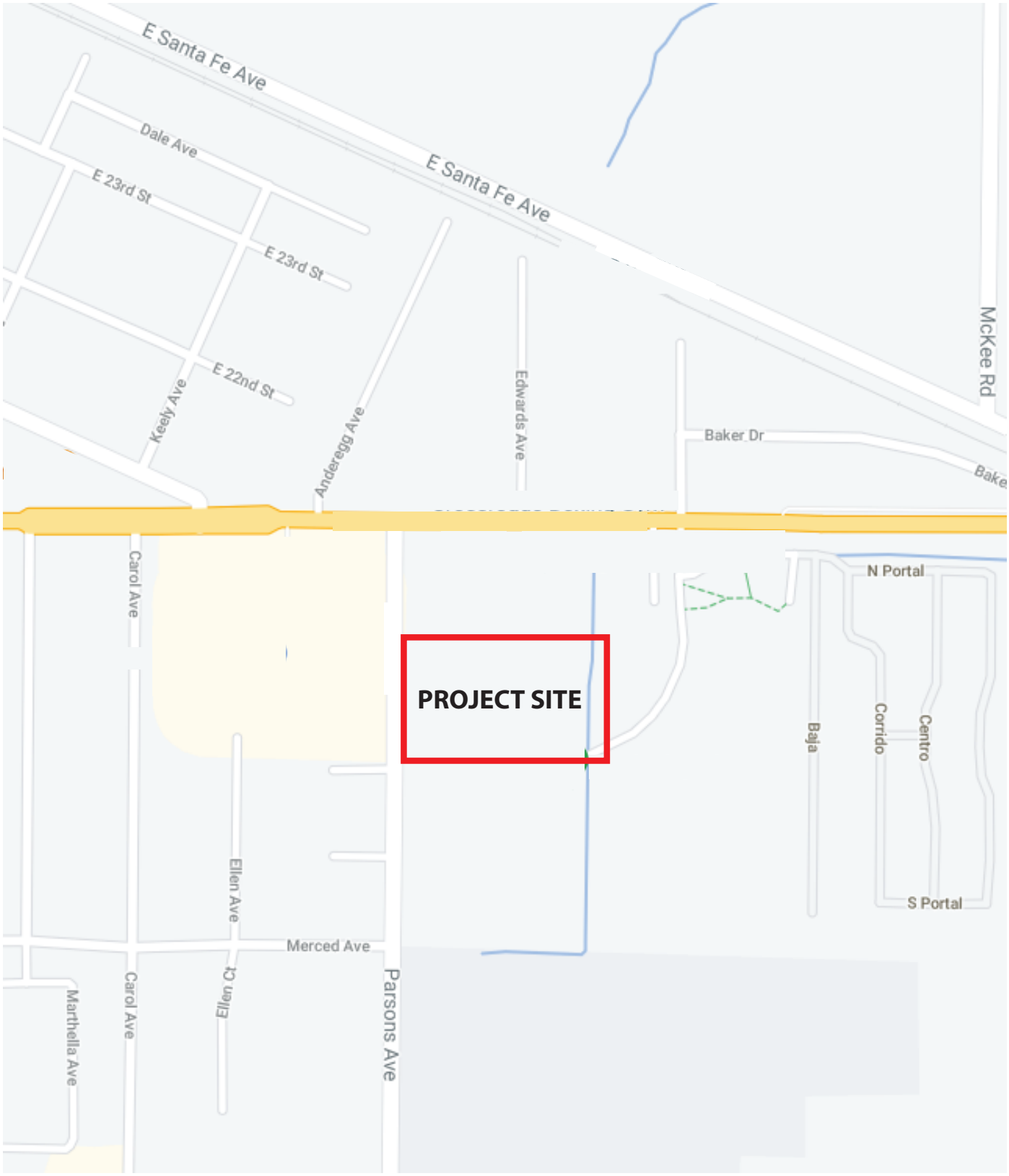
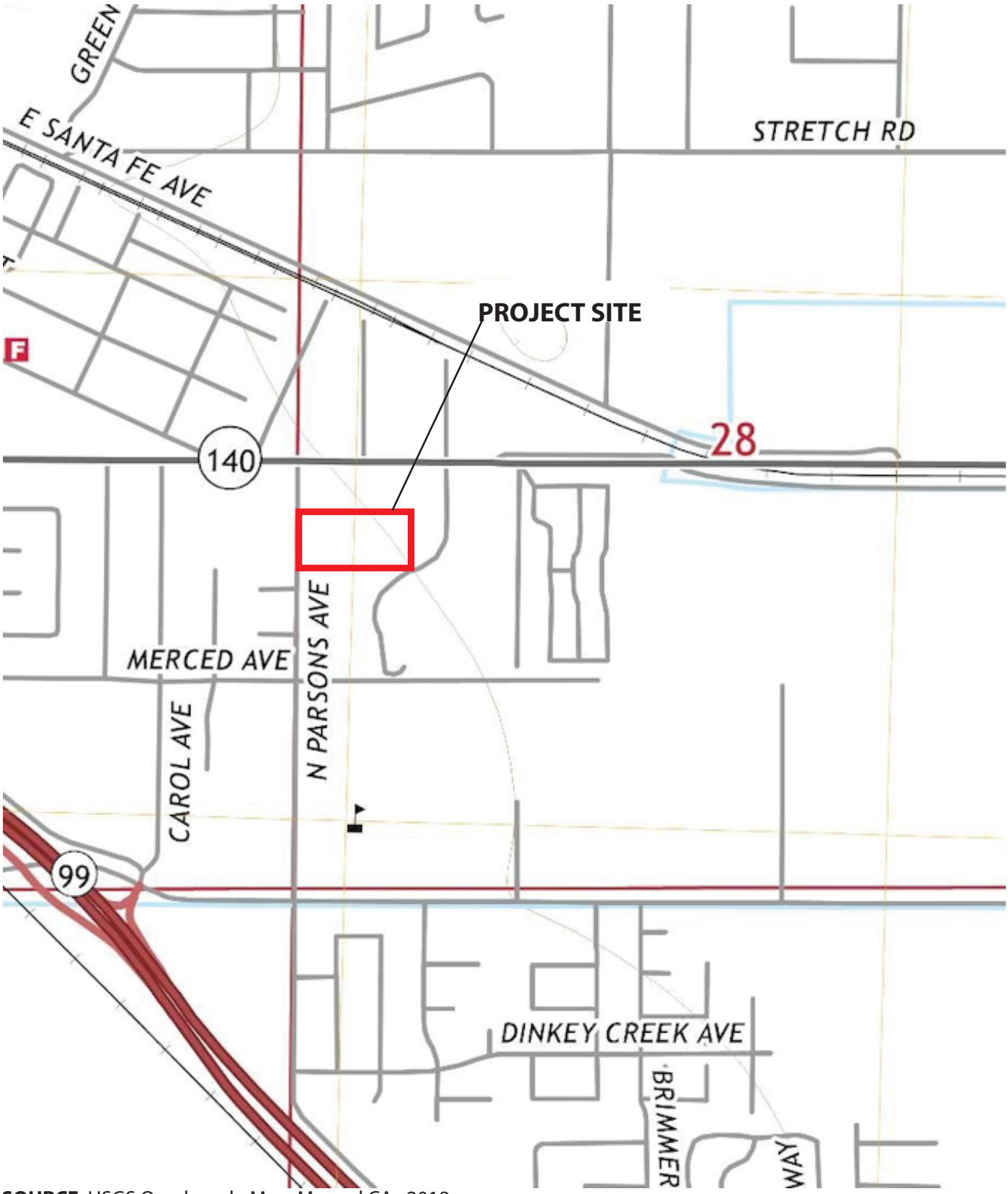


Figure 1-2
STREET MAP



SOURCE: USGS Quadrangle Map, Merced CA , 2018.
Township T7S, R13E, S29

SOURCE: Google Earth

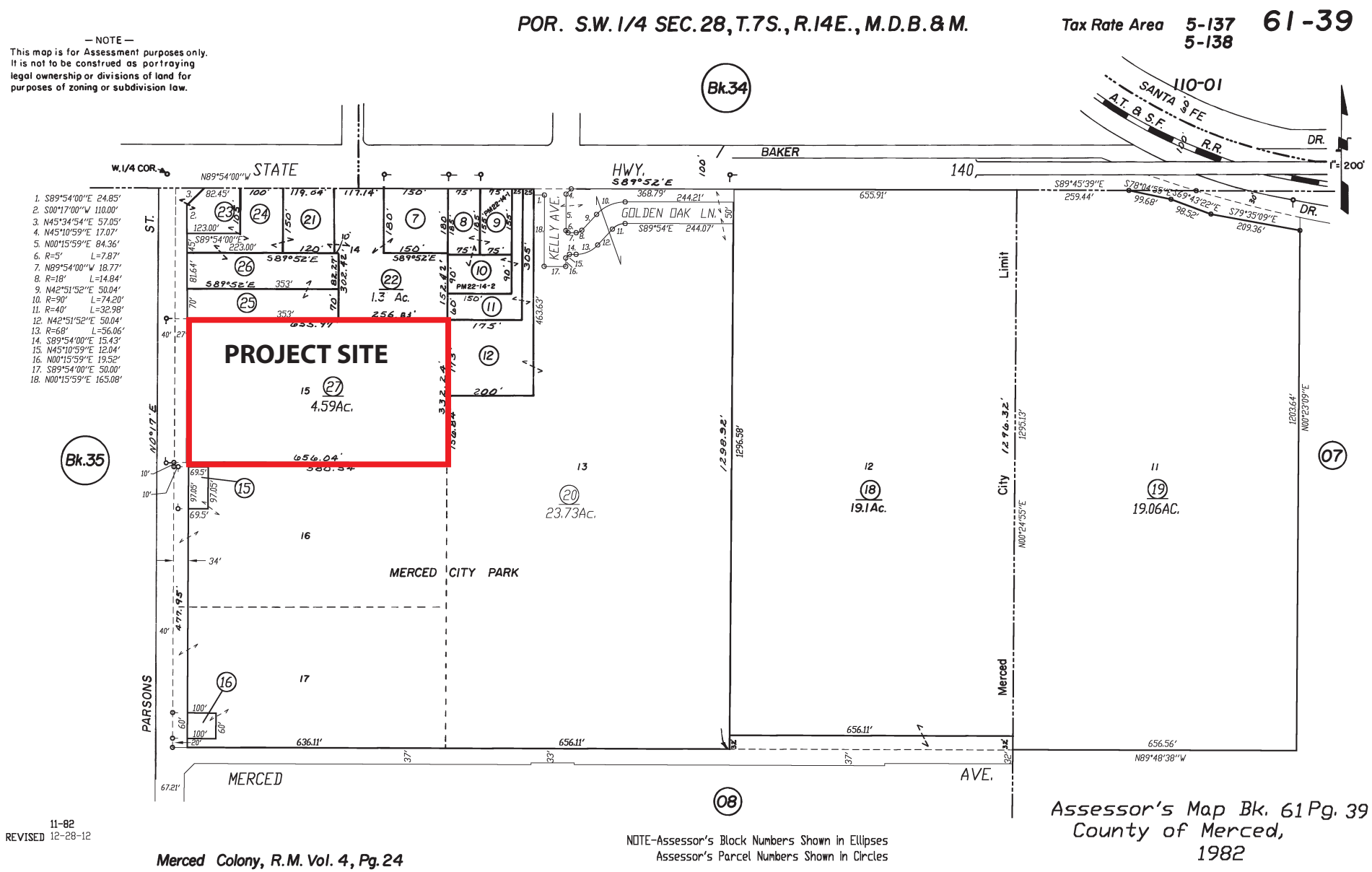


Figure 1-5
ASSESSOR PARCEL MAP

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
3.1 AESTHETICS			
a) Scenic Vistas	LS	None required	-
b) Scenic Resources and Highways	NI	None required	-
c) Visual Character and Quality	LS	None required	-
d) Light and Glare	LS	None required	-
3.2 AGRICULTURE AND FORESTRY RESOURCES			
a) Agricultural Land Conversion	NI	None required	-
b) Agricultural Zoning and Williamson Act	NI	None required	-
c, d) Forest Land Conversion and Zoning	NI	None required	-
e) Indirect Conversion of Farmland of Forest Land	NI	None required	-
3.3 AIR QUALITY			
a) Air Quality Plan Consistency	LS	None required	-
b) Cumulative Emissions	LS	None required	-
c) Exposure of Sensitive Receptors to Pollutants	PS	AIR-1 If substantial evidence indicating that the project may involve a significant health risk effect due to project emissions is provided to the City, the applicant shall retain a qualified air quality professional to prepare a Health Risk Assessment of the project. If the HRA results indicate that the project would involve a significant health risk, the HRA shall recommend measures that would reduce modeled health risks to a less than significant level. Such measures may involve use of low-emission construction vehicles and other construction equipment as recommended by the air quality professional. The project applicant shall	

LEGEND: NI = No Impact; LS = Less Than Significant; PS = Potentially Significant

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
		incorporate these recommendations in the construction plans for the project.	
d) Odors and Other Emissions	NI	None required	
3.4 BIOLOGICAL RESOURCES			
a) Special-Status Species	LS	None required	-
b) Riparian and Other Sensitive Habitats	NI	None required	-
c) State and Federal Jurisdictional Wetlands	LS	None required	-
d) Fish and Wildlife Movement	NI	None required	-
e) Local Biological Requirements	NI	None required	-
f) Conflict with Habitat Conservation Plans	NI	None required	-
3.5 CULTURAL RESOURCES			
a) Historical Resources	NI	None required	-
b) Archaeological Resources	PS	CULT-1: If any subsurface cultural resources are encountered during construction of the project, the City of Merced Development Services Department shall be notified and all construction activities within 50 feet of the encounter shall be halted until a qualified archaeologist can examine these materials and determine their significance. If the find is determined to be significant, then the archaeologist shall recommend further mitigation measures that would reduce potential effects on the find to a level that is less than significant. Recommended measures	LS

LEGEND: NI = No Impact; LS = Less Than Significant; PS = Potentially Significant

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
		may include, but are not limited to, 1) preservation in place, or 2) excavation, recovery, and curation by qualified professionals. The project developer shall be responsible for retaining qualified professionals, implementing recommended mitigation measures, and documenting mitigation efforts in a written report to the City's Development Services Department, consistent with the requirements of the CEQA Guidelines.	
c) Human Burials	PS	CULT-2: If project construction encounters evidence of human burial or scattered human remains, all construction activities within 50 feet of the encounter shall be halted and the contractor shall immediately notify the County Coroner and the City, which shall in turn notify the appropriate tribal representatives. The City shall notify other federal and State agencies as required. The City will be responsible for compliance with the requirements of California Health and Safety Code Section 7050.5 and with any direction provided by the County Coroner. If the human remains are determined to be Native American, the County Coroner shall notify the Native American Heritage Commission, which will notify and appoint a Most Likely Descendant. The Most Likely Descendant shall work with the City and a qualified archaeologist to decide the proper treatment of the human remains and any associated funerary objects in accordance with California Public Resources Code Sections 5097.98 and 5097.991. Avoidance is the preferred means of disposition of the burial resources.	LS
3.6 ENERGY			
a) Project Energy Consumption	LS	None required	-
b) Consistency with Energy Plans.	LS	None required	-

LEGEND: NI = No Impact; LS = Less Than Significant; PS = Potentially Significant

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
3.7 GEOLOGY AND SOILS			
a-i) Fault Rupture Hazards	NI	None required	-
a-ii, iii) Seismic Hazards	LS	None required	-
a-iv) Landslides	NI	None required	-
b) Soil Erosion	LS	None required	-
c) Geologic Instability	LS	None required	-
d) Expansive Soils	LS	None required	-
e) Adequacy of Soils for Wastewater Disposal	NI	None required	-
f) Paleontological Resources and Unique Geological Features	PS	GEO-1: If any subsurface paleontological resources are encountered during construction of the project, the City of Merced Community Development Department shall be notified and all construction activities within 50 feet of the encounter shall be halted until a qualified paleontologist can examine these materials and determine their significance. If the find is determined to be significant, then the paleontologist shall recommend mitigation measures that would reduce potential effects on the find to a level that is less than significant. Recommended measures may include, but are not limited to, 1) preservation in place, or 2) excavation, recovery, and curation by qualified professionals. The project developer shall be responsible for retaining qualified professionals, implementing recommended mitigation measures, and documenting mitigation efforts in a written report to the City's Community Development Department, consistent with the requirements of the CEQA Guidelines.	LS

LEGEND: NI = No Impact; LS = Less Than Significant; PS = Potentially Significant

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
3.8 GREENHOUSE GAS EMISSIONS			
a, b) Project GHG Emissions and Consistency with GHG Reduction Plans	LS	None required	-
3.9 HAZARDS AND HAZARDOUS MATERIALS			
a) Hazardous Material Transport, Use, and Storage	LS	None required	-
b) Release of Hazardous Materials	LS	None required	-
c) Hazardous Materials Releases near Schools	NI	None required	-
d) Hazardous Materials Sites	NI	None required	-
e) Public Airport Operations	NI	None required	-
f) Emergency Response and Evacuations	PS	HAZ-1: Prior to the start of project construction, the developer shall prepare and implement a Traffic Control Plan, which shall include as necessary such items as control requirements, resident notification of access closure, and daily access restoration. The contractor shall specify dates and times of road closures or restrictions, if any, and shall ensure that adequate access will be provided for emergency vehicles. The Traffic Control Plan shall be reviewed and approved by the City Department Engineering Department and shall be coordinated with the Merced Police Department and the Merced Fire Department if construction will require road closures or lane restrictions.	LS
g) Wildland Fire Hazards	NI	None required	-
3.10 HYDROLOGY AND WATER QUALITY			

LEGEND: NI = No Impact; LS = Less Than Significant; PS = Potentially Significant

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
a) Surface Water Quality	PS	HYDRO-1: The developer shall submit a Storm Water Quality Plan for the project that shall include post-construction Best Management Practices (BMPs) as required by the City's Storm Water Management Program. The Storm Water Quality Plan shall be reviewed and approved by the City of Merced Engineering Department prior to approval of project improvement plans. The developer shall comply with applicable requirements of, and pay all associated fees as required by, the City's Storm Water Management Program as set forth in its NPDES Permit. HYDRO-2: If required, the developer shall execute a Maintenance Agreement with the City for stormwater BMPs prior to receiving a Certificate of Occupancy. The developer shall remain the responsible party and provide funding for the operation, maintenance and replacement costs of the proposed treatment devices built for the project.	LS
b) Groundwater Supplies and Recharge	LS	None required	-
c-i, ii, iii) Drainage Patterns and Runoff	LS	None required	-
c-iv) Flood Flows	PS	HYDRO-3: Prior to the start of project construction, the project applicant shall obtain a development permit from the City in accordance with Merced Municipal Code Section 17.48.135. The permit application shall include a plan with the information required by Merced Municipal Code Section 17.48.135(A), including base flood elevations and proposed elevations of the lowest floor. The project applicant shall demonstrate compliance with all applicable requirements of Merced Municipal Code Chapter 17.48, including construction standards and adequate drainage	LS

LEGEND: NI = No Impact; LS = Less Than Significant; PS = Potentially Significant

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
		paths around structures. All applicable requirements shall be incorporated as development permit conditions.	
d) Other Flooding Hazards	NI	None required	-
e) Conflict with Water Quality or Groundwater Plans	NI	None required	-
3.11 LAND USE AND PLANNING			
a) Division of Established Communities	NI	None required	-
b) Conflicts with Plans, Policies and Regulations Mitigating Environmental Effects	LS	None required	-
3.12 MINERAL RESOURCES			
a, b) Availability of Mineral Resources	NI	None required	-
3.13 NOISE			
a) Exposure to Noise Exceeding Local Standards	PS	NOISE-1: The City shall require the construction contractor to implement the following measures during project construction: • Construction activities shall be limited to between 7:00 a.m. and 6:00 p.m. Monday through Saturday to avoid noise-sensitive hours of the evenings and nights. Construction activities shall be prohibited on Sundays and holidays, unless the contractor obtains prior approval from the City. • Construction equipment noise shall be minimized by muffling and shielding intakes and exhaust on construction equipment, per the manufacturer's	LS

LEGEND: NI = No Impact; LS = Less Than Significant; PS = Potentially Significant

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
		specifications, and by shrouding or shielding impact tools. • Construction contractors shall locate fixed construction equipment, such as compressors or generators, and construction staging areas as far as possible from nearby sensitive receptors, such as residences, schools, and hospitals.	
b) Exposure to Groundborne Vibration or Noise	LS	None required	-
c) Public Airport and Private Airstrip Noise	NI	None required	-
3.14 POPULATION AND HOUSING			
a) Unplanned Population Growth	LS	None required	-
b) Displacement of Housing or People	NI	None required	-
3.15 PUBLIC SERVICES			
a) Fire Protection	LS	None required	-
b) Police Protection	LS	None required	-
c) Schools	LS	None required	-
d, e) Parks and Other Public Facilities	LS	None required	-
3.16 RECREATION			
a, b) Recreational Facilities	LS	None required	-
3.17 TRANSPORTATION			

LEGEND: NI = No Impact; LS = Less Than Significant; PS = Potentially Significant

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
a) Conflict with Transportation Plans, Ordinances and Policies	LS	None required	-
b) Conflict with CEQA Guidelines Section 15064.3(b)	LS	None required	-
c) Traffic Hazards	LS	None required	-
d) Emergency Access	LS	None required	-
3.18 TRIBAL CULTURAL RESOURCES			
a, b) Tribal Cultural Resources	PS	Mitigation Measure CULT-1 and CULT-2.	LS
3.19 UTILITIES AND SERVICE SYSTEMS			
a) Relocation or Construction of New Facilities	LS	None required	-
b) Water Systems and Supply	LS	None required	-
c) Wastewater Treatment Capacity	LS	None required	-
d, e) Solid Waste Services	LS	None required	-
3.20 WILDFIRE			
a) Emergency Response Plans and Emergency Evacuation Plans	NI	None required.	-
b) Exposure of Project Occupants to Wildfire Hazards	NI	None required	-
c) Installation and Maintenance of Infrastructure	NI	None required	-
d) Risks from Runoff, Post-Fire Slope Instability, or Drainage Changes	NI	None required	-

LEGEND: NI = No Impact; LS = Less Than Significant; PS = Potentially Significant

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
3.21 MANDATORY FINDINGS OF SIGNIFICANCE			
a) Findings on Biological and Cultural Resources	PS	Mitigation measures in Sections 3.4 and 3.5.	LS
b) Findings on Individually Limited but Cumulatively Considerable Impacts	LS	None required	-
c) Findings on Adverse Effects on Human Beings	LS	None required	-

LEGEND: NI = No Impact; LS = Less Than Significant; PS = Potentially Significant

2.0 PROJECT DESCRIPTION

2.1 Project Location

The project site is located on 1808 Parsons Avenue in southeastern Merced (see Figures 1-1 to 1-5). The project site is on a parcel identified as Assessor's Parcel Number (APN) 061-390-027. The site is shown on the U.S. Geological Survey's Merced, California, 7.5-minute quadrangle map as within Section 28, Township 7 South, Range 14 East, Mt. Diablo Base and Meridian. The approximate latitude and longitude of the project site is 37º 17' 38" North and 120º 27' 01" West, respectively.

2.2 Project Details

The project proposes to construct an apartment complex consisting of six buildings on a 4.7-acre undeveloped site in the City of Merced. Five buildings would provide a total of 108 apartment units, all of which would be affordable to lower-income households. Specifically, these units would be offered mainly to households making 30-60% of the local Area Median Income, although some units may be made available to households of up to 80% Area Median Income. The sixth building would be a community center for apartment residents with space for staff and leasing offices, a childcare facility, and other activities. Additional project components include parking spaces, landscaping, and utility improvements.

The project proposes to construct five three-story apartment buildings. Four of these three-story buildings, labeled as Building Type A on Figure 2-1, would have 21 units each, for a total of 84 units. The fifth apartment building, designated as Building Type B on Figure 2-1, would have 24 units. The apartment complex overall would have 108 units. For all apartment buildings, the upper stories would be accessed by stairs. All buildings would have two stairwells.

In the western portion of the project site, adjacent to Parsons Avenue, a one-story community center for apartment residents would be constructed. The community center would have approximately 6,000 square feet of floor area. The community center building would have staff and leasing offices and space for computer laboratories and a Head Start day care facility. A sport court would be adjacent to and north of the community center.

A tot lot/playground are proposed at the center of the project site, between two of the apartment buildings. The site plan indicates two trash bins, which would be kept within enclosures.

The project proposes the installation of 183 parking spaces, located throughout the project site, for residents and visitors. Of these spaces, 46 would be for compact vehicles; the remainder would be full-size spaces (20 feet by 9 feet). Five spaces would be

designated for vehicles for disabled persons. Access to the parking areas would be provided by a main gate-controlled driveway off Parsons Avenue at the northwestern corner of the project site. Secondary vehicular access would be provided off Parsons Avenue at the southwestern corner of the project site. This access would be equipped with a Knox box to allow emergency vehicle entry only, but it would also be an automatic exit for residents. Driveways from Parsons Avenue to these access points would be installed in accordance with City specifications.

For water and wastewater services, the project would connect to an existing 16-inch diameter water main and an existing eight-inch diameter sewer line respectively, both within Parsons Avenue. The project also proposes to connect to the City's existing storm drainage system. In accordance with City requirements, the project would be required to provide 48-hour onsite detention prior to discharge to the City's system. While no details on the project's storm drainage system are available, it is anticipated that large underground pipes may be used if surface area is not available for a detention basin. The project site is adjacent to a 12-inch diameter storm drainage line with a catch basin within Parsons Avenue. The City has sufficient capacity to serve the site with sewer and water facilities.

2.3 Permits and Approvals

The proposed project is not consistent with the current General Plan designation of Thoroughfare Commercial (CT) nor the current zoning of C-T (Thoroughfare Commercial). Therefore, the project would require a General Plan Amendment and Zone Change for the project site to designations that are consistent with the proposed project. The project proposes to change the General Plan designation of the project site to High-Medium Density (HMD) Residential, and to rezone the site to R-3-1.5 (Medium Density Residential). The City Council must grant these approvals, with recommendations provided by the Planning Commission.

Should the project be approved by the City, building and grading permits from the City would be required, along with an encroachment permit for any work in City streets. As discussed in Section 3.10, Hydrology and Water Quality, the project shall also be required to obtain from the City a development permit for construction in a Special Flood Hazard Area.

PROJECT SUMMARY

Site Data:

Gross Site Area:	+/- 4.59 ac
Total Apartment Units:	108
Gross Density:	+/-22.88 du/ac

Area Data:

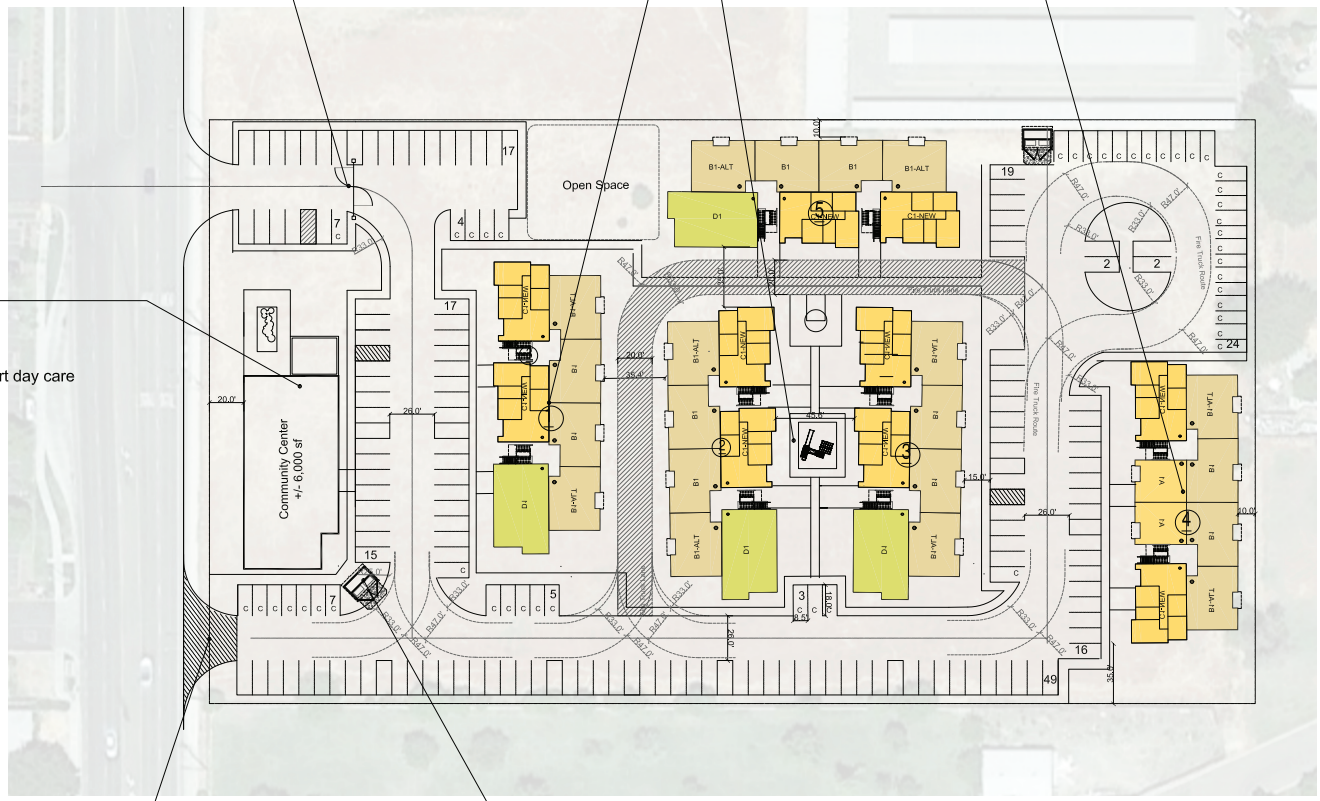
Residential

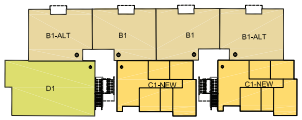
Apartment Type 'A' (21 Plex):	(3 plotted)
Apartment Type 'B' (24 Plex):	(1 plotted)
Community Center:	+/- 6,000 SF

Total Parking 187 Spaces (1.73 ratio)

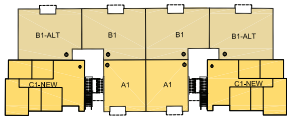
- Full-size 141 spaces
- Compact 46 spaces (24.6%)

*NOTE: Project areas are preliminary and subject to refinement.

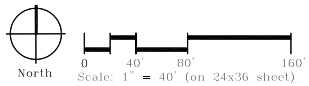




BUILDING TYPE A - 21 PLEX



BUILDING TYPE B - 24 PLEX



NOTE: Proposed property location, boundary lines, and shape of the parcel shown in this study are for graphic reference only and may be subject to change pending on owner's final surveying map.

CONCEPTUAL SITE PLAN - 108 Units OPTION B

PARSON AVENUE SITE

MERCED, CA.

VISIONARY HOME BUILDERS

Sacramento, CA.

November 17, 2021 | MR000000.00

BSB DESIGN BSBDESIGN.COM

Figure 2-1
SITE PLAN

3.0 ENVIRONMENTAL CHECKLIST FORM

3.1 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?			✓	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				✓
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 points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			✓	
d) Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area?			✓	

NARRATIVE DISCUSSION

Environmental Setting

The project site is in a mostly developed area of southeastern Merced. The site itself is a vacant parcel of mostly bare ground. The project site is adjacent to Joe Herb Park, which has grassy areas and mature trees. Otherwise, the landscape consists mostly of commercial buildings of various sizes and uses. Views from the project site are of development to the north and west, and of Joe Herb Park to the south and east.

California's Scenic Highway Program (California Streets and Highways Code Section 260 *et seq*.) was created in 1963 to preserve and protect scenic highway corridors from change which would diminish the aesthetic value of lands adjacent to highways. The program includes a list of highways that are either eligible for designation as scenic highways or have been so designated. There are only two officially designated State Scenic Highway within Merced County: Interstate 5 from the Stanislaus County Line to State Route (SR) 152 (14.9 miles), and SR 152 from Interstate 5 to the Santa Clara County Line (13.8 miles). Both are in western Merced County (Caltrans 2018).

There are no lighting features on the project site. Existing lighting in the immediate project vicinity consists mainly of security and building lighting in nearby development, and street lights along Parsons Avenue and SR 140.

Merced Municipal Code Chapter 20.36 sets standards for landscaping. For residential zoning districts, all required exterior setback areas, excluding areas required for access to the property, shall be landscaped. For all, zoning districts, natural turf areas shall be limited to no more than 50 percent of the landscaped area. A minimum of 90 percent of plants and trees shall be drought-tolerant, non-invasive species. Projects subject to the requirements of this chapter shall submit a landscape and sprinkler plan as part of applications for all permits as required by the Zoning Ordinance and as part of subsequent Building Permit applications.

Additionally, Municipal Code Section 20.46.030 sets specific design standards for multifamily dwellings. Among these standards, blank walls shall be treated with a variety of textures, use of projecting details that create shade/shadow, and contrasting trim materials. Parking areas shall be screened from public right-of-way by landscaping, and a minimum of one tree shall be planted for each six parking spaces. Parking spaces shall be lit at night for security reasons, but the lighting shall not spill over onto adjacent properties.

The recently revised Appendix G of the CEQA Guidelines mentions California Public Resources Code Section 21099, which states that the aesthetic and parking impacts of residential, mixed-use residential, or employment center projects on an infill site within a transit priority area shall not be considered significant effects under CEQA. While the project is residential and may be considered an infill project, it is not in a designated transit priority area. Therefore, Public Resources Code Section 21099 does not apply to this project.

Environmental Impacts and Mitigation Measures

a) Scenic Vistas.

The Merced County General Plan notes that scenic vistas in the County, where available, include views of the Coast Ranges to the west, the Sierra Nevada to the east, and the corridors of the Merced River, San Joaquin River, Los Banos Creek, and Bear Creek (Merced County 2013a). The San Joaquin and Merced Rivers and Los Banos Creek are not in the project vicinity. Bear Creek is separated from the project site by distance and intervening development. Because of existing urban and park development surrounding the project site, views of the Coast Ranges and the Sierra Nevada are not available.

The project involves the construction of a medium-density residential development, a community center, and related site improvements. These structures have the potential to partially obstruct or contribute to obstruction of distance views from places outside the project site. However, given their location and the degree of obstruction from existing urban development, they would not involve a significant effect on distance views. Project impacts on scenic vistas would be less than significant.

b) Scenic Resources and Highways.

The project site is a vacant parcel. There are no trees, rock outcroppings, or other notable scenic features on the site. The project site is not on or near the stream corridors designated by the County General Plan as scenic areas. It is not near any of the designated State Scenic Highways. No scenic highways have been designated by either the City or Merced County. The project would have no impact on scenic resources and highways.

c) Visual Character and Quality.

As noted, the project site is a vacant parcel. The project, with its design and landscaping, may be considered an improvement to the existing on-site landscape as viewed from Parsons Avenue and Joe Herb Park, which are the main public viewing areas near the project site.

The project would be required to comply with applicable landscaping standards, as specified in the City's Zoning Ordinance, as well as applicable standards for multifamily dwellings. Project impacts on visual quality would be less than significant.

d) Light and Glare.

The project would add lighting to a site that currently has no lighting. Project lighting could result in changes in indirect illumination levels to parcels adjacent to the project site. However, adjacent parcels are occupied by either commercial land uses or by Joe Herb Park. Neither are considered sensitive to changes in illumination levels.

The Merced General Plan EIR states that the following guidelines will be followed in selecting and designing any outdoor lighting (City of Merced 2010):

- All outdoor lights, including parking lot lights, landscaping, security, path, and deck lights should be fully shielded, full cutoff luminaries.
- Complete avoidance of all outdoor up-lighting for any purpose.
- Avoidance of tree-mounted lights unless they are fully shielded and pointing down towards the ground or shining into dense foliage. Ensure compliance over time.
- Complete avoidance of up-lighting and unshielded lighting in water features such as fountains or ponds.

Implementation of these guidelines would reduce potential lighting impacts on nearby properties. Project impacts on light and glare would be less than significant.

3.2 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 (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				✓
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				✓
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?				✓
d) Result in the loss of forest land or conversion of forest land to non-forest use?				✓
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use, or conversion of forest land to non-forest use?				✓

NARRATIVE DISCUSSION

Environmental Setting

The project site is vacant and is currently zoned for commercial development. A review of Google Earth photographs of the project site indicated no agricultural activities at least since 1999 and probably longer. Surrounding lands, as noted, have been developed with urban and park uses.

The Important Farmland Maps, prepared by the California Department of Conservation as part of its Farmland Mapping and Monitoring Program, designate the viability of lands for farmland use, based on the physical and chemical properties of the soils and other factors. The maps categorize farmland, in decreasing order of soil quality, as "Prime Farmland," "Unique Farmland," and "Farmland of Statewide Importance." Collectively, these categories are referred to as “Farmland” in the CEQA Checklist in Appendix G of the CEQA Guidelines and in this document. There are also designations for grazing land and for urban/built-up areas, among others. According to the 2016 Important Farmland Map of Merced County, the most recent map available, the project site is designated as Urban and Built-Up Land (FMMP 2018).

a) Farmland Conversion.

The project site is vacant and not in agricultural use; State farmland mapping designates the site as Urban and Built-Up Land. It is not designated Farmland as defined in CEQA Guidelines Appendix G; therefore, the project would not convert Farmland to non-agricultural use. The project would have no impact on Farmland conversion.

b) Agricultural Zoning and Williamson Act.

As noted, the project site is zoned for commercial uses, not for agriculture. The Williamson Act is State legislation that seeks to preserve farmland by offering property tax breaks to farmers who sign a contract pledging to keep their land in agricultural use. The project site is not agricultural land and therefore not under a Williamson Act contract. The project would have no impact on this issue.

c, d) Forest Land Conversion and Zoning.

The Merced County General Plan EIR states that the County has no large forests and no commercial forestry production (Merced County 2013b). There are no designated forest lands on the project site or in the vicinity, and the project site is not zoned for timber production. The project would have no impact on forest lands.

e) Indirect Conversion of Farmland and Forest Land.

Land in the vicinity of the project site is designated as Urban and Built-Up Land, which is not Farmland as defined for CEQA purposes. The land in the project vicinity has been mostly developed for urban uses; there are no active agricultural operations in the vicinity. As noted in c, d) above, there are no forest lands in the vicinity. The project would have no impact related to indirect conversion of Farmland or forest land.

3.3 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 Attainment Plan?			✓	
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?			✓	
c) Expose sensitive receptors to substantial pollutant concentrations?		✓		

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

NARRATIVE DISCUSSION

Environmental Setting

Air Quality Status

The project site is within the San Joaquin Valley Air Basin. The San Joaquin Valley Air Pollution Control District (SJVAPCD), which includes Merced County, has jurisdiction over most air quality matters in the Air Basin. The SJVAPCD is tasked with implementing programs and regulations required by both the federal and California Clean Air Acts. Under their respective Clean Air Acts, both the federal government and the State of California have established ambient air quality standards for six criteria air pollutants: ozone, particulate matter, carbon monoxide, nitrogen dioxide, sulfur dioxide, and lead. California has four additional criteria pollutants under its Clean Air Act. Table 3-1 shows the current attainment status of the Air Basin relative to the federal and State ambient air quality standards for criteria pollutants. Except for ozone and particulate matter, which are discussed below, the Air Basin is in attainment of, or unclassified for, all federal and State ambient air quality standards.

TABLE 3-1
SAN JOAQUIN VALLEY AIR BASIN ATTAINMENT STATUS

	Designation/Classification	
Criteria Pollutant	**Federal Primary Standards**	**State Standards**
Ozone - One hour	No Federal Standard	Nonattainment/Severe
Ozone - Eight hour	Nonattainment/Extreme	Nonattainment
PM_{10}	Attainment	Nonattainment
$PM_{2.5}$	Nonattainment	Nonattainment
Carbon Monoxide (CO)	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Dioxide (NO_x)	Attainment/Unclassified	Attainment
Sulfur Dioxide	Attainment/Unclassified	Attainment
Lead	No Designation/Classification	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified
Vinyl Chloride	No Federal Standard	Attainment

Source: SJVAPCD 2021.

Air Pollutants of Concern

The San Joaquin Valley Air Basin is designated a non-attainment area for ozone. Ozone is not emitted directly into the air. It is formed when reactive organic gases (ROG) and nitrogen oxides (NO_x), referred to as "ozone precursors," react in the atmosphere in the presence of sunlight. Ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and can cause substantial damage to vegetation and other materials. The SJVAPCD currently has a 2007 Ozone Plan and a 2013 Plan for the Revoked 1-Hour Ozone Standard for the Air Basin to attain federal ambient air quality standards for ozone.

The Air Basin is also designated a non-attainment area for respirable particulate matter, a mixture of solid and liquid particles suspended in air, including dust, pollen, soot, smoke, and liquid droplets. In the San Joaquin Valley, particulate matter is generated by a mix of rural and urban sources, including agricultural activities, industrial emissions, dust suspended by vehicle traffic, and secondary aerosols formed by reactions in the atmosphere. Health concerns associated with suspended particulate matter focus on those particles small enough to reach the lungs when inhaled; consequently, both the federal and state air quality standards for particulate matter apply to particulates 10 micrometers or less in diameter (PM_{10}) and to particulates less than 2.5 micrometers in diameter ($PM_{2.5}$), which are carried deeper into the lungs. Acute and chronic health effects associated with high particulate levels include the aggravation of chronic respiratory diseases, heart and lung disease, coughing, bronchitis, and respiratory illnesses in children. The SJVAPCD currently has a 2007 PM_{10} Maintenance Plan to maintain the Air Basin's attainment status for federal PM_{10} ambient air quality standards, and a 2008 $PM_{2.5}$ Plan for the Air Basin to attain federal $PM_{2.5}$ ambient air quality standards.

Carbon monoxide (CO) is an odorless, colorless gas that is highly toxic. It is formed by the incomplete combustion of fuels and is emitted directly into the air, unlike ozone. The main source of CO in the San Joaquin Valley is on-road motor vehicles (SJVAPCD 2015). The San Joaquin Valley Air Basin is in attainment/unclassified status for CO; as such, the SJVAPCD has no CO attainment plans. However, high CO concentrations may occur in areas of limited geographic size, referred to as "hot spots," which are ordinarily associated with areas of highly congested traffic.

In addition to the criteria pollutants, the ARB has identified other air pollutants as toxic air contaminants (TACs) - pollutants that may cause acute or chronic long-term health effects, such as cancer. Some TACs may cause adverse effects even at low levels. Diesel particulate matter is the most common TAC, generated mainly as a product of combustion in diesel engines. Other TACs are less common and are typically associated with industrial activities.

Air Quality Rules and Regulations

As previously noted, the SJVAPCD has jurisdiction over most air quality matters in the Air Basin. It implements the federal and California Clean Air Acts, and the applicable attainment and maintenance plans, through local regulations. The SJVAPCD has developed plans to attain State and federal standards for ozone and particulate matter,

which include emissions inventories to measure the sources of air pollutants and the use of computer modeling to estimate future levels of pollution and make sure that the Valley will meet air quality goals (SJVAPCD 2015). A State Implementation Plan for CO has been adopted by the ARB for the entire state. The SJVAPCD regulations that would be applicable to the project are summarized below.

Regulation VIII (Fugitive Dust PM10 Prohibitions)

Rules 8011-8081 are designed to reduce PM_{10} emissions (predominantly dust/dirt) generated by human activity, including construction and demolition activities, road construction, bulk materials storage, paved and unpaved roads, carryout and track out, landfill operations, etc.

Rule 4101 (Visible Emissions)

This rule prohibits emissions of visible air contaminants to the atmosphere and applies to any source operation that emits or may emit air contaminants.

Rule 9510 (Indirect Source Review)

Rule 9510, also known as the Indirect Source Rule, is intended to reduce or mitigate construction and operational emissions of NO_x and PM_{10} from new development in the SJVAPCD. This rule requires specific percentage reductions in estimated on-site construction and operation emissions, and/or payment of offsite mitigation fees for required reductions that cannot be met on the project site. Construction emissions of NO_x and PM_{10} exhaust must be reduced by 20% and 45%, respectively. Operational emissions of NO_x and PM_{10} must be reduced by 33.3% and 50%, respectively. Rule 9510 applies to residential development projects of 50 units or more; therefore, the project would be subject to Rule 9510.

Environmental Impacts and Mitigation Measures

In 2015, the SJVAPCD adopted a revised Guide for Assessing and Mitigating Air Quality Impacts (SJVAPCD Guide). The SJVAPCD Guide defines an analysis methodology, thresholds of significance, and mitigation measures for the assessment of air quality impacts for projects within SJVAPCD's jurisdiction. Table 3-2 shows the CEQA thresholds for significance for pollutant emissions within the SJVAPCD. The significance thresholds apply to emissions from both project construction and project operations.

The California Emissions Estimator Model (CalEEMod) was used to estimate both construction and operational emissions from the proposed project. A report of the complete CalEEMod results is shown in Appendix A of this document. Table 3-2 shows the maximum project construction emissions in a calendar year and the annual operational emissions. The construction period is assumed to be part of two calendar years. "Mitigated emissions" are the result of the application of project features that reduce air pollutant and greenhouse gas (GHG) emissions associated with the project. Section 3.8, Greenhouse Gas Emissions, discusses these project features in more detail.

TABLE 3-2
SJVAPCD SIGNIFICANCE THRESHOLDS AND PROJECT EMISSIONS

	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
SJVAPCD Significance Thresholds[1]	**10**	**10**	**100**	**27**	**15**	**15**
Construction Emissions[2]	0.43	1.71	1.53	<0.01	0.24	0.13
Above Threshold?	*No*	*No*	*No*	*No*	*No*	*No*
Operational Emissions[3]	0.80	0.79	3.80	<0.01	0.63	0.18
Above Threshold?	*No*	*No*	*No*	*No*	*No*	*No*

[1] Applicable to both construction and operational emissions.
[2] Maximum emissions in a calendar year.
[3] Tons per year under mitigated conditions (see Chapter 9.0, Greenhouse Gas Emissions).
Notes: ROG – reactive organic gases; NO_x – nitrogen oxide; CO – carbon monoxide; SO_x – sulfur oxide; PM_{10} – particulate matter 10 microns in diameter; $PM_{2.5}$ – particulate matter 2.5 microns in diameter.
Sources: CalEEMod Version 2020.4.0, SJVAPCD 2015.

a) Air Quality Plan Consistency.

SJVAPCD has attainment plans for ozone and particulate matter, while the State has a CO attainment plan. As indicated in Table 3-2, project construction and operational emissions would not exceed the applicable SJVAPCD significance thresholds. As the significance thresholds were established in part to ensure consistency with the objectives of air quality attainment plans adopted by the SJVAPCD, project emissions would be consistent with these plans.

The project would be subject to SJVAPCD Regulation VIII, which contains measures to reduce fugitive dust emissions during construction. Dust control provisions are also routinely included in site improvement plans and specifications, along with construction contracts. It also would be subject to SJVAPCD Rule 9510, which requires NO_x and PM_{10} reductions in construction exhaust and operational emissions. With application of these SJVAPCD rules and regulations, project NO_x and PM_{10} construction and operational emissions would be further reduced. Project impacts related to air quality plans would be less than significant.

b) Cumulative Emissions.

As described above, the project would not generate operational emissions above SJVAPCD significance thresholds. Application of SJVAPCD Rule 9510 would further reduce NO_x and PM_{10} operational emissions. The significance thresholds are applied to evaluate regional impacts of project-specific emissions of air pollutants. Regional impacts of a project can be characterized in terms of total annual emissions of criteria pollutants and their impact on SJVAPCD's ability to reach attainment of criteria pollutant standards. On that basis, the proposed project would not result in a considerable contribution to a significant cumulative air quality impact in the Air Basin. Project impacts related to cumulative emissions would be less than significant.

c) Exposure of Sensitive Receptors to Pollutants.

As defined in the SJVAPCD Guide, sensitive receptors include residences, schools, parks and playgrounds, day care centers, nursing homes, and hospitals (SJVAPCD 2015). The project site is northeast of a residential area. As noted, project construction and operational emissions would be below SJVAPCD significance thresholds for criteria pollutants. Implementation of applicable SJVAPCD rules and regulations, especially Regulation VIII and Rule 9510, would further reduce the emissions that could potentially reach the residential area.

Potential health effects on sensitive receptors occur with long-term exposure to pollutants, particularly TACs. TACs includes diesel particulate matter, which is often associated with operation of construction equipment. Health Risk Assessments that are conducted for projects use exhaust $PM_{2.5}$ as a surrogate for diesel particulate matter. According to the CalEEMod run for the project, construction activities would generate approximately 198 pounds of exhaust $PM_{2.5}$ for the estimated nine-month construction period, or approximately 0.74 pounds per day. This amount is readily dissipated and would not be concentrated such that nearby sensitive receptors would be affected. Construction impacts would cease with the completion of project work, and length of exposure time by nearby properties would be short.

Based on the CalEEMod run, project operations would generate approximately 26.4 pounds per year of exhaust $PM_{2.5}$, or approximately 0.07 pounds per day. This amount likewise is readily dissipated and would not be concentrated such that nearby sensitive receptors would be affected. Neither project construction nor operations would generate diesel particulate matter emissions in quantities that would present a significant health risk to nearby properties.

CO hotspots have the potential to expose receptors to emissions that violate state and/or federal CO standards, even if the broader air basin is in attainment of these standards. The main intersection that would be potentially affected by the project would be the SR 140/Parsons Avenue intersection. A project is considered to have potentially significant impacts related to CO if the Level of Service (LOS) at one or more intersections in the project vicinity would decline to E or F (SJVAPCD 2015). As discussed in Section 3.17, Transportation, LOS at the SR 140/Parsons Avenue intersection is expected to be no lower than D – above E or F. In addition, there are no sensitive receptors at this intersection – only commercial land uses or vacant land. Therefore, the project would have no adverse impact related to CO emissions.

Although the above analysis indicates the project construction and operation would not produce significant impacts on sensitive receptors, however, if evidence is provided that suggests a potential health risk, the following mitigation measure would apply. Implementation of the mitigation measure would reduce potential impacts to a level that would be less than significant.

Level of Significance: Potentially significant

Mitigation Measure:

AIR-1: If substantial evidence indicating that the project may involve a significant health risk effect due to project emissions is provided to the City, the applicant shall retain a qualified air quality professional to prepare a Health Risk Assessment of the project. If the HRA results indicate that the project would involve a significant health risk, the HRA shall recommend measures that would reduce modeled health risks to a less than significant level. Such measures may involve use of low-emission construction vehicles and other construction equipment as recommended by the air quality professional. The project applicant shall incorporate these recommendations in the construction plans for the project.

Significance after Mitigation: Less than significant

d) Odors and Other Emissions.

Residential development does not generate substantial odors that would affect nearby land uses, nor would it generate substantial amounts of any other emissions such as TACs. The project would have no impact related to odors or other emissions.

3.4 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?			✓	
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 U.S. Fish and Wildlife Service?				✓
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			✓	

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				✓
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				✓
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?				✓

NARRATIVE DISCUSSION

Environmental Setting

Existing Conditions

The Merced General Plan EIR identified 13 land use types and biological communities/habitats were identified in the General Plan area, including developed lands, irrigation waters, seasonal wetlands, riparian, open water, agriculture, and annual grassland (City of Merced 2010). The project site contains a flat landscape that is mostly bare soil. Vegetation is limited to grasses and weeds. There are no trees or shrubs on the project site. There are no irrigation waters or open water on or near the project site, as well as no streams with riparian habitat (City of Merced 2010). Although the project site has no structures, it may be considered an urban land based upon its location and lack of natural vegetation.

Special-Status Species

Special-status species are plant or wildlife species that are in one or more of the following categories:

- Legally protected under the federal Endangered Species Act, the California Endangered Species Act, or other regulations.
- Designated rare, threatened, or endangered and candidate species for listing by the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW).
- Considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitat.
- Considered rare or endangered under the conditions of CEQA Guidelines Section 15380, such as species identified on Lists 1A, 1B and 2 in the Inventory of Rare and Endangered Vascular Plants of California by the California Native Plant Society, and species that are considered sensitive or of special concern due to

limited distribution or lack of adequate information to permit listing or rejection for state or federal status, such as those included on List 3 in the California Native Plant Society Inventory.

The Merced General Plan EIR identified 59 special-status species in or around the General Plan area: 26 plant species and 33 wildlife species. Of these species, five had critical habitat designated in or around the General Plan area: San Joaquin Valley Orcutt grass, hairy Orcutt grass, green tuctoria, Conservancy fairy shrimp, and vernal pool fairy shrimp (City of Merced 2010).

Waters of the U.S. and Wetlands

Waters of the U.S., including wetlands, are broadly defined under 33 Code of Federal Regulations 328 to include navigable waterways, their tributaries, and adjacent wetlands. Jurisdictional wetlands and Waters of the U.S. include, but are not limited to, perennial and intermittent creeks and drainages, lakes, seeps, and springs; emergent marshes; riparian wetlands; and seasonal wetlands. Federal and state agencies regulate these waters. In April 2019, the State Water Resources Control Board (SWRCB) adopted the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Materials to Waters of the State*, which covers wetlands not regulated by federal agencies.

Environmental Impacts and Mitigation Measures

a) Special-Status Species.

Information on special-status species provided by the Merced General Plan EIR was supplemented by information more specific to the project site provided by the IPaC database of USFWS and the California Natural Diversity Database (CNDDB) of CDFW. The IPaC search was limited to the project site, while the CNDDB search area included the area covered by the USGS Merced 7.5-minute topographic map. The results of the IPaC and the CNDDB searches are available in Appendix B. Most of the species in these database results were also identified in the Merced General Plan EIR.

Special-Status Plants

The databases identified a total of 15 special-status plants in their search areas. Only one – the fleshy (succulent) owl's clover – was specifically identified by the IPaC as potentially occurring on the project site. Fleshy owl's clover is listed as threatened under the federal Endangered Species Act and as endangered under the California Endangered Species Act. The habitat of fleshy owl's clover is vernal pools. No vernal pools have been identified on the project site, and the ground on the site has been disturbed. No critical habitat has been designated by USFWS for this plant species on the project site. Other plant species require vernal pool, marshland, and/or grassland habitat, none of which are found on the project site. The project site is not within designated critical habitat areas for San Joaquin Valley Orcutt grass, hairy Orcutt grass, or Greene's tuctoria (City of Merced 2010).

The following are plant species identified by the databases that were not identified in the Merced General Plan EIR:

- Hogwallow starfish (*Hesperevax caulescens*) – habitat is vernal pools. No vernal pools are on the project site.

- Forked hare-leaf (*Lagophylla dichotoma*) – habitat is grassland. No grassland is on the project site.

- Watershield (*Brasenia schreberi*) – grows in ponds, lakes, and slow-moving streams. No such bodies of water are on or near the project site.

- Small-flowered morning-glory (*Convolvulus simulans*) – habitat is grassland. No grassland is on the project site.

Based on the above information, no special-status plant species are expected to occur on the project site due to lack of suitable habitat.

Special-Status Wildlife

The databases identified a total of 20 special-status wildlife species in their search areas. Eleven were specifically identified by the IPaC as potentially occurring on the project site. All but four of the database species had been previously identified in the Merced General Plan EIR.

The Merced General Plan EIR identified the following habitats for special-status wildlife species: vernal and seasonal pools, open grassland, streams and marshes, riparian woodlands, and forests. None of these habitats are available on the project site. There are no trees or brush on the project site, and the site lacks vegetation that could provide nesting or foraging habitat. The project site is not within designated critical habitat areas for Conservancy fairy shrimp, vernal pool fairy shrimp, vernal pool tadpole shrimp, or California tiger salamander (City of Merced 2010).

The following are wildlife species identified by the databases that were not identified in the Merced General Plan EIR:

- Bald eagle (*Haliaeetus leucocephalus*) – habitat includes estuaries, large lakes, reservoirs, rivers, and some seacoasts. Nests in mature or old-growth trees, snags, cliffs, and rock promontories. None of these are on the project site.

- California red-legged frog (*Rana draytonii*) – found in aquatic habitats, including pools and backwaters within streams and creeks, ponds, marshes, springs, sag ponds, dune ponds and lagoons. No aquatic habitats are on the project site.

- Valley elderberry longhorn beetle (*Desmocerus californicus*) – habitat blue elderberry shrubs. No shrubs are on the project site.

- Monarch butterfly (*Danaus plexippus*) – migratory species that prefers pine, fir, and cedar trees for roosting. The project site does not have these trees.

Based on the above information, no special-status wildlife species are expected to occur on the project site due to lack of suitable habitat. Overall, project impacts on special-status species would be less than significant.

b) Riparian and Other Sensitive Habitats.

The project site does not have any riparian vegetation, as there are no streams on or near the project site. Other sensitive habitats that may be found in the San Joaquin Valley include vernal pools, oak woodlands, and native grasslands. None of these habitats were identified on the project site. The project would have no impact on riparian or other sensitive habitats.

c) State and Federal Jurisdictional Wetlands.

The National Wetlands Inventory database was searched for any recorded wetlands on the project site. The results, available in Appendix B, indicated one "riverine" feature along the eastern boundary of the project site. However, a view of current aerial photos does not indicate the presence of a defined water or associated vegetation in that area. It is possible that past activities on or adjacent to the project site have eliminated that feature. Given existing conditions on the project site, it is unlikely that any State-protected wetlands are on the site. Project impacts on wetlands are considered less than significant.

d) Fish and Wildlife Movement.

There are no streams either on or adjacent to the project site, so no fish movements would be affected by the project. There are no trees on the project site that raptors and other protected migratory birds could use for nesting. There are also no grasslands on the site that could provide suitable nesting habitat for smaller birds that may be protected by the Migratory Bird Treaty Act. The project would have no impact on fish or wildlife movement or nesting sites.

e) Local Biological Requirements.

Merced Municipal Code Chapter 20.34 seeks to preserve riparian vegetation and protect wildlife habitat and wildlife corridors along natural drainage ways by establishing development buffer areas along creeks. With limited exceptions, construction, grading or other alterations to riparian vegetation or to streambeds is prohibited. Since there are no creeks are on or near the project site, the provisions of Municipal Code Chapter 20.34 would not apply to the project.

Also, Municipal Code Chapter 14.12 contains provisions protecting street trees and requiring that street trees be planted with development. The City has no other ordinances applicable to biological resources. The project would have no impact related to local biological requirements.

f) Conflict with Habitat Conservation Plans.

Habitat Conservation Plans (HCPs) are plans prepared under Section 10 of the Endangered Species Act that allow activities that could result in an "incidental take" of listed species

to occur. Such plans are required to have measures to mitigate impacts on listed species and to monitor the effectiveness of the mitigation. Natural Community Conservation Plans are California counterparts to HCPs but are broader in their geographical range and conservation objectives, which include protection of ecosystems rather than specific species.

The one HCP that could apply to the Merced area is the PG&E San Joaquin Valley Operations and Maintenance HCP, prepared for the Pacific Gas and Electric Company (PG&E). This plan applies to portions of nine counties in the San Joaquin Valley, including Merced County where the project is located. However, the plan area is defined to include PG&E's gas and electrical transmission and distribution facilities, the lands owned by PG&E and/or subject to PG&E easements for these facilities, private access routes to infrastructure associated with operations and maintenance activities, minor facility expansion areas, and mitigation areas for impacts resulting from covered activities (PG&E 2006). The project site contains none of these; therefore, the HCP would not apply.

A search of the CDFW website indicated that no Natural Community Conservation Plans or similar conservation plans cover the Merced area. The project would have no impact on HCPs or similar plans.

3.5 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?				✓
b) Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to Section 15064.5?		✓		
c) Disturb any human remains, including those interred outside of formal cemeteries?		✓		

NARRATIVE DISCUSSION

Environmental Setting

Most of the information for this section was provided by the Merced General Plan and EIR. Additional information was provided by a report prepared by the Central California Information Center at California State University Stanislaus, which provided the results of a records search. The report is available in Appendix C of this IS/MND.

The project site, along with City of Merced, lies within the ethnographic territory of the Yokuts. Section 3.18, Tribal Cultural Resources, discusses the Yokuts in more detail.

Merced County was first explored by Gabriel Moraga in 1806, when he named the Merced River, "El Rio de Nuestra Señora de la Merced." Merced County was carved out of Mariposa County in 1855. The construction of the Central Pacific Railroad, beginning in 1871, brought major changes to the region. The City of Merced was laid out in January of that year, when the railroad reached the spot. Merced became the County seat in December 1872. By 1875, Merced's commercial and industrial districts were well established. Merced was incorporated as a charter city on April 1, 1889. Transportation facilities - first railroads, then State Route 99 - would have impacts on the City's growth and development. A significant event in the City's history occurred in 2005, when the University of California Merced campus opened north of the City (City of Merced 2010, 2012b).

The Merced General Plan EIR noted that a total of 22 surveys were completed within the City of Merced Sphere of Influence. A records search indicated the presence of 12 historical resources and one archaeological resource (City of Merced 2010). None of these were on or near the project site.

Environmental Impacts and Mitigation Measures

a) Historical Resources.

A records search conducted at the Central California Information Center found no documented historical resources on the project site (CCIC 2021). Given existing conditions, it is unlikely that any historical resources would be found intact. The project would have no impact on historical resources.

b) Archaeological Resources.

A records search conducted at the Central California Information Center found no documented prehistoric resources on the project site. Based on existing data, the project site has a low sensitivity for the possible discovery of prehistoric and historic archaeological resources (CCIC 2021). However, it is conceivable that excavation associated with the project could unearth archaeological materials of significance that are currently unknown. Procedures to address archaeological discoveries if they should occur are set forth in the mitigation measure below. Implementation of the mitigation measure would reduce potential impacts to a level that would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

CULT-1: If any subsurface cultural resources are encountered during construction of the project, the City of Merced Development Services Department shall be notified and all construction activities within 50 feet of the encounter shall be halted until a qualified archaeologist can examine these materials and determine their significance. If the find is determined to be significant, then the archaeologist shall recommend further mitigation measures that would reduce potential effects on the find to a level that is less than significant. Recommended measures may include, but are not limited to, 1) preservation in place, or 2) excavation,

recovery, and curation by qualified professionals. The project developer shall be responsible for retaining qualified professionals, implementing recommended mitigation measures, and documenting mitigation efforts in a written report to the City's Development Services Department, consistent with the requirements of the CEQA Guidelines.

Significance after Mitigation: Less than significant

c) Human Burials.

As with other cultural resources, it is not expected that any human burials, particularly those of Native Americans, would be uncovered by construction on the project site, given site disturbance and location distant from probable Native American settlements. However, it is conceivable that excavation associated with the project could uncover a previously unknown burial.

CEQA Guidelines Section 15064.5(e) describes the procedure to be followed when human remains are uncovered in a location outside a dedicated cemetery. All work in the vicinity of the find shall be halted, and the County Coroner shall be notified to determine if an investigation of the death is required. If the Coroner determines that the remains are Native American in origin, then the County Coroner must contact the Native American Heritage Commission within 24 hours. The Native American Heritage Commission shall identify the most likely descendants of the deceased Native American, and the most likely descendants may make recommendations on the disposition of the remains and any associated grave goods with appropriate dignity. If a most likely descendant cannot be identified, the descendant fails to make a recommendation, or the landowner rejects the recommendations of the most likely descendant, then the landowner shall rebury the remains and associated grave goods with appropriate dignity on the property in a location not subject to further disturbance.

Mitigation presented below would require compliance with CEQA Guidelines Section 15064.5(e) in the event human remains are encountered. Implementation of the mitigation measure would ensure that any human remains and associated grave goods encountered during project construction would be treated with appropriate dignity. Project impacts on human remains after mitigation would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

CULT-2: If project construction encounters evidence of human burial or scattered human remains, all construction activities within 50 feet of the encounter shall be halted and the contractor shall immediately notify the County Coroner and the City, which shall in turn notify the appropriate tribal representatives. The City shall notify other federal and State agencies as required. The City will be responsible for compliance with the requirements of California Health and Safety Code Section 7050.5 and with any direction provided by the County Coroner. If the human remains are determined to be Native American, the County Coroner

shall notify the Native American Heritage Commission, which will notify and appoint a Most Likely Descendant. The Most Likely Descendant shall work with the City and a qualified archaeologist to decide the proper treatment of the human remains and any associated funerary objects in accordance with California Public Resources Code Sections 5097.98 and 5097.991. Avoidance is the preferred means of disposition of the burial resources.

Significance after Mitigation: Less than significant

3.6 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 impacts due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?			✓	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			✓	

NARRATIVE DISCUSSION

Environmental Setting

Electricity and natural gas are major energy sources for residences and businesses in California. In Merced County, electricity consumption in 2020 totaled approximately 3,262 million kilowatt-hours (kWh), of which approximately 818 million kWh were consumed by residential uses and the remainder by non-residential uses (CEC 2020a). In 2020, natural gas consumption in Merced County totaled approximately 131 million therms, of which approximately 27 million therms were consumed by residential uses and the remainder by non-residential uses (CEC 2020b).

Motor vehicle use accounts for substantial energy usage through the consumption of gasoline and diesel fuel. The Merced County Association of Governments (MCAG) estimated total vehicle miles traveled (VMT) within Merced County and its cities were approximately 2,725,000 miles daily in 2016 (MCAG 2018a). Estimated motor vehicle fuel consumption in Merced County in 2015 was 304,600 gallons of gasoline and 209,600 gallons of diesel fuel per day. Fuel consumption per capita was 1.89 gallons per day (MCAG 2018b).

The State of California has adopted comprehensive energy efficiency standards as part of its Building Standards Code, California Code of Regulations, Title 24. Part 6 of Title 24 is referred to as the California Energy Code. In 2009, the California Building Standards Commission adopted a voluntary Green Building Standards Code, also known as

CALGreen, which became mandatory in 2011. CALGreen sets forth mandatory measures, applicable to new residential and nonresidential structures, on water efficiency and conservation, building material conservation, and interior environmental quality. It also mentions energy efficiency, although CALGreen defers to the Energy Code for actions. The City has adopted the 2019 versions of both the California Energy Code and CALGreen.

California has adopted a Renewables Portfolio Standard, which requires all electricity retailers in the state to generate 33% of electricity they sell from renewable energy sources (solar, wind, geothermal, etc.) by the end of 2020. As of the end of 2019, most of the retail sellers were on track to meet or exceed the 2020 target (CEC 2020). In 2015, SB 350 was signed into law, which increased the electricity generation requirement from renewable sources to 50% by 2030. In 2018, SB 100 was enacted, which accelerated the schedule for 50% electricity generation from renewable sources to 2026 and set a goal of 60% electrical generation from renewable sources by 2030. It also set the goal that zero-carbon resources will supply 100% of electricity to California by 2045.

Environmental Impacts and Mitigation Measures

a) Project Energy Consumption.

Project construction would involve fuel consumption and use of other non-renewable resources. Construction equipment used for such improvements typically runs on diesel fuel or gasoline. The same fuels typically are used for vehicles that transport equipment and workers to and from a construction site. However, construction-related fuel consumption would be finite, short-term, and consistent with construction activities of a similar character. This energy use would not be considered wasteful, inefficient, or unnecessary.

Electricity may be used for equipment operation during construction activities. It is expected that more electrical construction equipment would be used in the future, as it would generate fewer air pollutant emissions. This electrical consumption would be consistent with construction activities of a similar character; therefore, the use of electricity in construction activities would not be considered wasteful, inefficient, or unnecessary, especially since fossil fuel consumption would be reduced. Moreover, under California's Renewables Portfolio Standard, a greater share of electricity would be provided from renewable energy sources over time, so less fossil fuel consumption to generate electricity would occur.

The most recent Residential Energy Consumption Survey by the U.S. Energy Information Administration found that average annual energy consumption by apartment units in buildings with five or more units located in the western United States was 4,581 kWh of electricity per household and 159 cubic feet of natural gas per household (EIA 2018). Based on these factors, proposed development on the project site would consume approximately 494,748 kWh of electricity and 17,172 cubic feet of natural gas annually.

The project would be required to comply with applicable provisions of the adopted California Energy Code and CALGreen in effect at the time of project approval. The provisions of these codes are intended to increase energy efficiency of buildings, thereby

reducing energy consumption. Compliance with these standards would reduce energy consumption associated with project operations. Also, as discussed in Section 3.17, Transportation, affordable housing projects such as the proposed project are not expected to generate substantial VMT, so fuel consumption would likely be less than for a typical market-rate residential project. Overall, project construction and operations would not consume energy resources in a manner considered wasteful, inefficient, or unnecessary. Project impacts related to energy consumption would be less than significant.

b) Consistency with Energy Plans.

The City does not have adopted plans for renewable energy or energy efficiency. However, the City has adopted the California Energy Code and CALGreen, both of which contain provisions that promote energy efficiency. The project would be required to comply with the applicable requirements of these two codes, which are designed to improve energy efficiency of structure, thereby forwarding State energy conservation goals. Project impacts related to energy plans would be less than significant.

3.7 GEOLOGY AND SOILS

Would the project:

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)				✓
ii) Strong seismic ground shaking?			✓	
iii) Seismic-related ground failure, including liquefaction?			✓	
iv) Landslides?				✓
b) Result in substantial soil erosion or the loss of topsoil?			✓	
c) Be located on strata 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?			✓	
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?			✓	

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

NARRATIVE DISCUSSION

Environmental Setting

Topography and Geology

The project site lies in the San Joaquin Valley in central California. The San Joaquin Valley is the southern portion of the Great Valley Geomorphic Province, which is a topographically flat, northwest-trending, structural trough about 50 miles wide and 450 miles long. The San Joaquin Valley is filled with thick sedimentary rock sequences that were deposited as much as 130 million years ago. Large alluvial fans have developed on each side of the Valley. The Geologic Map of the San Francisco – San Jose Quadrangle (Wagner et al. 1991) designates the underlying geology of the project site as the Riverbank Formation. The Riverbank Formation, ranging in thickness from 1 to 200 feet, consists of weathered gravel, sand, and silt that were deposited between 130,000 and 450,000 years ago (DWR 2014).

Project Site Soils

Most of the soils in the San Joaquin Valley consist of sand, silt, loamy clay alluvium, peat, and other organic sediments. These soils are the result of long-term natural soil deposition and the decomposition of marshland vegetation. According to a custom soil survey for the project site, two types of soil are found (SCS 1962, NRCS 2021):

- Yokohl clay loam, 0 to 3 percent slopes (designated as YbA on Figure 3-1) is the predominant soil type on the project site. Yokohl soils that are found in terraces and alluvium derived mainly from basic igneous rocks. They are well-drained soils, but they have a claypan as well as a strongly cemented iron-silica hardpan subsoil, which inhibit penetration of water into deeper layers. Surface runoff is slow, and there is no erosion hazard. Yokohl clay loam has a more slowly permeable surface and a thicker claypan.

- Wyman clay loam, 0 to 3 percent slopes (designated as WoA on Figure 3-1) is found in the eastern portion of the project site. Wyman soils are well-drained soils formed in basic igneous alluvium. Permeability is moderate and runoff is slow. There is no erosion hazard. Wyman clay loam puddles very easily.

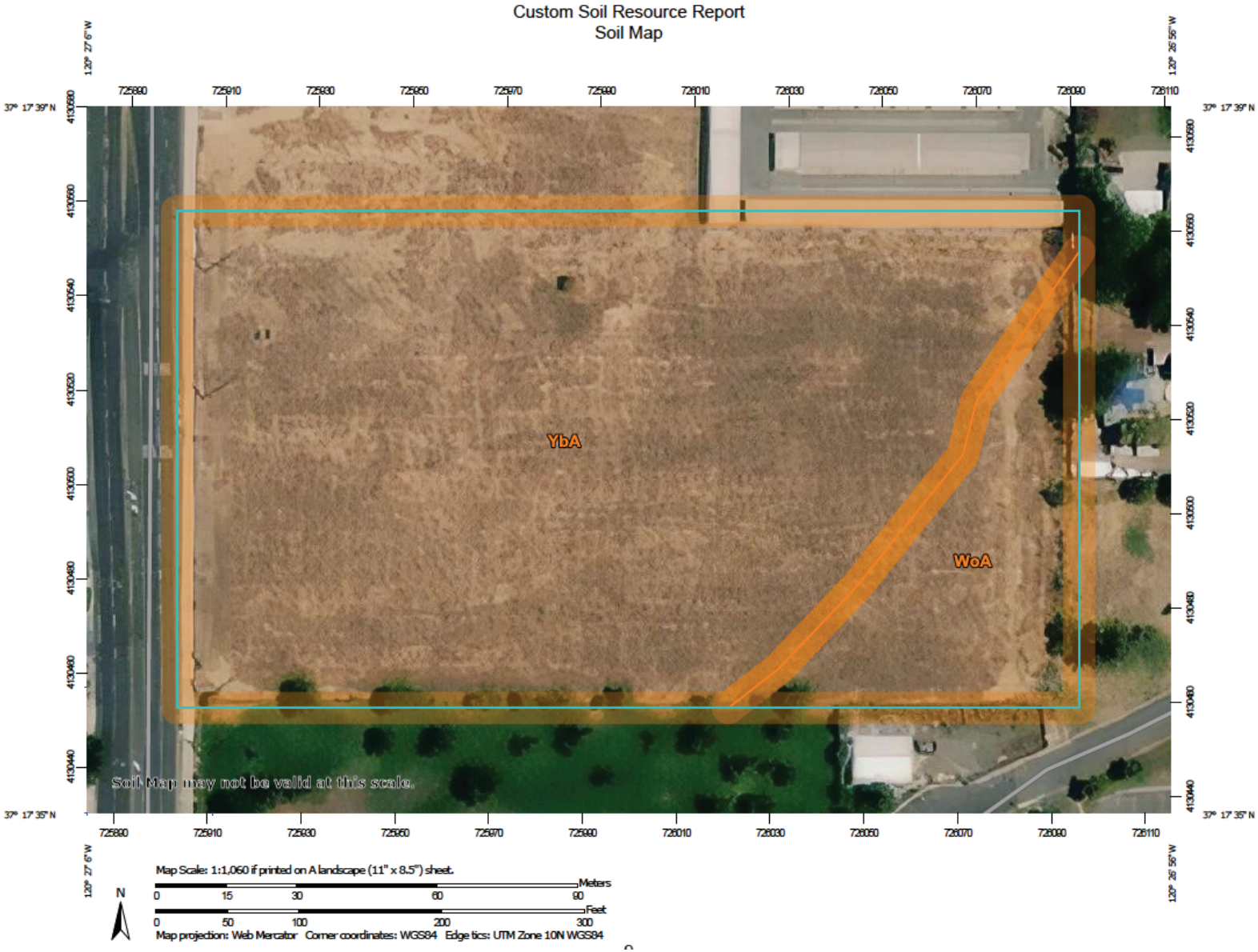


Figure 3-1
SOILS MAP

Seismic and Geologic Hazards

The Merced General Plan EIR states that, based on review of geologic maps and reports for the area, there are no known active or potentially active faults, or Alquist-Priolo Earthquake Fault Zones in the General Plan area. However, the EIR also notes that the General Plan area could be subjected to ground shaking in the event of a major earthquake on the Great Valley, Ortigalita, or Quien Sabe Faults, or other area faults (City of Merced 2010).

Differential settlement, resulting in the compaction of loose, less cohesive soils, may be caused by earthquakes and could occur in the Merced General Plan area. The most likely areas are those in which the groundwater surface is deep - otherwise liquefaction would be more likely - the soils are loose to medium-dense, and the soil profile includes strata of loose and uniformly graded sand. The potential for ground subsidence due to earthquake motion is largely dependent on the magnitude, duration, and frequency of the earthquake waves (City of Merced 2010).

Paleontological Resources

The Merced General Plan EIR does not discuss paleontological resources in detail. Various fossil specimens have been recovered from the Riverbank Formation in at least two counties. However, based on local findings between Madera and Merced, the Riverbank Formation has been assigned a low sensitivity for paleontological resources (Caltrans 2015). The project site does not contain any known paleontological resources or unique geological features.

Environmental Impacts and Mitigation Measures

a-i) Fault Rupture Hazards.

As noted above, no faults, including active or potentially active faults, have been mapped in the Merced area. The project site is not in an area designated as an Alquist-Priolo Earthquake Fault Zone (California Geological Survey 2015). The closest designated active fault is the Ortigalita fault, which is a Holocene fault approximately 29 miles to the west of the project site. The project would have no impact related to a fault rupture hazard.

a-ii, iii) Seismic Hazards.

As noted above, while no seismic activity events have been recorded in Merced, the City and project site are potentially subject to ground shaking from nearby fault systems, which represent a hazard to buildings and infrastructure. All new buildings in Merced are required to be built in accordance with the most recent version of the California Building Code adopted by the City. The California Building Code includes seismic safety provisions that require buildings to be constructed to withstand anticipated ground shaking, based on occupancy type.

When coarse sediments are saturated and compact during an earthquake, soils may lose strength and become fluid, a process called liquefaction. Water from voids may be forced to the ground surface, where it emerges in the form of mud spouts or sand boils. The

Merced General Plan EIR evaluated potential liquefaction hazards and concluded that, based on the predicted seismic accelerations and soil and groundwater conditions typically encountered in the Merced region, general liquefaction potential is low (City of Merced 2010).

Differential settlement, resulting in the compaction of loose, less cohesive soils, may be caused by earthquakes and could occur in the Merced area. The most likely areas are those in which the groundwater surface is deep, the soils are loose to medium-dense, and the soil profile includes strata of loose and uniformly graded sand (City of Merced 2010). The Yokohl and Wyman soils are clay loams with no sand layers, so differential settlement is unlikely to occur. Project impacts related to seismic hazards are considered less than significant.

a-iv) Landslides.

The topography of the project site and surrounding area is flat; therefore, landslides would not occur. The project would have no impact related to landslides.

b) Soil Erosion.

As noted, neither of the soil types identified on the project site has an erosion hazard. However, project construction would involve ground-disturbing activities such as excavation and grading. Such activities would loosen onsite soils, making them susceptible to erosion.

Compliance with SJVAPCD Regulation VIII, which is discussed in Section 3.3, Air Quality, would reduce potential wind erosion impacts. Merced Municipal Code Chapter 15.50 contains provisions designed to control soil erosion. Section 15.50.120(B) regulates construction activities, requiring all construction projects, regardless of size, having soil disturbance or activities exposed to storm water must, at a minimum, implement Best Management Practices (BMPs) for erosion and sediment controls, soil stabilization, dewatering, source controls, pollution prevention measures, and prohibited discharges.

For all projects that disturb one acre of land or more, a Construction General Permit is required from the SWRCB. The permit requirements include preparation of a Storm Water Pollution Prevention Plan (SWPPP) by a Qualified SWPPP Developer to address potential water quality issues. A SWPPP specifies the BMPs needed to avoid or minimize adverse water quality impacts. Construction BMPs fall within the general categories of Temporary Soil Stabilization, Temporary Sediment Control, Wind Erosion Control, Tracking Control, Non-Storm Water Management, and Waste Management and Materials Pollution Control. BMPs applicable to the project are incorporated in the SWPPP as required. BMPs are incorporated into project improvement plans and specifications, subject to the approval of the City Engineer. BMP function and effectiveness are monitored and reported, and remediation is required to address pollution occurrence. Merced Municipal Code Section 15.50.120(B) requires construction activities to obtain a Construction General Permit if applicable.

Compliance with the conditions of the Construction General Permit and with applicable City regulations would minimize the amount of sediment that leaves the construction site

and potential construction water quality effects. Project impacts related to soil erosion would be less than significant.

c) Geologic Instability.

The Merced region is generally level to gently sloping. Slopes potentially subject to failure are not generally present where development is likely to have a significant impact. The currently stable conditions may be changed by slope alterations due to cuts or fills, and changes to drainage patterns, but in general, the potential for land sliding or slope failure is very low (City of Merced 2010). As the project site is level and has no soils that have a significant erosion hazard, the likelihood of any soil instability on the site is low. Required engineering design of proposed structures and site improvements would minimize any soil stability hazards to a level that would be less than significant.

d) Expansive Soils.

Expansive soils are those soils that shrink and swell in response to changes in moisture content, potentially causing serious damage to overlying structures. Soils in the area are generally moderate to deep silty and clayey loams. Some gravely and cobbly loams are also present, primarily concentrated in the stream drainages. The soils listed in the Merced General Plan EIR, including the two soils identified in this document, are not generally considered to be expansive (City of Merced 2010). Therefore, project impacts related to expansive soils would be less than significant.

e) Adequacy of Soils for Sewage Disposal.

The project would be connected to the City's wastewater system. It does not propose to install any septic system or other onsite wastewater disposal system. Because of this, the project would have no impact related to soil adequacy for sewage disposal.

f) Paleontological Resources and Unique Geological Features.

The project site is flat and contains no geological features that may be considered unique. Given past activities on the project site, it is unlikely that any intact paleontological resources would be encountered. As noted, the Riverbank Formation is considered to have low sensitivity for paleontological resources. However, paleontological resources have been recovered from the Riverbank Formation. It is conceivable that currently unknown resources may be uncovered during project construction activities. Procedures to address paleontological discoveries should they occur are set forth in the mitigation measure below. Implementation of this mitigation measure would reduce potential impacts to a level that would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

GEO-1: If any subsurface paleontological resources are encountered during construction of the project, the City of Merced Community Development Department shall be notified and all construction

activities within 50 feet of the encounter shall be halted until a qualified paleontologist can examine these materials and determine their significance. If the find is determined to be significant, then the paleontologist shall recommend mitigation measures that would reduce potential effects on the find to a level that is less than significant. Recommended measures may include, but are not limited to, 1) preservation in place, or 2) excavation, recovery, and curation by qualified professionals. The project developer shall be responsible for retaining qualified professionals, implementing recommended mitigation measures, and documenting mitigation efforts in a written report to the City's Community Development Department, consistent with the requirements of the CEQA Guidelines.

Significance after Mitigation: Less than significant

3.8 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?			✓	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			✓	

NARRATIVE DISCUSSION

Environmental Setting

GHG Background

Greenhouse gases (GHGs) are gases that absorb and emit radiation within the thermal infrared range, trapping heat in the earth's atmosphere. GHGs are both naturally occurring and are emitted by human activity. GHGs include carbon dioxide, the most abundant GHG, as well as methane, nitrous oxide, and other gases. There is a general scientific consensus that increased GHG emissions have led to an increase in the average global temperature, thereby leading to potential changes in the global climate. The State of California has prepared Climate Change Assessments that provide scientific assessments on the potential impacts of climate change in California by region. Potential impacts occurring in the San Joaquin Valley and adjacent areas include the following (Westerling et al. 2018):

- Acceleration of warming across the region and state.

- More intense and frequent heat waves.
- Higher frequency of catastrophic floods.
- More intense and frequent drought.
- More severe and frequent wildfires.

GHG emissions in California in 2019, the most recent year for which data are available, were estimated at approximately 418.2 million metric tons carbon dioxide equivalent (CO_2e) – a decrease of approximately 14.6% from the peak level in 2004. Transportation was the largest contributor to GHG emissions in California, with almost 40% of total emissions. Other significant sources include industrial activities, with approximately 21% of total emissions, and electric power generation, both in-state and imported, with approximately 14% of total emissions (ARB 2021).

In 2008, the most recent year for which data are available, the Merced community generated 405,748 metric tons CO_2e of GHG emissions. Approximately 36 percent of GHG emissions were provided each by transportation and commercial sources (City of Merced 2012a).

Unlike the criteria air pollutants described in Section 3.3, Air Quality, GHGs have no "attainment" standards established by the federal or State government. In fact, GHGs are not generally thought of as traditional air pollutants because their impacts are global in nature, while air pollutants mainly affect the general region of their release to the atmosphere (SJVAPCD 2015). Nevertheless, the U.S. Environmental Protection Agency (EPA) has found that GHG emissions endanger both the public health and public welfare under Section 202(a) of the Clean Air Act due to their impacts associated with climate change (EPA 2009).

GHG Emission Reduction Plans

The State of California has implemented GHG emission reduction strategies through AB 32, the Global Warming Solutions Act of 2006, which requires total statewide GHG emissions to reach 1990 levels by 2020, or an approximately 29% reduction from 2004 levels. The 2019 state GHG emissions were almost 13 million metric tons CO_2e below the 2020 target established by AB 32 (ARB 2021).

In 2016, Senate Bill (SB) 32 was enacted. SB 32 extends the GHG reduction objectives of AB 32 by mandating statewide reductions in GHG emissions to levels that are 40% below 1990 levels by the year 2030. The State has adopted an updated Scoping Plan that sets forth strategies for achieving the SB 32 target. The updated Scoping Plan continues many of the programs that were part of the previous Scoping Plans, including the cap-and-trade program, low-carbon fuel standards, renewable energy, and methane reduction strategies. It also addresses, for the first time, GHG emissions from the natural and working lands of California, including the agriculture and forestry sectors (ARB 2017).

Cities and counties throughout California have prepared Climate Action Plans (CAPs) that outline how the local government will reduce GHG emissions, which are typically related

to the 2020 emission reduction target set in the State's Climate Change Scoping Plan. The City of Merced adopted its CAP in 2012. The City's CAP includes goals, strategies, and actions to reduce local community GHG emissions to 1990 levels by the year 2020, consistent with the state objectives set forth in AB 32 (City of Merced 2012a). At this time, the City has not updated its CAP.

SB 375, enacted in 2008, requires metropolitan planning organizations to develop a Sustainable Communities Strategy (SCS) as part of the Regional Transportation Plan (RTP) preparation process. An SCS must demonstrate an approach to how land use development and transportation can work together to meet GHG emission reduction targets for cars and light trucks. MCAG, the metropolitan planning organization for Merced County and its incorporated cities, adopted its current RTP/SCS in 2018. The target for Merced County, set by the ARB in 2010, calls for the region to reduce per capita GHG emissions by 5% by 2020 and 10% by 2035 (MCAG 2018a).

Environmental Impacts and Mitigation Measures

a, b) Project GHG Emissions and Consistency with GHG Reduction Plans.

The CalEEMod model estimated the total GHG construction and operational emissions associated with the project (see Appendix A). Table 3-3 presents the results of the CalEEMod run.

TABLE 3-3
PROJECT GHG EMISSIONS

GHG Emission Type	Unmitigated Emissions	Mitigated Emissions
Construction[1]	552.9	552.9
Operational[2]	845.9	522.3

[1] Total GHG emissions for construction period in metric tons carbon dioxide equivalent (CO_2e).
[2] Annual emissions in metric tons CO2e.
Sources: California Emissions Estimator Model v. 2020.4.0.

"Mitigated emissions" are the result of project compliance with applicable laws, rules, and regulations, along with inclusion of project features that reduce GHG emissions. These include the following:

- The density of residential development on the project site (23 dwelling units per acre).
- Increased diversity of land uses in the area.
- The project site is approximately 0.1 miles from a transit stop and 2.0 miles from downtown Merced.

- The project offers all apartment units at a rent affordable to specified lower-income households.
- The project would add sidewalks to the site that would connect to the existing network in the vicinity.
- SB X7-7, enacted in 2009, sets an overall goal of reducing per capita urban water use by 20% by December 31, 2020. The California Green Building Code mandates a 20% reduction in indoor water use.
- AB 341 establishes the goal of diverting 75% of California's waste stream from landfills by 2020.

GHG construction emissions would be limited due to the length of time of construction activity; these emissions would cease once work is completed. Mitigated operational GHG emissions would be approximately 38.3% less than under business-as-usual (unmitigated) conditions.

Per SB 32, the State has set a 2030 reduction target of 40% below 1990 GHG emission levels. The Merced CAP does not have 2030 reduction targets. However, assuming the same growth in business-as-usual GHG emissions that was projected to occur between 2008 (when baseline emissions were established) and 2020 by the CAP, the total 2030 business-as-usual GHG emissions in Merced would be approximately 610,918 metric tons CO_2e. Based on information in the CAP, the 2030 reduction target (40% below 1990 emissions) would be 209,989 metric tons CO_2e. Therefore, the percentage reduction from business-as-usual levels that would be required in 2030 would be approximately 65.6%, which would considerably exceed the State target.

The 2017 Scoping Plan proposes various measures to achieve the 2030 target. Most of these are State measures, such as use of the cap-and-trade program, the Short-Lived Climate Pollutant Plan, and achievement of the 50% renewable sources of electricity in the Renewables Portfolio Standard (see Section 3.6, Energy). Based on estimates in the 2017 Scoping Plan, State actions would account for 89.8% of GHG reductions needed by 2030, with local actions accounting for approximately 9.3% of reductions. Applying this ratio to the percentage reduction for 2030, then approximately 6.1% of the reduction from 2030 business-as-usual levels would be achieved by local measures. A project that can shows GHG reductions greater than 6.1% can be said to be consistent with the reduction goals of SB 32. Project GHG operational emission reductions would exceed this percentage. Therefore, the project would be consistent with the reduction goals of SB 32.

The project would also be consistent with the goal of reducing per capita GHG emissions through compact growth, as set forth in the RTP/SCS. One of the strategies is to direct growth to existing communities through investments that provide a range of housing choices for existing and new residents. The project would be consistent with this strategy, occupying a vacant lot within an urbanized portion of the City of Merced. Moreover, as discussed in Section 3.11, Land Use, the project would place residents close to schools and retail stores, thereby reducing the use of cars and travel trips lengths. Finally, as discussed in Section 3.17, Transportation, affordable housing projects such as the proposed project

are expected to generate less VMT than typical market-rate housing projects, thereby generating fewer GHG emissions. Overall, impacts related to GHG emissions and GHG reduction plans would be less than significant.

3.9 HAZARDS AND HAZARDOUS MATERIALS

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?			✓	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			✓	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				✓
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				✓
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?				✓
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?		✓		
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?				✓

NARRATIVE DISCUSSION

Environmental Setting

This section focuses on hazards associated with hazardous materials, proximity to airports, and wildfires. Geologic and soil hazards are addressed in Section 3.7, Geology and Soils, and potential flooding hazards are addressed in Section 3.10, Hydrology and Water Quality.

Data on recorded hazardous material sites are kept in the GeoTracker database, maintained by the SWRCB, and in the EnviroStor database, maintained by the California Department of Toxic Substances Control. Both GeoTracker and EnviroStor provide the names and addresses of documented hazardous material sites, along with their cleanup status. A search of both GeoTracker and EnviroStor databases indicated no hazardous material sites within or in the immediate vicinity of the project site (SWRCB 2021, DTSC 2021). The nearest listed site is the Parkway Cleaners site at 1830 Yosemite Parkway, approximately 0.35 miles west of the project site. A list of solid waste disposal sites identified by SWRCB with waste constituents above hazardous waste levels outside the waste management unit did not show any locations in the Merced area (CalEPA 2021a). Likewise, a list by SWRCB containing sites under Cease and Desist Orders and Cleanup and Abatement Orders showed no locations on or near the project site (CalEPA 2021b).

The Merced Regional Airport is in the southwestern portion of the City, south of SR 99. The continued operation of the Merced Regional Airport involves various hazards to both flight (physical obstructions in the airspace or land use characteristics which affect flight safety) and safety on the ground (damage due to an aircraft accident). Growth is restricted around the Merced Regional Airport in the southwest corner of the City due to the noise and safety hazards associated with the flight path (City of Merced 2010). Another airport that potentially affects the City is Castle Airport, formerly Castle Air Force Base, located adjacent to the City of Atwater northwest of Merced. Castle Airport operations would potentially affect only the northwestern part of Merced.

The Merced General Plan EIR states that both urban and wildland fire hazard potential exists in the City of Merced and surrounding areas, creating the potential for injury, loss of life, and property damage. Wildland fires affect grassland, brush or woodlands, and any structures on or near these fires. Such fires can result from either human-made or natural causes. Urban fires comprise the majority of fires in the City of Merced, but the potential for wildland fires could increase as large blocks of undeveloped land are annexed into the City (City of Merced 2010).

Environmental Impacts and Mitigation Measures

a) Hazardous Material Transport, Use, and Storage.

Hazardous materials that are likely to be used and stored on the project site would include cleaning products and pesticides, herbicides, and fertilizers for landscaping. None of these likely to be stored or used in large quantities. Facilities that store significant amounts of hazardous materials are required to prepare a Hazardous Material Business Plan that would be submitted to the County Environmental Health Department. The Hazardous Material Business Plan must be prepared by any facility that handles a hazardous material, or mixture containing a hazardous material, of a quantity at any one time during the reporting year equal to or greater than 55 gallons for liquids, 500 pounds for solids, or 200 cubic feet for a compressed gas. None of the hazardous materials anticipated to be used by the project would be stored in such quantities. Project impacts related to transport, use, or storage of hazardous materials would be less than significant.

b) Release of Hazardous Materials.

Construction activities on the project site may involve the use of hazardous materials such as fuels and solvents, and thus create a potential for hazardous material spills. Construction and maintenance vehicles would transport and use fuels in ordinary quantities. Fuel spills, if any occur, would be minimal and localized and would not typically have significant adverse effects. Potential hazardous materials spills during construction are addressed in the required SWPPP, described in Section 3.7, Geology and Soils. In accordance with SWPPP requirements, contractors have absorbent materials at construction sites to clean up minor spills. Other substances used in the construction process would be stored in approved containers and used in relatively small quantities, in accordance with the manufacturers' recommendations and/or applicable regulations.

As noted in a) above, project operations would not involve the transport, use, or storage of hazardous materials in substantial quantities. Any releases of these materials are not expected to be in quantities large enough to pose a threat to human health and the environment. Overall, impacts related to releases of hazardous materials would be less than significant.

c) Hazardous Materials Releases near Schools.

The nearest school facility to the project site is Golden Valley High School, located approximately one-quarter mile south of the project site. However, as noted in b) above, project construction and operations would not require the handling or transport of acutely hazardous materials or waste that would endanger schools or the public. The use of small quantities of hazardous materials during project construction would be limited to the project site and would not occur near any schools. The project would not produce hazardous emissions. The project would have no impact on schools within one-quarter mile of the project site.

d) Hazardous Materials Sites.

As previously noted, a search of the GeoTracker and EnviroStor databases, along with SWRCB lists, did not identify any active hazardous material sites on or in the immediate vicinity of the project site. As noted in Section 3.2, Agriculture and Forestry Resources, no agricultural activities have occurred on the project site for at least two decades, so contamination of the soil by residual agricultural chemicals is unlikely. The project would have no impact related to hazardous material sites.

e) Public Airport Operations.

The project site is approximately 3.5 miles east of the Merced Regional Airport. Based on the Airport Land Use Compatibility Plan for Merced County airports, the project site is outside the safety zones for Merced Regional Airport. It is even beyond the delineated Airport Influence Area, within which projects would be subject to review by the Merced County Airport Land Use Commission. The project site is also outside the safety zones and Airport Influence Area of Castle Airport (Merced County ALUC 2012). Based on this, the project would not present a hazard to flights, nor would it place residents at risk of potential aircraft accidents. The project would have no impact related to public airport operations.

f) Emergency Response and Evacuations.

The only street that would be affected by the project would be Parsons Avenue. The project would not obstruct Parsons Avenue traffic once construction work is completed. Project work within Parsons Avenue would consist of connections to utility lines and frontage improvements such as curb, gutter, and sidewalk. Construction work would be temporary and would cease once work is completed. However, work within Parsons Avenue has the potential of restricting lanes such that emergency response or emergency evacuation could be affected. Mitigation presented below would ensure that access would be maintained during construction activities within Parsons Avenue, thereby reducing impacts to a level that would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

HAZ-1: Prior to the start of project construction, the developer shall prepare and implement a Traffic Control Plan, which shall include as necessary such items as control requirements, resident notification of access closure, and daily access restoration. The contractor shall specify dates and times of road closures or restrictions, if any, and shall ensure that adequate access will be provided for emergency vehicles. The Traffic Control Plan shall be reviewed and approved by the Merced Department of Public Works and shall be coordinated with the Merced Police Department and the Merced Fire Department if construction will require road closures or lane restrictions.

Significance After Mitigation: Less than significant

g) Wildland Fire Hazards.

The project site is in a mainly developed urban area with no wildlands; ongoing maintenance of the site minimizes wildland fire potential on the site. The project would reduce the existing fire hazard on the site by replacing an undeveloped area with a few grasses and weeds with a developed and paved area. The project would have no impact related to wildfires. Section 3.20, Wildfire, provides a more detailed analysis of wildfire impacts.

3.10 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?		✓		

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			✓	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river runoff or through the addition of impervious surfaces, in a manner which would:				
i) Result in substantial erosion or siltation on- or off-site?			✓	
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			✓	
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			✓	
iv) Impede or redirect flood flows?		✓		
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				✓
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?				✓

NARRATIVE DISCUSSION

Environmental Setting

Surface Waters

There are no natural streams on or adjacent to the project site. The nearest surface water feature is Bear Creek, approximately one mile to the north. Surface water quality in the Merced area is maintained through the City's Storm Water Management Program (SWMP), developed in compliance with the federal National Pollutant Discharge Elimination System (NPDES) program and with the SWRCB's Municipal Separate Storm Sewer System (MS4) General Permit. The SWMP is intended to limit, to the maximum extent practicable, the discharge of pollutants from storm sewer systems, including the City's. Merced Municipal Code Chapter 15.50 incorporates several provisions regarding storm water management and discharge, including provisions related to construction as described in Section 3.7, Geology and Soils.

One of the implementing actions of the SWMP is the development of a Post-Construction Standards Plan, which provides information on how to meet the SWRCB's requirements for mitigating the negative impact of increases in storm water runoff caused by new development and redevelopment. The plan accomplishes this goal through the incorporation of Low Impact Development standards and hydromodification management

techniques. Low Impact Development standards mitigate excessive runoff by using storm water control measures that utilize evapotranspiration, infiltration, capture/reuse, and biotreatment to mimic runoff control of a natural environment. Hydromodification techniques are used to design development sites so that post-construction runoff flow rates do not exceed those of the pre-construction conditions (City of Merced 2014a).

Groundwater

The project site is within the Merced Groundwater Subbasin, which underlies 767 square miles of central and eastern Merced County. The estimated storage capacity of the Merced Subbasin as of 1995 was 21,100,000 acre-feet to a depth of 300 feet and 47,600,000 acre-feet to the base of fresh groundwater. Both natural and applied water recharge in the Subbasin was estimated at 290,000 acre-feet, while urban and agricultural extractions totaled 546,000 acre-feet. This has led to a decline in groundwater levels of 30 feet between 1970 and 2000, although there was a period of groundwater level increase from 1978 to 1988 (DWR 2017).

The City relies on groundwater for its water supply, which is provided by 20 active wells (see Section 3.19, Utilities and Service Systems). Data from a nearby U.S. Geological Survey well indicates that the depth to groundwater in the area is approximately 88 feet below ground surface (USGS 2021). Groundwater quality in the Merced area is generally good; the most recent Consumer Confidence Report indicated that City water does not violate any drinking water quality standards (City of Merced 2020).

In 2014, the State enacted the Sustainable Groundwater Management Act. This act requires the formation of local groundwater sustainability agencies that must assess conditions in their local water basins and adopt locally based Groundwater Sustainability Plans for sustainable use of groundwater and avoidance of overdraft. Plans for "critically overdrafted" basins must be completed and adopted by January 31, 2020, while plans for high- and medium-priority basins have an adoption deadline of January 31, 2022. The Merced Irrigation-Urban Groundwater Sustainability Agency, of which the City is a member, was formed in 2017. A Groundwater Sustainability Plan for the Subbasin, classified as critically overdrafted, was adopted on January 28, 2020.

The primary means for achieving sustainability in the Subbasin will be reduction in groundwater pumping achieved through implementation of a framework to allocate the sustainable yield to the Groundwater Sustainability Agencies. This framework will be supplemented by the implementation of projects and management actions that will either increase surface water supplies to augment the sustainable groundwater yield or will increase groundwater recharge, which will in turn increase the amount of groundwater that may be sustainably used (Merced SGMA 2019).

Flooding Hazard

A Flood Insurance Rate Map prepared by the Federal Emergency Management Agency (FEMA) indicates that the project site is designated Zone AO. Zone AO is considered a portion of the 100-year floodplain – the floodplain commonly used to assess potential flooding impacts and considered a Special Flood Hazard Area. Therefore, the project site

is within the 100-year floodplain as defined by FEMA. Flooding within the area of the project site would reach a depth of one foot (FEMA 2008). The source of potential flooding in the area appears to be Bear Creek, north of the project site.

In 2007, the State of California approved SB 5 and a series of related Senate and Assembly bills intended to set new flood protection standards for urban areas in the Central Valley. This group of bills, referred to collectively in this document as "SB 5," establish the State standard for flood protection in these areas as protection from the 200-year frequency flood. Under SB 5, urban and urbanizing areas must be provided with 200-year flood protection no later than 2025. The Merced General Plan indicates the project site is outside the 200-year floodplain (City of Merced 2012b).

Environmental Impacts and Mitigation Measures

a) Surface Water Quality.

The project would not directly affect surface waters. As noted in Section 3.7, Geology and Soils, construction activities would disturb soils, which could be transported off site and could eventually enter surface waters. Project development and operation would lead to contamination of storm runoff with fuels, oils, metals, and other substances associated with motor vehicles, particularly from the parking areas. Since the project proposes to connect to the City's storm drainage system, the potentially contaminated runoff could eventually enter surface waters. This is considered a potentially significant impact.

As noted, the City of Merced has adopted a SWMP, which is intended to minimize the potential storm water quality impacts of development. Program elements most applicable to land development include construction storm water discharge requirements and the incorporation of post-construction BMPs. A Post-Construction Standards Plan was prepared for the City that provides to guide project proponents and municipal plan checkers through the various site design requirements of the Phase II MS4 Permit to mitigate the negative impact of increases in storm water runoff caused by new development and redevelopment. This is accomplished through the incorporation of Low Impact Development standards and hydromodification management techniques. Low Impact Development mitigates excessive runoff with storm water control measures including evapotranspiration, infiltration, capture/reuse, and biotreatment to mimic the runoff control characteristics of a natural environment. Hydromodification techniques are used to design development sites so that post-construction runoff flow rates do not exceed those of the pre-construction conditions. The City shall verify that applicable projects have been properly conditioned with the post-construction standards (City of Merced 2014a).

Compliance with the provisions of the City's SWMP, which are specified in the mitigation measures below, would reduce impacts to a level that would be less than significant. In addition, compliance with the City provisions and Construction General Permit conditions, as described in Section 3.7, Geology and Soils, would minimize water quality impacts from construction activities.

Level of Significance: Potentially significant

Mitigation Measures

HYDRO-1: The developer shall submit a Storm Water Quality Plan for the project that shall include post-construction Best Management Practices (BMPs) as required by the City's Storm Water Management Program. The Storm Water Quality Plan shall be reviewed and approved by the City of Merced Engineering Department prior to approval of project improvement plans. The developer shall comply with applicable requirements of, and pay all associated fees as required by, the City's Storm Water Management Program as set forth in its NPDES Permit.

HYDRO-2: If required, the developer shall execute a Maintenance Agreement with the City for stormwater BMPs prior to receiving a Certificate of Occupancy. The developer shall remain the responsible party and provide funding for the operation, maintenance and replacement costs of the proposed treatment devices built for the project.

Significance After Mitigation: Less than significant

b) Groundwater Supplies.

As noted, the City relies on groundwater for its primary source of water. The project would not draw directly from the underlying aquifer, but it would be connected to the City's water system, and so it would indirectly affect groundwater supplies. Adequate water supply exists to accommodate this demand. Section 3.19, Utilities and Service Systems, discusses this in detail.

The project would replace an existing vacant parcel with urban development and pavement. This would substantially reduce the amount of precipitation that would percolate into the ground at the site, thereby reducing groundwater recharge. Given the relatively small acreage of the project site and the extent of other lands available for recharge in and surrounding the City, the project is not expected to interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. The Merced Integrated Regional Water Management Plan indicates an abundance of available land suitable for groundwater recharge in the Merced vicinity (RMC Water and Environment 2013). Low Impact Development standards would also tend to increase percolation of rainfall and reduce storm water runoff from the site. Project impacts on groundwater are considered less than significant.

c-i, ii, iii) Drainage Patterns and Runoff.

The project would alter existing storm drainage patterns, due to site grading and the installation of buildings and pavement. In addition, proposed improvements on the project site would result in the generation of additional runoff due to the introduction of impervious surfaces. As noted in a) above, runoff would be likely to collect pollutants, mainly deposits from motor vehicles.

The project proposes to connect to the City's existing storm drainage system. As described in a) above, Drainage improvements would need to comply with City design standards and post-construction BMPs in accordance with the City's SWMP, which was prepared with the intent of maintaining surface water quality in the Merced area. Project impacts on drainage and runoff are considered less than significant.

c-iv) Flood Flows.

As noted, the project site is within a 100-year floodplain as indicated by the FEMA map for the area. Because of this, the project could impede or redirect any flood flows. Flooding on the project site could reach a depth of one foot.

Merced Municipal Code Chapter 17.48 addresses flood damage prevention and construction within Special Flood Hazard Areas. Section 17.48.135 requires a development permit before the start of construction within a Special Flood Hazard Area. The application for a development permit shall include plans that, among other requirements, show base flood elevation information and proposed elevation, in relation to mean sea level, of the lowest floor. Section 17.48.140 sets forth construction standards for structures within the Special Flood Hazard Area, including the use of materials resistant to flood damage, the use of construction methods and practices that minimize flood damage, and (for AH and AO zones) adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures. In addition, new construction and substantial improvement in Zone AO shall have the lowest floor, including basement, elevated above the highest adjacent grade at least as high as the depth number specified in feet on the FIRM, or at least two feet if no depth number is specified. For this project, the elevation would be one foot.

Compliance with the requirements of Merced Municipal Code Chapter 17.48, which is required by the mitigation measure below, would reduce potential flooding impacts related to the project, including impeding or redirecting flood flows. Project impacts after mitigation would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

HYDRO-3: Prior to the start of project construction, the project applicant shall obtain a development permit from the City in accordance with Merced Municipal Code Section 17.48.135. The permit application shall include a plan with the information required by Merced Municipal Code Section 17.48.135(A), including base flood elevations and proposed elevations of the lowest floor. The project applicant shall demonstrate compliance with all applicable requirements of Merced Municipal Code Chapter 17.48, including construction standards and adequate drainage paths around structures. All applicable requirements shall be incorporated as development permit conditions.

Significance after Mitigation: Less than significant

d) Other Flooding Hazards.

The Merced General Plan indicates that the project site is not within a potential inundation zone for any dam failure in the area (City of Merced 2012b). The project site is in a topographically flat region away from the coast, with no large bodies of water in the vicinity. Therefore, the project would not be affected by seiches or tsunamis. The project would have no impact related to other flooding hazards.

e) Conflict with Water Quality or Groundwater Plans.

As described above, the project would be required to comply with the provisions of the City's SWMP, which is designed to maintain local water quality. The Groundwater Sustainability Plan for the Merced Subbasin has been adopted. There are no projects or implementing actions in the Groundwater Sustainability Plan for the Merced Subbasin that apply specifically to the project, other than a Merced Region Water Use Efficiency Program that will be implemented by multiple water purveyors to increase the level of water conservation and ensure long-term water use efficiency by the region's urban and agricultural users. It is expected that the project would comply with any requirements that are designed to implement this action. The project would have no impact related to water quality or groundwater plans.

3.11 LAND USE AND 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?				✓
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?			✓	

NARRATIVE DISCUSSION

Environmental Setting

Existing Land Uses and Regulations

The project site is a flat, undeveloped area that is vacant. The area surrounding the project site consists of commercial development to the north, which includes a convenience store and a self-storage facility among other businesses. A commercial center is west of the project site and includes a Rancho San Miguel grocery market and a CVS Pharmacy, among other businesses. A single-family residential area is southwest of the site. As previously noted, the project site is adjacent to Joe Herb Park, which borders the project

site to the south and east. Beyond Joe Herb Park to the south is Golden Valley High School, a public high school (see Section 3.15, Public Services).

The Merced Vision 2030 General Plan was adopted in 2012, with the Housing Element updated in 2016. The Merced General Plan serves as the blueprint for the community's future growth and development to the year 2030. As noted in Chapter 2.0, Project Description, the current City General Plan designation for the project site is Thoroughfare Commercial, which does not allow for the land use proposed by the project.

The Merced Zoning Ordinance in incorporated in Merced Municipal Code Title 20. The Zoning Ordinance implements the Merced General Plan and protects the public health, safety, and general welfare of the Merced community by establishing land uses zones and allowable land uses within each zone. It also sets both general development standards and development standards for specific zones. The current zoning for the project site is C-T, Thoroughfare Commercial, which does not allow for the land use proposed by the project.

Environmental Justice

Environmental justice is not an issue that CEQA explicitly requires to be addressed; however, the State of California has recently emphasized the incorporation of environmental justice in land use and environmental planning. State law defines "environmental justice" as "the fair treatment of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies." The State has enacted SB 535, which seeks to address the adverse environmental impacts of projects that disproportionately affect minority and/or lower-income communities, particularly those already burdened with environmental problems.

The California Office of Environmental Health Hazard Assessment has developed the California Communities Environmental Health Screening Tool (CalEnviroScreen) to identify "environmental justice" or "disadvantaged" communities. CalEnviroScreen measures pollution and population characteristics using 20 indicators such as air and drinking water quality, waste sites, toxic emissions, asthma rates, and poverty. It applies a formula to each U.S. Census tract in California to generate a score that rates the level of cumulative impacts on each area. A census tract that scores in the top 25% is considered a disadvantaged community. The project site is within Census Tract 6047000170, which includes most of the City of Merced and some adjacent rural areas. This Census tract has an overall CalEnviroScreen score in the 80-85 percentile, which makes it a disadvantaged community as defined by State law. The tract has a relatively low score of 64 for pollution burden, but a score of 86 for population characteristics (OEHHA 2021).

Environmental Impacts and Mitigation Measures

a) Division of Established Communities.

The project is proposed on a site currently designated for commercial development. The project would not divide existing residential communities in the area, which are located

southwest of the project site. The project would have no impact on division of established communities.

b) Conflicts with Plans, Policies and Regulations Mitigating Environmental Effects.

Project development would not be consistent with current Merced General Plan and zoning designations for commercial development, which does not allow for the high-medium density residential development proposed by the project. The project includes an application for a General Plan Amendment to amend the General Plan designation from Thoroughfare Commercial (CT) to High-Medium Density (HMD) Residential and Zone Change to change the zoning designation from Thoroughfare Commercial (C-T) to R-3-1.5. These changes would allow the residential development proposed by the project. The project would not be inconsistent with existing development in the area, as residential development has occurred southwest and east of the project site. Also, by providing affordable housing for lower income residents, the project would be consistent with the City's Housing Element Goal H-1: New Affordable Housing Construction. Supporting policies and actions in the Housing Element include:

- Policy H-1.2: Support Development of Affordable Housing
- Policy H-1.4: Provide Priority Review and Permitting for Affordable Housing Projects
- Action 1.1.a: Evaluate for Multi-Family Housing Development

The project may potentially conflict with General Plan Policy 3.1, which seeks to avoid or minimize the risk of flooding to new development. As described in Section 3.10, Hydrology and Water Quality, the project is within a Special Flood Hazard Area. However, the project would comply with the provisions of Merced Municipal Code Chapter 17.48, which addresses flood damage prevention and construction within Special Flood Hazard Areas. This would be consistent with General Plan Implementing Action 3.2.b, which requires new development and substantial improvements or upgrades in identified FEMA flood hazard zones (i.e., 100- and 500-year floodplains) to be constructed in accordance with applicable city, State, and federal regulations, including compliance with the minimum standards of the Federal Emergency Management Agency and the National Flood Improvement Program to avoid or minimize the risk of flood damage.

This IS/MND discusses other potential project impacts that could affect City ordinances and Merced Municipal Code provisions. The project would comply with these ordinances and provisions. Project impacts would be less than significant.

Environmental Justice

The project proposes construction in a mostly developed area of Merced. The project would not contribute to the issues pertaining to Census Tract 6047000304, as indicated by CalEnviroScreen, except for $PM_{2.5}$. As discussed in Section 3.3, Air Quality, $PM_{2.5}$ would be generated mainly during project construction, and compliance with SJVAPCD rules and regulations on dust control would reduce $PM_{2.5}$ construction impacts to a level that would be less than significant.

It should be noted that the project is intended to provide affordable housing for City households with low incomes, which would address the high CalEnviroScreen indicator score for poverty in the Census tract (OEHHA 2021). Moreover, this housing would be located near a high school and retail stores, which would reduce the need for apartment residents to use a car, with its attendant environmental impacts and its costs for households. Therefore, the project would not have significant adverse effects related to environmental justice, and it would likely have beneficial impacts.

3.12 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?				✓
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?				✓

NARRATIVE DISCUSSION

Environmental Setting

The City of Merced, including the project site, does not contain any mineral resources that require managed production. The California Division of Mines and Geology, now part of the California Geological Survey, has classified portions of the state into Mineral Resource Zones. No Mineral Resource Zones exist within the City of Merced or in the area designated for future expansion of the City (City of Merced 2012b). There are no active oil or natural gas wells in the project vicinity (DOGGR 2021).

Environmental Impacts and Mitigation Measures

a, b) Availability of Mineral Resources.

There are no identified mineral resources areas on the project site. As no Mineral Resource Zones have been designated in the Merced area, the project would have no effect on the availability of or access to locally designated or known mineral resources. The project would have no impact on mineral resources.

3.13 NOISE

Would the project result in:	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?		✓		
b) Generation of excessive groundborne vibration or groundborne noise levels?			✓	
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				✓

NARRATIVE DISCUSSION

Environmental Setting

Noise Background

Assessment of noise impacts focuses on the “ambient" noise level, which is the general noise level in a project area. The project site is in an area that is mostly developed. Noise sources in the area include vehicle traffic on Parsons Avenue and on SR 140 north of the project site. Data from the Merced General Plan 2040 EIR indicate the noise level on the segment of Parsons Avenue from Childs Avenue to SR 140 is 60 decibels (dB) at 100 feet from the road centerline, and the noise level on the segment of SR 140 from Parsons Avenue to Campus Parkway is 67 dB at 100 feet from centerline (City of Merced 2010).

Another noise source in the vicinity is train traffic on the Burlington Northern Santa Fe Railroad tracks, which parallel SR 140 east of the intersection of SR 140 and Santa Fe Avenue, east of the project site. A measurement at a site on the Burlington Northern Santa Fe track indicated an average sound exposure level of approximately 100 dB at 110 feet from the track centerline. The number of train events on this track was 26. Without horn use, the noise level along the track was estimated at 72 dB at 100 feet from centerline (City of Merced 2010).

The Noise Element of the Merced General Plan establishes noise standards applicable to projects. Implementing Action 1.2.c states that new development of noise-sensitive land uses may not be permitted in areas exposed to existing or projected levels of noise from transportation noise sources which exceed the levels specified in Table N-3 of the Noise Element. Table N-3 indicates that the maximum allowable exposure of outdoor areas of

residential land uses to transportation noise is 60 dB from roadways and 65 dB from railways. Interior noise levels are required to be 45 dB.

The decibel measurements in the City's noise standards are in terms of the noise descriptors Day-Night Average Level (L_{dn}) and Community Noise Equivalent Level (CNEL). The L_{dn} is based upon the average hourly equivalent sound level over a 24-hour day, with a +10-dB weighting applied to noise occurring between 10:00 p.m. and 7:00 a.m. The nighttime weighting is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. The CNEL is the same as the L_{dn}, with an additional +5-dB weighting applied to noise occurring between 7:00 p.m. and 10:00 p.m.

Environmental Impacts and Mitigation Measures

a) Exposure to Noise Exceeding Local Standards.

The project would result in a permanent increase in ambient noise levels over existing conditions, as the site is currently vacant. Noise would be generated mainly by traffic to and from the apartment complex. Land uses along SR 140 are mostly commercial uses that are not sensitive to changes in traffic noise levels. Therefore, the focus of this analysis would be on traffic noise along Parsons Avenue.

Specific noise impacts along Parsons Avenue would depend on the direction trip distribution on the street. Nevertheless, an approximation of noise levels generated by traffic on Parsons Avenue can be estimated using the Highway Traffic Noise Prediction Model developed by the Federal Highway Administration. The model generates noise contours based on daily traffic, distances from the roadway, and traffic speeds. For this project, estimated daily traffic volumes were provided by the Merced General Plan EIR and from expected daily traffic from the project site (see Section 3.17, Transportation).

Appendix D contains the results of the Highway Traffic Noise Prediction Model for the project. At a distance of 100 feet from the Parsons Avenue right-of-way, the traffic noise level under existing conditions would be 59.1 dB. With the addition of traffic from the project, the noise level would be 59.8 dB. This is a less than 1-dB increase, which is considered an imperceptible change in noise levels (Egan 1988). Project impacts on traffic noise levels in the area are considered less than significant.

Activities on the project site, particularly in the residential units, could potentially disturb residents in the area. Merced Municipal Code Chapter 9.64 gives the Merced Police Department authority to take action to abate noise disturbances created by an individual or by parties and gatherings at private property. Enforcement of this provision would ensure that noise generated by project site activities deemed excessive would reduce noise impacts on nearby residences to a level that would be less than significant.

Construction of the proposed project would involve temporary increases in ambient noise levels, due to the use of construction equipment and vehicle traffic to and from the construction site. Typical equipment involved in construction generates maximum noise levels ranging from 76 to 90 dB at a distance of 50 feet (FHWA 2006). Although project

construction noise would cease once construction work is completed, this is considered a potentially significant short-term impact, as the project site is near existing residential development. Mitigation described below would reduce the amount of construction noise reaching nearby residential development, thereby reducing impacts to a level that would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

NOISE-1: The City shall require the construction contractor to implement the following measures during project construction:

- Construction activities shall be limited to between 7:00 a.m. and 6:00 p.m. Monday through Saturday to avoid noise-sensitive hours of the evenings and nights. Construction activities shall be prohibited on Sundays and holidays, unless the contractor obtains prior approval from the City.

- Construction equipment noise shall be minimized by muffling and shielding intakes and exhaust on construction equipment, per the manufacturer's specifications, and by shrouding or shielding impact tools.

- Construction contractors shall locate fixed construction equipment, such as compressors or generators, and construction staging areas as far as possible from nearby sensitive receptors, such as residences, schools, and hospitals.

Significance after Mitigation: Less than significant

b) Exposure to Groundborne Vibration or Noise.

Groundborne vibration is not a common environmental problem. It is typically associated with transportation facilities, although it is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of groundborne vibration are trains, buses on rough roads, and construction activities such as blasting, pile-driving, and operating heavy earth-moving equipment.

Other than operation of construction equipment during construction, the project would not involve these potential noise sources. In most cases, vibration induced by typical construction equipment does not result in adverse effects on people or structures. Noise from the equipment typically overshadows any meaningful ground vibration effects on people (Caltrans 2013). As the nearest residence is approximately 90 feet from the southwestern corner of the project site and is separated from it by Parsons Avenue, the residence is unlikely to receive any vibrations from the project site that would be perceptible. In any case, any vibrations generated by construction activities would cease once construction work is completed, and project operations would not generate any vibrations. Project impacts related to groundborne vibrations would be less than significant.

c) Public Airport and Private Airstrip Noise.

As discussed in Section 3.9, Hazards and Hazardous Materials, the nearest public airport to the project site is Merced Regional Airport, approximately 3.5 miles to the west. The project site is outside the established noise contours for Merced Regional Airport, which extend as far as 55 dB (Merced County ALUC 2012). There are also no private airstrips in the project vicinity. The project would have no impact associated with noise from airport or airstrip operations.

3.14 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)?			✓	
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				✓

NARRATIVE DISCUSSION

Environmental Setting

According to the 2020 U.S. Census, the population of Merced is 86,333, an increase of approximately 9.8% from its 2010 population of 78,958. As of January 1, 2021, the City of Merced had an estimated 30,041 housing units - an increase from 27,446 in 2010 (U.S. Census Bureau 2021). Of the total housing units in 2021, 19,167 were single-family detached units (typical houses), approximately 63.8% of the total. Approximately 16.5% of the total housing units were multifamily units of five or more per building. The total number of such units in 2021 was 4,956, an increase from 4,712 in 2010 (California Department of Finance 2021).

The U.S. Census Bureau indicates that the median gross rent is $1,111 (U.S. Census Bureau 2021). As noted in Chapter 1.0, Introduction, 3,464 households earned less than or equal to 30 percent of the area's median income. Of those households, 82.9 percent had a housing cost burden greater than 30 percent of their income and 80.3 percent had a cost burden greater than 50 percent of their income (City of Merced 2016).

Environmental Impacts and Mitigation Measures

a) Unplanned Population Growth.

The project would involve the construction of 108 multifamily residential units on an approximately four-acre site. Based upon the average of 3.18 persons per household in Merced (California Department of Finance 2021), the project would result in a potential population addition of approximately 343 people.

The proposed development is currently not consistent with the Merced General Plan, which designates the project site for commercial development. However, the project would be consistent with the objectives in the Housing Element of the Merced General Plan to increase affordable housing for lower-income households and to make more multifamily housing available (City of Merced 2016). The lower-income housing need is based largely upon the projected population growth in Merced.

The project would provide employment opportunities in Merced during its construction, which may attract people from outside the Merced area. However, these opportunities would be limited in number and would most likely be met from the existing population in the Merced area. Project impacts on unplanned population growth would be less than significant.

b) Displacement of Housing or People.

The project site is currently vacant and has no structures, residential or otherwise. Therefore, the project would not displace housing or people. The project would have no impact on displacement of people or housing.

3.15 PUBLIC SERVICES

Would the project:

a) Result in substantial adverse physical impacts associated with the provision of, 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:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
i) Fire protection?			✓	
ii) Police protection?			✓	
iii) Schools?			✓	
iv) Parks?			✓	
v) Other public facilities?			✓	

NARRATIVE DISCUSSION

Environmental Setting

Fire protection, rescue, and emergency medical response service are provided by the Merced Fire Department. The Fire Department consists of 62 uniformed firefighters and three civilian staff. It operates five fire stations that serve its own district in the City of Merced. The project site is within the district of Fire Station 54, which is located at 1425 East 21st Street. The Fire Department has a goal of maintaining a response time of four to six minutes for the first crew to arrive at a fire or medical emergency within an assigned district. As the City continues to grow in population and area, the fire protection system would have to change if it is to maintain this response time standard. This would require two existing stations to be relocated and five new facilities with personnel and equipment to be added to the system (City of Merced 2010).

Police protection services are provided by the Merced Police Department from its station at 611 West 22nd Street. The current City budget shows an allocation for 138 positions, which includes sworn officers and other staff. There were 111 sworn officers on Police Department staff in 2009 (City of Merced 2013). The City uses the service ratio of 1.32 sworn officers per 1,000 population. Staffing levels were adequate to meet existing needs (City of Merced 2010). The Police Department provides patrol, investigation, code enforcement, animal control, and dispatch services.

The project site is within the boundaries of the Weaver Union Elementary School District, which provides elementary and middle school services (kindergarten to 8th grade). Elementary school students residing on the project site would attend Pioneer Elementary School at 2950 Gerard Avenue. Enrollment at this school during the 2019-20 school year was 1,053 students. Weaver Middle School, the only middle school in the Weaver School District, is located at 3076 East Childs Avenue. The school had an enrollment of 948 students as of the 2019-20 school year (EdData 2021).

High school services are provided by the Merced Union High School District (MUHSD). The project site is north of Golden Valley High School, which is at the northeast corner of the intersection of Parsons Avenue and Childs Avenue. During the 2019-20 school year, enrollment at Golden Valley High School was 1,843 students (EdData 2021).

The Merced Parks and Community Services Department manages parks and recreation programs in the City. The project site is adjacent to Joe Herb Park, a City park that borders the project site. Section 3.16, Recreation, describes City parks in more detail. Other public facilities include the Merced branch of the Merced County Library at 2100 O Street, and the Merced County Courthouse at 2260 N Street.

Environmental Impacts and Mitigation Measures

a-i) Fire Protection.

The project would generate a demand for fire protection services by the Merced Fire Department. The project site is already served by the Fire Department, so the day-to-day increase in service demand would be related to emergency medical services for residents.

Buildings constructed as part of the project would be required to comply with the 2019 California Fire Code, as amended by the City in Merced Municipal Code Chapter 17.32.

The Fire Code contains provisions designed to improve fire safety in structures, including installation of sprinkler systems, alarm systems, and portable fire extinguishers, along with requirements for hydrants and fire flows. The project also would be subject to the City's adopted Building and Electrical Codes with their applicable provisions related to fire safety, including the installation of smoke detectors and sprinkler systems. Entryways would be constructed to City standards, which consider emergency vehicle accessibility. Compliance with these requirements would minimize fire risk to residents and buildings of the proposed project development.

The Merced Fire Department has indicated a need for new and improved facilities to serve the City. New development is required under Merced Municipal Code Chapter 17.62 to pay Public Facility Impact Fees to the City for future construction or improvement of Fire Department facilities, among other capital improvements. The Public Facility Impact Fee for multifamily development is $4,107 per dwelling unit, but would increase to $8,520 per unit on March 23, 2022. The fees would be used in part to pay for new fire stations and the remodeling of an existing station (City of Merced 2021). Compliance with the applicable codes and City standards, along with payment of fees, would reduce project impacts on fire protection services to a level that would be less than significant.

a-ii) Police Protection.

The project would generate a demand for police protection services by the Merced Police Department. The project site is within City limits and thus is already served by the Police Department. The Police Department anticipates that at least one new police station would be needed to serve the City's population. While the proposed project would not necessarily require new police facilities, new development is required to pay Public Facility Impact Fees to the City, which would in part pay for a new central station that is planned (City of Merced 2021). With payment of Public Service Impact Fees, project impacts related to police protection services would be less than significant.

a-iii) Schools.

The proposed project is likely to house students who would attend both Weaver School District and MUHSD schools. Based on a student generation rate of 0.5 used in a fee justification study (Weaver Union School District 2018), the project would generate approximately 54 elementary and middle school students. Additionally, based on a student generation rate of 0.072 students per unit used in a MUHSD fee justification study (MUHSD 2020), the project would generate approximately eight high school students.

The Weaver School District, in its fee justification study, stated that it currently exceeds its kindergarten-8th grade capacity and will continue to exceed its capacity into the 2022-2023 school year (Weaver Union School District 2018). The MUHSD's fee justification study indicated that it currently has adequate capacity to accommodate existing students, but no excess capacity would be available for students generated by new development not subject to mitigation agreements (MUHSD 2020). As such, the project would likely generate a requirement for new or expanded facilities at both Weaver School District and MUHSD.

To assist in meeting construction costs for future facilities, both the Weaver School District and the MUSHD collect developer fees for industrial, commercial, and residential projects in accordance with state law. Residential developer fees for both the Weaver School District and MUHSD are $3.48 per square foot; however, the Weaver School District shares one-third of its collected fees with MUHSD, and MUHSD shares two-thirds of its fees with its feeder elementary school districts, including Weaver. The project would pay required developer fees to both the Weaver School District and MUHSD. Under State law, payment of developer fees is considered adequate mitigation of potential environmental impacts for CEQA purposes, so project impacts on schools are considered less than significant.

a-iv, v) Parks and Other Public Facilities.

The addition of the units could result in an increase in residents who may visit parks and libraries and use other public facilities within the City. As discussed in Section 3.14, Population and Housing, the population increase resulting from the project is not expected to be significant. Therefore, additional demands on parks and other public facilities such as libraries are expected to be incremental, and no new or expanded public facilities would be required. Project impacts would be less than significant.

3.16 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 facilities would occur or be accelerated?			✓	
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?			✓	

NARRATIVE DISCUSSION

Environmental Setting

The City's Parks and Community Services Departments responsible for the landscape maintenance of approximately 300 acres of municipal parks, landscaped areas, traffic medians, athletic fields and open land areas while maintaining approximately 17 miles of associated bikeways. The City manages six parks that offer a variety of amenities, along with a senior community center. The nearest park to the project site is Joe Herb Park, which borders the project site on the south and east. Joe Herb Park, approximately 26.74 acres in size, offers several baseball diamonds and batting cages. It also has a picnic shelter with

nearby restroom facilities, a playground, three horseshoe pits, a barbeque pit with a sink, and five large picnic tables.

Outside the City, McConnell State Recreation Area is on the Merced River approximately 16 miles northwest of the project site. This recreational area offers picnic and camping facilities. Yosemite National Park, which offers a variety of recreational lands and facilities, is approximately 50 miles northeast of the project site.

Environmental Impacts and Mitigation Measures

a, b) Recreational Facilities.

As noted in Section 3.14, Population and Housing, the project is expected to generate an occupancy of approximately 343 residents. This is not considered a significant increase in population. The residents of the proposed project would generate a demand for recreational facilities and services. However, the existing parks and recreational facilities are expected to accommodate the additional residents without causing a substantial physical deterioration of these facilities.

Merced Municipal Code Chapter 17.38 requires an applicant for a building permit for residential development to pay a park and recreation facilities fee, which would be used to finance the acquisition, improvement, and expansion of public parks, playgrounds, and recreational facilities. The fee for the project would be $282 per unit; however, Municipal Code Section 17.38.050 indicates that such fees may be reduced for low-cost housing. The project applicant would be required to pay the park and recreation facilities fee. However, as of March 23, 2022, this fee has been repealed and Park fees are collected as part of the Public Facilities Financing Program.

In addition, the project proposes to construct a community center that would provide some recreational amenities. This would reduce the impact on offsite facilities that may occur with the increase in localized population resulting from the project. With payment of fees plus provision of an onsite community center, project impacts on recreational facilities are considered less than significant.

3.17 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?			✓	
b) Conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?			✓	

c) Substantially increase hazards to a geometric design feature (e g., sharp curves or dangerous intersections) or incompatible uses (e g, farm equipment)?			✓	
d) Result in inadequate emergency access?			✓	

NARRATIVE DISCUSSION

Environmental Setting

Existing Transportation Facilities and Services

The project site would be accessed from Parsons Avenue. Parsons Avenue is a four-lane, north-south City street that currently extends south from SR 140 to beyond Childs Avenue, from which it proceeds into Merced County. There are plans to connect Parsons Avenue to other road segments to the north, eventually converting it to a main north-south road in Merced. The Merced General Plan classifies Parsons Avenue as a "minor arterial". The Merced General Plan EIR indicated that traffic volume on Parsons Avenue between Childs Avenue and SR 140 was 9,600 (City of Merced 2010). Since no significant development appears to have occurred in the area since the EIR was released, the current traffic volume on Parsons Avenue would be approximately the same.

Parsons Avenue intersects with SR 140 north of the project site. SR 140 is a two-lane, east-west State highway that connects the Merced area with Interstate 5 to the west and Yosemite National Park to the east. It serves local traffic and a high volume of recreational traffic. SR 140 enters the City from the west at the intersection of 13th and V Streets, crosses the City via SR 99, and continues eastward. Traffic volume on SR 140 west of the Parsons Avenue intersection was 15,100, and 7,550 east of the intersection (City of Merced 2010).

Public transportation services in Merced are provided by Merced County Transit (The Bus), which is overseen by the Transit Joint Powers Authority for Merced County and is managed through MCAG. The Bus operates intercity routes within Merced, including the M5 route that connects southeastern Merced to the downtown area. The M5 route goes along Parsons Avenue by the project site, and a bus shelter is across Parsons Avenue from the site. Dial-A-Ride service is available for senior citizens, the handicapped, or those without a regularly scheduled fixed route bus operating within one mile of their residence.

The City of Merced has an extensive system of bicycle routes. An existing bike path extends along Parsons Avenue from SR 140 to Golden Valley High School, and an existing bike lane extends south of Childs Avenue. There are sidewalks on both sides of Parsons Avenue, including along the project site frontage.

Transportation Plans and Guidelines

Merced General Plan

The Transportation and Circulation Element of the Merced General Plan sets goals and policies intended to coordinate transportation/circulation with land use and other pertinent areas of the General Plan, while promoting the efficient movement of people, goods and services within the Merced area. Policy T-1.8 states that a minimum peak hour LOS D shall be used as a design objective for most existing City streets except under special circumstances. LOS is a measure of traffic flow on roadways and traffic delays at intersections using a scale from A to F, with A representing the best traffic flow or shortest intersection delays and F representing the worst traffic flow or longest intersection delays. LOS is still used as a measure of traffic performance, but its use to determine CEQA is now superseded by VMT (see below).

State CEQA Guidelines Section 15064.3

The State of California has recently added Section 15064.3 to the CEQA Guidelines, which is meant to incorporate SB 743 into CEQA analysis. SB 743 was enacted in 2013 with the intent to balance congestion management needs and the mitigation of the environmental impacts of traffic with statewide GHG emission reduction goals, mainly by developing an alternative mechanism for evaluating transportation impacts. Section 15064.3 states that VMT is the preferred method for evaluating transportation impacts, rather than the commonly used LOS. The VMT metric measures the total miles traveled by vehicles as a result of a given project. VMT accounts for the total environmental impact of transportation associated with a project, including use of non-vehicle travel modes.

While a quantitative analysis of VMT is preferred, a qualitative analysis may be used if existing models or methods are not available to estimate VMT for the project being considered. The City of Merced currently does not have traffic impact standards based on VMT. The Governor's Office of Planning and Research has issued a Technical Advisory on evaluating transportation impacts using VMT (OPR 2018).

Regional Transportation Plan/Sustainable Communities Strategy

MCAG adopted the current version of its Regional Transportation Plan (RTP) in 2018. The RTP seeks to ensure that the Merced County transportation system will continue to operate efficiently over the next 25 years with sufficient capacity to meet demand and with mobility options available for all of Merced County's residents. The RTP focuses on regional transportation infrastructure needs, which includes roadways, railways, airports, and pedestrian and bicycle facilities. Transportation improvements proposed near the project site that are part of the RTP include sidewalks on Childs Avenue from Parsons Avenue to Campus Parkway, and new road construction on Parsons Avenue from SR 140 to Stretch Drive (MCAG 2018a).

Part of the RTP is the SCS, which must demonstrate an approach to how land use development and transportation can work together to meet GHG emission reduction targets for cars and light trucks. Section 3.8, Greenhouse Gas Emissions, discusses the SCS in more detail.

a) Conflict with Transportation Plans, Ordinances and Policies.

Development of the project would generate new vehicle trips and potentially affect traffic operations at nearby intersections. The number of vehicle trips the project would generate would be approximately 587 on weekdays, with fewer trips on weekends. This trip estimate is based on the CalEEMod run for the project. CalEEMod bases its trip estimates on trip generation rates for apartments from the Institute of Transportation Engineers *Trip Generation Manual.* As noted, traffic volume on Parsons Avenue was 9,600, and this traffic volume was expected to change little from the last count. With the estimated vehicle trips generated by the project added, the total volume on Parsons Avenue would be 10,187.

The Merced General Plan describes traffic volume thresholds for LOS, based on the type of road or street. For a two-lane arterial such as Parsons Avenue, the maximum volume under which LOS D can be maintained is 16,800 (City of Merced 2012b). Therefore, Parsons Avenue would be able to maintain the minimum required LOS D with the project. The project would not lead to a conflict with the transportation goals and policies of the Merced General Plan.

The project would result in an increase in demand for public transit service. The frequency and proximity of future transit service is not known at this time and, as a result, demand for transit cannot be quantified. However, it is expected that The Bus routes can accommodate the additional passengers the project would generate. This would be consistent with the goals of the RTP/SCS, which encourage further use of public transit. Impacts on public transit are considered less than significant.

The project would result in an increase in demand for bicycle and pedestrian facilities. As noted, bicycle and pedestrian facilities already exist in the area and can accommodate the additional demand. Project impacts on bicycle and pedestrian facilities would be less than significant.

b) Conflict with CEQA Guidelines Section 15064.3(b).

As discussed above, VMT is now the preferred method for evaluating transportation impacts, rather than LOS. The City currently does not have its own traffic impact standards based on VMT. Therefore, guidance provided by the OPR Technical Advisory is used for this analysis.

The OPR Technical Advisory identifies screening criteria that can be used to determine whether sufficient evidence exists to presume a project will have a less-than-significant VMT impact without conducting a detailed study. One of the criteria applies to an affordable housing project, defined as a project consisting of deed-restricted affordable housing. OPR states that a project consisting of a high percentage of affordable housing may be a basis for the lead agency to find a less-than-significant impact on VMT. Evidence supports a presumption of less-than-significant impact for a 100% affordable residential development in infill locations (OPR 2018).

The proposed project is an affordable housing project by the OPR definition, as 100% of its units would be affordable to very-low income households. Therefore, project impacts based on VMT are considered less than significant. This conclusion is supported by the project's proximity to retail services and schools (see Section 3.11, Land Use), as well as the location of existing transit services. Therefore, the project would not conflict with CEQA Guidelines Section 15064.3(b), and impacts would be less than significant.

c) Transportation Hazards.

The project site is located along Parsons Avenue, which has curb, gutter, and sidewalk improvements in accordance with City standards and specifications. The project proposes a driveway that would allow vehicles to enter the project site without queuing on Parsons Avenue. Traffic generated by the project would be mostly passenger vehicles, similar in composition to current traffic on Parsons Avenue. Vehicles that could affect traffic flow, such as farm equipment, would not be generated by the project. The project would not create any road hazards; therefore, project impacts would be less than significant.

d) Emergency Access.

As described in Chapter 2.0, Project Description, the project would have one main entrance and a second entrance accessible to emergency vehicles only. Adequate access for emergency vehicles would be provided to the project site. Project impacts related to emergency access would be less than significant.

3.18 TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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				✓
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.				✓

NARRATIVE DISCUSSION

Environmental Setting

The project site, along with City of Merced, lies within the ethnographic territory of the Yokuts. The Yokuts territory covered portions of the San Joaquin Valley from the Tehachapi Mountains in the south to Stockton in the north. Settlements were oriented along the water ways, with their village sites normally placed adjacent to these features for their nearby water and food resources. House structures varied in size and shape, with most constructed from the readily available tules found in the extensive marshes of the low-lying valley areas. Economic subsistence was based on the acorn, with substantial dependency on gathering and processing of wild seeds and other vegetable foods. The rivers, streams, and sloughs that formed a maze within the San Joaquin Valley provided abundant food resources such as fish, shellfish, and turtles. Game, wild fowl, and small mammals were trapped and hunted to provide protein augmentation of the diet. Trade for goods was well-developed with tribes on the coast and in the Sierra Nevada and Great Basin (City of Merced 2010).

In 2004, the California Legislature enacted SB 18, which requires local governments to consult with tribes on potential cultural resource impacts when a general plan or a specific plan is adopted or amended, or when an open space area is designated. This project proposes a General Plan Amendment, so SB 18 potentially applies. However, SB 18 addresses land use planning, not CEQA environmental review.

In 2014, the California Legislature enacted AB 52, which focuses on CEQA consultation with Native American tribes on projects potentially affecting the tribes. The intent of this consultation is to avoid or mitigate potential impacts on "tribal cultural resources," which are defined as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe." Under AB 52, when a tribe requests consultation with a CEQA lead agency on projects within its traditionally and culturally affiliated geographical area, the lead agency must provide the tribe with notice of a proposed project within 14 days of a project application being deemed complete or when the lead agency decides to undertake the project, if it is the agency's own project. The tribe has up to 30 days to respond to the notice and request consultation; if consultation is requested, then the local agency has up to 30 days to initiate consultation.

Matters which may be subjects of AB 52 consultation include the type of CEQA environmental review necessary, the significance of tribal cultural resources, and project alternatives or appropriate measures for preservation or mitigation of the tribal cultural resource that the tribe may recommend to the lead agency. The consultation process ends when either (1) the resource in question is not considered significant, (2) the parties agree to mitigate or avoid a significant effect on a tribal cultural resource, or (3) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. Regardless of the outcome, a lead agency is still obligated under CEQA to mitigate for any significant environmental effects, as explicitly noted in AB 52.

Environmental Impacts and Mitigation Measures

a, b) Tribal Cultural Resources.

As noted in Section 3.5, Cultural Resources, no archaeological resources have been recorded on or near the project site. A records search conducted as part of the Merced General Plan EIR revealed only one recorded Native American archaeological resource in the Planning Area - a prehistoric bowl mortar in the southwest sector. It was noted that there was a possibility of the presence of unrecorded prehistoric period sites near the watercourses in the Merced area (City of Merced 2010). However, the project site is not near any watercourses.

Given the limited number of recorded Native American resources in the Merced area and the distance from a watercourse, the project site is considered unlikely to have any tribal cultural resources. Nevertheless, the City is expected to contact local tribes that may have an interest in the Merced area in accordance with SB 18 and AB 52 requirements.

Project construction could potentially uncover previously unknown archaeological resources, including those of Native American origin. Mitigation Measure CULT-1 would require construction work to stop at an uncovered resource site under an archaeologist can evaluate the resource and give recommendations for its disposition. Mitigation Measure CULT-2 sets procedures for the treatment of any Native American remains that may be uncovered during project construction. Implementation of these mitigation measures would reduce potential impacts on tribal cultural resources to a level that would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures: Implementation of Mitigation Measures CULT-1 and CULT-2.

Significance after Mitigation: Less than significant

3.19 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 effects?			✓	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?			✓	
c) Result in a determination by the wastewater treatment provider that would serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			✓	

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			✓	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			✓	

NARRATIVE DISCUSSION

Environmental Setting

Wastewater

The City of Merced collects and treats wastewater generated by City residents and businesses, along with wastewater generated by UC Merced to the north. The City's wastewater collection system consists of more than 400 miles of sewer lines ranging in diameter from 6 to 48 inches (City of Merced 2017). A sewer line is located adjacent to the project site along Parsons Avenue.

The collected wastewater is conveyed to the wastewater treatment and reclamation facility southwest of Merced. The treatment facility has a current capacity of 12 million gallons per day (mgd). As of 2017, the average wastewater flow into the treatment facility was approximately 8 mgd (City of Merced 2017). The City has plans to expand the treatment capacity of the existing facility to 20 mgd and to construct a new treatment facility to serve North Merced (City of Merced 2017).

Potable Water

The City provides potable water to City residents and business, as well as to UC Merced. As noted in Section 3.10, Hydrology and Water Quality, the City obtains its water from local aquifers through 20 active wells. The design capacity of the wells ranges from 1,200 to 4,000 gallons per minute (gpm), and total capacity is approximately 60,300 gpm, which translates into approximately 116,810 acre-feet per year. Annual demand as of 2012 was 25,899 acre-feet (City of Merced 2014b).

The City has approximately 280 miles of water system pipelines. The pipelines generally range from 4 to 16 inches in diameter and are made of cast iron, ductile iron, and polyvinyl chloride. The City's water system also includes four storage tanks with a total capacity of 1.5 million gallons. A water line 16 inches in diameter is located beneath Parsons Avenue adjacent to the project site (City of Merced 2014b).

Storm Drainage

Storm drainage generated in the developed areas of the City are collected by a municipal system. The system consists of approximately 112 miles of underground storm drain lines, detention ponds, underground storage pipes, 56 storm pump stations, basins, and associated storm inlet and discharge lines (City of Merced 2013). There are currently six discharge

points of drainage collected by the City's system: one in southeastern Merced at the Merced Irrigation District's Doane Lateral, and five west of Merced into creeks and sloughs (Merced Storm Water Group 2007).

As noted in Section 3.10, Hydrology and Water Quality, the City has an adopted SWMP, developed in compliance with the federal NPDES program and with the SWRCB's MS4 General Permit. The SWMP requires preparation of a construction Storm Water Pollution Prevention Plan and incorporation of post-construction BMPs into the project to protect water quality. Project disposal of storm drainage would be required to conform to the adopted SWMP.

Solid Waste

The City collects solid waste from both residential and commercial customers, and it provides recycling and green waste services. Solid waste collected in Merced is transported to one of two landfills in Merced County. The Billy Wright Landfill, approximately one mile west of Interstate 5 near Los Banos, has a maximum permitted disposal capacity of 14,800,000 cubic yards. As of September 30, 2010, this landfill had a remaining capacity of 11,370,000 cubic yards (CalRecycle 2018a). The Highway 59 Landfill, along SR 59 approximately six miles north of Merced, has a maximum permitted disposal capacity of 30,012,352 cubic yards. As of September 1, 2005 – the latest date for which information was available – this landfill had a remaining capacity of 28,025,334 cubic yards (CalRecycle 2018b).

Other Utilities

Natural gas and electrical power in the City are supplied by PG&E. The Merced Irrigation District also provides electrical service to some customers in the area. Telephone service is provided by various vendors. Cable television is available from Comcast, and satellite television is available from several sources. Similarly, cellular telephone service can be purchased from several vendors. Existing poles with attached electrical and communication lines are situated along Parsons Avenue along the western boundary of the project site. State-regulated franchise utilities are obligated to extend services to new development sites as necessary.

Environmental Impacts and Mitigation Measures

a) Relocation or Construction of New Facilities.

The project would connect to existing water, sewer, storm drainage, electricity, natural gas, and cable television lines in the project vicinity. As noted in Chapter 2.0, Project Description, the project can be served by the City for the provision of water, wastewater, and storm drainage services. Also, as noted in Chapter 2.0, a 16-inch diameter water line and eight-inch sewer line are already beneath Parsons Avenue. No new utility facilities would need to be constructed or relocated to provide these services, other than connecting lines to the project site. All connecting lines to City systems would be constructed in accordance with City standards and specifications. Project impacts related to relocation or construction of new facilities would be less than significant.

b) Water Systems and Supply.

The project would connect to the existing water line located along Parsons Avenue. The existing water supply line has adequate capacity to serve the project; no new or expanded water lines beyond connecting lines from the project site would be required.

The project would place additional demand on the City's water supply. As indicated above, the City's water system had approximately 90,911 acre-feet of water per year available. Based on a water usage factor of 2.9 acre-feet per year per unit of high-medium density residential development, estimated water usage by the project would be 313.2 acre-feet per year. The City has adequate water supplies to satisfy this demand, even during multiple dry years (City of Merced 2014b). No new or expanded water entitlements would be required. Project impacts on water systems and supply would be less than significant.

c) Wastewater Treatment Capacity.

The project would place additional demand on the City's wastewater collection and treatment system. Based on a factor of 7,188 gallons per day per acre for high-medium density residential users (City of Merced 2017), the estimated amount of wastewater that would be generated by the project would be 33,783.6 gallons per day (0.034 mgd). As indicated above, the City's wastewater treatment facility currently has available capacity of 4.0 mgd on average, and there are plans to expand facility capacity by another 8.0 mgd. Thus, the City's wastewater treatment facility would have adequate capacity to accommodate wastewater generated by the project. Project impacts on wastewater services would be less than significant.

d, e) Solid Waste Services.

The project would generate solid waste consistent with residential land uses. The project is not anticipated to create a significant amount of solid waste. All solid waste generated during construction and operations would be removed in accordance with federal, state, and local regulations. The Highway 99 Landfill, with 93% of its capacity available, could accommodate project-generated solid waste. Project impacts would be less than significant.

3.20 WILDFIRE

If located in or near State Responsibility Areas or lands classified as Very High Fire Hazard Severity Zones, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?				✓
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?				✓
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water				✓

sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				✓

NARRATIVE DISCUSSION

Environmental Setting

The Merced General Plan states that wildland and vegetation fire hazards exist in Merced County, mostly outside urban areas. The Valley's long, hot, dry summers and extensive vegetation creates a fire season that extends from late spring to early fall. As the City has annexed large blocks of undeveloped land, the potential for wildland and vegetation fires within the City has increased (City of Merced 2012b).

Cal Fire's Fire and Resource Assessment Program identifies fire threat based on a combination of two factors: 1) fire frequency, or the likelihood of a given area burning, and 2) potential fire behavior (hazard). These two factors are combined in determining the following Fire Hazard Severity Zones: Moderate, High, Very High, Extreme. These zones apply to areas designated as State Responsibility Areas – areas in which the State has primary firefighting responsibility. The project site is not within a State Responsibility Area and therefore has not been placed in a Fire Hazard Severity Zone for such areas (Cal Fire 2007a). Both the project site and surrounding area are in a Local Responsibility Area, and both areas are not in any designated fire hazard severity zones (Cal Fire 2007b).

Environmental Impacts and Mitigation Measures

a) Emergency Response Plans and Emergency Evacuation Plans.

The project site is not part of a State Responsibility Area, and Cal Fire maps indicate the site is not designated within a Very High Fire Hazard Severity Zone or a zone of higher severity for either state or local responsibility areas. The project site is in a predominantly urban area, which is not prone to wildfires. As discussed in Section 3.9, Hazards and Hazardous Materials, the project would not obstruct any roadways once construction work is completed. The project would have no impact related to wildfire emergency response plans or emergency evacuation plans.

b) Exposure of Project Occupants to Wildfire Hazards.

The project site is not part of a State Responsibility Area, and Cal Fire maps indicate the site is not designated within a Very High Fire Hazard Severity Zone or a zone of higher severity for either state or local responsibility areas. The project site is in a predominantly urban area, which is not prone to wildfires. The project site itself contains little vegetation; however, the project would reduce the existing fire hazard on the site by replacing an existing vacant that has some grasses and weeds with developed area and landscaping. The project would have no impact related to exposure of project occupants to wildfire hazards.

c) Installation and Maintenance of Infrastructure.

The project proposes the installation of roads and parking areas and the extension of utilities. The installation of these facilities is not expected to exacerbate the wildfire risk on the project site, which is minimal as explained in b) above. The project would have no impact related to exacerbation of wildfire hazards by infrastructure improvements.

d) Risks from Runoff, Post-Fire Slope Instability, or Drainage Changes.

The project site is in a topographically flat area. There are no streams or other channels that cross the site. As such, it is not expected that people or structures would be exposed to significant risks from changes resulting from fires in steeper areas, including downslope or downstream flooding or landslides. The project would have no impact related to risks from runoff, post-fire slope instability, or drainage changes.

3.21 MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		✓		
b) Does the project have impacts 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.)			✓	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			✓	

NARRATIVE DISCUSSION

a) Findings on Biological and Cultural Resources.

The project's potential biological, cultural, and tribal cultural resource impacts were described in Sections 3.4, 3.5 and 3.18, respectively. Potentially significant environmental

effects were identified in these issue areas, but these effects would be reduced to levels that would be less than significant with implementation of identified mitigation measures.

b) Findings on Individually Limited but Cumulatively Considerable Impacts.

The potential cumulative impacts of urban development of the site were accounted for in the Merced General Plan EIR (City of Merced 2010). The potential environmental effects identified in this IS/MND have been considered in conjunction with each other as to their potential to generate other potentially significant effects.

As described in this IS/MND, the potential environmental effects of the project would either be less than significant or would have no impact at all. Where the project involves potentially significant effects, these effects would be avoided or reduced to a level that is less than significant with proposed mitigation measures and/or compliance with applicable regulations and conditions of required permits. The various potential environmental effects of the project would not combine to generate any potentially significant cumulative effects. Overall, the cumulative effects of the project were determined to be less than significant.

c) Findings on Adverse Effects on Human Beings.

Potential adverse effects on human beings were discussed in Section 3.7, Geology and Soils (seismic hazards); Section 3.9, Hazards and Hazardous Materials; Section 3.10, Hydrology and Water Quality (flooding); Section 3.17, Transportation (traffic hazards); and Section 3.20, Wildfire. All potential adverse effects on human beings identified in those sections are either less than significant or would be reduced to levels that are less than significant through mitigation measures or through compliance with applicable laws, regulations, and ordinances.

4.0 REFERENCES

4.1 DOCUMENT PREPARERS

This IS/MND was prepared by BaseCamp Environmental, Inc. for use by and under the supervision of the City of Merced. The following persons were involved in preparation of the IS/MND:

BaseCamp Environmental, Inc.

Charlie Simpson, Principal
Terry Farmer, AICP, Senior Environmental Planner
Krista Simpson, Graphics

4.2 DOCUMENTS CITED

California Air Resources Board (ARB). 2017. California's 2017 Climate Change Scoping Plan. November 2017.

_____. 2021. California Greenhouse Gas Emissions for 2000 to 2019: Trends of Emissions and Other Indicators. July 28, 2021.

California Department of Conservation, Division of Land Resources Protection, Farmland Mapping and Monitoring Program (FMMP). 2018. Merced County Important Farmland 2016, Sheet 1 of 2 (map). Map published February 2018.

California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR). 2021. Well Finder – CalGEM GIS. Available online at https://maps.conservation.ca.gov/doggr/wellfinder/. Accessed October 20, 2021.

California Department of Finance. 2021. Report E-5 - Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011-2021, with 2010 Benchmark. Released May 1, 2021.

California Department of Forestry and Fire Protection (Cal Fire). 2007a. Fire Hazard Severity Zones in SRA, Merced County (map). Adopted November 7, 2007.

_____. 2007b. Draft Fire Hazard Severity Zones in LRA, Merced County (map). October 2, 2007.

California Department of Resources, Recycling, and Recovery (CalRecycle). 2018a. Facility/Site Summary Details: Billy Wright Disposal Site. Available at http://www.calrecycle.ca.gov/SWFacilities/Directory/24-AA-0002/Detail/. Accessed September 23, 2018.

_____. 2018b. Facility/Site Summary Details: Highway 59 Disposal Site. Available at http://www.calrecycle.ca.gov/SWFacilities/Directory/24-AA-0001/Detail/. Accessed September 23, 2018.

California Department of Toxic Substances Control (DTSC). 2021. EnviroStor database, www.envirostor.dtsc.ca.gov. Accessed October 14, 2021.

California Department of Transportation (Caltrans). 2013. Transportation and Construction Vibration Guidance Manual. September 2013.

_____. 2015. Paleontological Evaluation Report and Preliminary Paleontological Mitigation Plan for the Madera 41 South Expressway Project, Madera County, California. Prepared by Cogstone Resource Management Inc. November 2015.

_____. 2018. List of Officially Designated State Scenic Highways. Available online at http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/scenic_hwy.htm. Accessed September 23, 2018.

California Department of Water Resources (DWR). 2014. Geology of the Northern Sacramento Valley. June 2014, updated September 22, 2014.

_____. 2017. California's Groundwater. DWR Bulletin 118. Last update June 2017.

California Energy Commission (CEC). 2020a. Electricity Consumption by County – Merced County. Available online at ecdms.energy.ca.gov/elecbycounty.aspx.

_____. 2020b. Gas Consumption by County – Merced County. Available online at ecdms.energy.ca.gov/gasbycounty.aspx.

California Environmental Protection Agency (CalEPA). 2021a. Sites Identified with Waste Constituents Above Hazardous Waste Levels Outside the Waste Management Unit. Available online at https://calepa.ca.gov/wp-content/uploads/sites/6/2016/10/SiteCleanup-CorteseList-CurrentList.pdf. Accessed March 5, 2021.

_____. 2021b. List of "Active" CDO and CAO from Water Board. Available online at http://www.calepa.ca.gov/SiteCleanup/CorteseList/default.htm. Accessed January 14, 2021.

California Geological Survey. 2015. CGS Information Warehouse: Regulatory Maps. Available online at http://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=regulatorymaps. Accessed September 22, 2018.

California Office of Environmental Health Hazard Assessment (OEHHA). 2021. CalEnviroScreen 4.0. Available online at oehha.ca.gov/calenviroscreen/report/calenviroscreen-30. Accessed October 15, 2021.

Central California Information Center (CCIC). 2021. Records Search File #11950I, Parson Apartments, 1808 Parsons Avenue, Merced, California. October 19, 2021.

City of Merced. 2010. Draft Program Environmental Impact Report, City of Merced Merced Vision 2030 General Plan. Prepared by Quad Knopf. August 2010.

_____. 2012a. Merced Climate Action Plan. October 1, 2012.

_____. 2012b. Merced Vision 2030 General Plan. January 2012.

_____. 2013. City of Merced Municipal Service Review. Prepared by Economic and Planning Systems, Inc. Adopted by LAFCo May 23, 2013.

_____. 2014a. Post-Construction Standards Plan. Copyright by WGR Southwest, Inc.

_____. 2014b. City of Merced Water Master Plan. Prepared by AECOM. January 2014.

_____. 2016. Housing Element of the Merced Vision 2030 General Plan. Adopted July 18, 2016.

_____. 2017. City of Merced Wastewater Collection System Master Plan (draft). Prepared by Stantec Consulting Services, Inc. December 15, 2017.

_____. 2020. City of Merced Consumer Confidence Report, Reporting Year 2020.

_____. 2021. Public Facilities Financing Plan – Projects and Impact Fees (brochure).

EdData. 2021. Census Day Enrollment. Available online at ed-data.org/school/Merced/. Accessed October 14, 2021.

Egan, M. David. 1988. Architectural Acoustics. McGraw Hill, New York.

Federal Emergency Management Agency. 2008. Flood Insurance Rate Map (FEMA #06047C0200G). Merced County, California. Effective date December 2, 2008.

Federal Highway Administration (FHWA). 2006. Roadway Construction Noise Model User's Guide. FHWA-HEP-05-054. January 2006.

Governor's Office of Planning and Research (OPR). 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA. December 2018.

Merced County. 2013a. 2030 Merced County General Plan. December 10, 2013.

_____. 2013b. 2030 Merced County General Plan Update Recirculated Draft Program Environmental Impact Report. July 2013.

Merced County Airport Land Use Commission (ALUC). 2012. Merced County Airport Land Use Compatibility Plan. Prepared by Mead and Hunt. Adopted June 21, 2012.

Merced County Association of Governments (MCAG). 2018a. Regional Transportation Plan/Sustainable Communities Strategy for Merced County.

_____. 2018b. Draft Program Environmental Impact Report for the MCAG 2018 Regional Transportation Plan/Sustainable Communities Strategy. May 2018.

Merced Storm Water Group. 2007. Storm Water Management Program. Prepared by Stantec. April 2007.

Merced Sustainable Groundwater Management Agency (SGMA). 2019. Merced Groundwater Subbasin Groundwater Sustainability Plan. Prepared by Woodard and Curran. November 2019.

Merced Union High School District (MUHSD). 2020. Development Fee Justification Study. Prepared by Odell Planning and Research, Inc. May 2020.

Pacific Gas and Electric Company (PG&E). 2006. Final PG&E San Joaquin Valley Operations and Maintenance Habitat Conservation Plan. Prepared by Jones and Stokes. December 2006.

RMC Water and Environment. 2013. Merced Integrated Regional Water Management Plan. August 2013.

San Joaquin Valley Air Pollution Control District (SJVAPCD). 2015. Guide for Assessing and Mitigating Air Quality Impacts. March 19, 2015.

_____. 2021. Ambient Air Quality Standards and Valley Attainment Status. SJVAPCD website, http://www.valleyair.org/aqinfo/attainment.htm. Accessed March 5, 2021.

State Water Resources Control Board (SWRCB). 2021. GeoTracker website, www.geotracker.swrcb.ca.gov. Accessed October 14, 2021.

U.S. Census Bureau. 2021. Geographic Profile - Merced, California. Available online at https://data.census.gov/cedsci/. Accessed October 26, 2021.

U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS). 2021. Custom Soil Resource Report for Merced Area, California, 1808 Parsons Avenue. October 14, 2021.

U.S. Department of Agriculture, Soil Conservation Service (SCS). 1962. Soil Survey, Merced Area, California. Issued July 1962.

U.S. Energy Information Administration (EIA). 2018. 2015 Residential Energy Consumption Survey: Energy Consumption and Expenditures Tables. Table CE4.10: Annual household site end-use consumption by fuel in the West - averages, 2015. Release date May 2018.

U.S. Environmental Protection Agency (EPA). 2009. Endangerment and Cause of Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act. Federal Register Vol. 74, No. 239, pp. 66496-66546. December 15, 2009.

U.S. Geological Survey. 2021. USGS Groundwater Watch – Site No. 371832120231201 - 007S014E24K001M. Available online at https://groundwaterwatch.usgs.gov/AWLSites.asp?mt=g&S=371832120231201&ncd=awl. Accessed October 25, 2021.

Wagner, D. L., E. J. Bortugno, and R. D. McJunkin. 1991. Geologic Map of the San Francisco-San Jose Quadrangle, California, 1:250,000. California Division of Mines and Geology, Regional Geologic Map Series.

Weaver Union School District. 2018. Level I Developer Fee Study for Weaver Union School District. Prepared by Jack Schreder and Associates, Inc. March 21, 2018.

Westerling, Leroy, Josue Medellin-Azuara, and Joshua Viers. 2018. San Joaquin Valley Summary Report. California's Fourth Climate Change Assessment. Publication number: SUM-CCCA4-2018-003.

4.3 PERSONS CONSULTED

Viviano Rodriguez, Visionary Home Builders

5.0 NOTES RELATED TO EVALUATION OF ENVIRONMENTAL IMPACTS

The following notes are included in the Environmental Information Checklist shown in Appendix G of the State CEQA guidelines. The notes provide guidance as to the proper use of the form.

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

    a) Earlier Analysis Used. Identify and state where they are available for review.

    b) Impacts Adequately Addressed: Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

c) Mitigation Measures: For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures, which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:

   a) the significance criteria or threshold, if any, used to evaluate each question; and

   b) the mitigation measure identified, if any, to reduce the impact to less than significance.

APPENDIX A
AIR QUALITY MODELING RESULTS

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Parsons Avenue Apartments

Merced County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	108.00	Dwelling Unit	4.70	108,000.00	309

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	49
Climate Zone	3			**Operational Year**	2023
Utility Company	Merced Irrigation District				
CO2 Intensity (lb/MWhr)	290.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Actual acreage.

Construction Phase - No demolition.

Grading - Actual acreage.

Trips and VMT - Estimated hauling trips.

Architectural Coating - Per SJVAPCD Rule 4601.

Woodstoves - No fireplaces.

Area Coating - Per SJVAPCD Rule 4601.

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation - Per SJVAPCD Rule 4601.

Water Mitigation -

Parsons Avenue Apartments - Merced County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	150.00	50.00
tblAreaCoating	Area_EF_Residential_Exterior	150	50
tblAreaCoating	Area_EF_Residential_Interior	150	50
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	150	50
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	150	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	6/2/2023	5/5/2023
tblConstructionPhase	PhaseEndDate	6/28/2022	5/31/2022
tblConstructionPhase	PhaseEndDate	7/15/2022	6/17/2022
tblConstructionPhase	PhaseEndDate	7/5/2022	6/7/2022
tblConstructionPhase	PhaseStartDate	7/16/2022	6/18/2022
tblConstructionPhase	PhaseStartDate	7/6/2022	6/8/2022
tblConstructionPhase	PhaseStartDate	6/29/2022	6/1/2022
tblFireplaces	NumberGas	59.40	0.00
tblFireplaces	NumberNoFireplace	48.60	108.00
tblGrading	AcresOfGrading	7.50	4.70
tblGrading	AcresOfGrading	8.00	4.70
tblGrading	MaterialImported	0.00	102,366.00
tblLandUse	LotAcreage	2.84	4.70
tblTripsAndVMT	HaulingTripNumber	0.00	5,118.00

2.0 Emissions Summary

Parsons Avenue Apartments - Merced County, Annual

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					
2022	0.1691	1.7090	1.5275	4.2400e-003	0.1737	0.0692	0.2429	0.0649	0.0650	0.1299	0.0000	384.9479	384.9479	0.0471	0.0273	394.2530
2023	0.4333	0.7725	0.9778	1.8000e-003	0.0342	0.0364	0.0705	9.1600e-003	0.0342	0.0434	0.0000	157.2142	157.2142	0.0306	2.3900e-003	158.6910
Maximum	**0.4333**	**1.7090**	**1.5275**	**4.2400e-003**	**0.1737**	**0.0692**	**0.2429**	**0.0649**	**0.0650**	**0.1299**	**0.0000**	**384.9479**	**384.9479**	**0.0471**	**0.0273**	**394.2530**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1691	1.7090	1.5275	4.2400e-003	0.1297	0.0692	0.1989	0.0432	0.0650	0.1082	0.0000	384.9477	384.9477	0.0471	0.0273	394.2528
2023	0.4333	0.7725	0.9778	1.8000e-003	0.0342	0.0364	0.0705	9.1600e-003	0.0342	0.0434	0.0000	157.2140	157.2140	0.0306	2.3900e-003	158.6909
Maximum	**0.4333**	**1.7090**	**1.5275**	**4.2400e-003**	**0.1297**	**0.0692**	**0.1989**	**0.0432**	**0.0650**	**0.1082**	**0.0000**	**384.9477**	**384.9477**	**0.0471**	**0.0273**	**394.2528**

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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**21.17**	**0.00**	**14.04**	**29.32**	**0.00**	**12.53**	**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	**6-1-2022**	**8-31-2022**	1.0090	1.0090
2	**9-1-2022**	**11-30-2022**	0.6044	0.6044
3	**12-1-2022**	**2-28-2023**	0.5652	0.5652
4	**3-1-2023**	**5-31-2023**	0.4013	0.4013
5	**6-1-2023**	**8-31-2023**	0.4549	0.4549
		Highest	1.0090	1.0090

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	0.4798	9.2500e-003	0.8021	4.0000e-005		4.4400e-003	4.4400e-003		4.4400e-003	4.4400e-003	0.0000	1.3099	1.3099	1.2600e-003	0.0000	1.3414
Energy	6.8600e-003	0.0586	0.0250	3.7000e-004		4.7400e-003	4.7400e-003		4.7400e-003	4.7400e-003	0.0000	124.1255	124.1255	7.6800e-003	2.0200e-003	124.9187
Mobile	0.3117	0.7270	2.9767	7.1500e-003	0.6124	7.4800e-003	0.6199	0.1643	7.0500e-003	0.1713	0.0000	663.7447	663.7447	0.0338	0.0448	677.9258
Waste						0.0000	0.0000		0.0000	0.0000	10.0846	0.0000	10.0846	0.5960	0.0000	24.9842
Water						0.0000	0.0000		0.0000	0.0000	2.2324	7.0747	9.3071	0.2301	5.5100e-003	16.7017
Total	**0.7984**	**0.7948**	**3.8037**	**7.5600e-003**	**0.6124**	**0.0167**	**0.6291**	**0.1643**	**0.0162**	**0.1805**	**12.3170**	**796.2548**	**808.5718**	**0.8688**	**0.0523**	**845.8718**

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	0.4798	9.2500e-003	0.8021	4.0000e-005		4.4400e-003	4.4400e-003		4.4400e-003	4.4400e-003	0.0000	1.3099	1.3099	1.2600e-003	0.0000	1.3414
Energy	6.8600e-003	0.0586	0.0250	3.7000e-004		4.7400e-003	4.7400e-003		4.7400e-003	4.7400e-003	0.0000	124.1255	124.1255	7.6800e-003	2.0200e-003	124.9187
Mobile	0.2490	0.4634	1.8959	3.9600e-003	0.3287	4.2200e-003	0.3329	0.0882	3.9700e-003	0.0922	0.0000	367.6042	367.6042	0.0244	0.0276	376.4238
Waste						0.0000	0.0000		0.0000	0.0000	2.5212	0.0000	2.5212	0.1490	0.0000	6.2460
Water						0.0000	0.0000		0.0000	0.0000	1.7859	5.6598	7.4457	0.1841	4.4100e-003	13.3614
Total	**0.7356**	**0.5313**	**2.7229**	**4.3700e-003**	**0.3287**	**0.0134**	**0.3421**	**0.0882**	**0.0132**	**0.1013**	**4.3071**	**498.6994**	**503.0065**	**0.3664**	**0.0340**	**522.2913**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**7.86**	**33.16**	**28.41**	**42.20**	**46.33**	**19.57**	**45.62**	**46.33**	**18.98**	**43.87**	**65.03**	**37.37**	**37.79**	**57.82**	**35.00**	**38.25**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2022	5/31/2022	5	0	
2	Site Preparation	Site Preparation	6/1/2022	6/7/2022	5	5	
3	Grading	Grading	6/8/2022	6/17/2022	5	8	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Building Construction	Building Construction	6/18/2022	5/5/2023	5	230	
5	Paving	Paving	6/3/2023	6/28/2023	5	18	
6	Architectural Coating	Architectural Coating	6/29/2023	7/24/2023	5	18	

Acres of Grading (Site Preparation Phase): 4.7

Acres of Grading (Grading Phase): 4.7

Acres of Paving: 0

Residential Indoor: 218,700; Residential Outdoor: 72,900; 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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	5,118.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	78.00	12.00	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	16.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2022

Unmitigated Construction On-Site

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

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Parsons Avenue Apartments - Merced County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2022

Mitigated Construction On-Site

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

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0477	0.0000	0.0477	0.0251	0.0000	0.0251	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.9300e-003	0.0827	0.0492	1.0000e-004		4.0300e-003	4.0300e-003		3.7100e-003	3.7100e-003	0.0000	8.3599	8.3599	2.7000e-003	0.0000	8.4274
Total	**7.9300e-003**	**0.0827**	**0.0492**	**1.0000e-004**	**0.0477**	**4.0300e-003**	**0.0517**	**0.0251**	**3.7100e-003**	**0.0288**	**0.0000**	**8.3599**	**8.3599**	**2.7000e-003**	**0.0000**	**8.4274**

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	1.8000e-004	1.3000e-004	1.4700e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3071	0.3071	1.0000e-005	1.0000e-005	0.3106
Total	**1.8000e-004**	**1.3000e-004**	**1.4700e-003**	**0.0000**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.3071**	**0.3071**	**1.0000e-005**	**1.0000e-005**	**0.3106**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0215	0.0000	0.0215	0.0113	0.0000	0.0113	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.9300e-003	0.0827	0.0492	1.0000e-004		4.0300e-003	4.0300e-003		3.7100e-003	3.7100e-003	0.0000	8.3598	8.3598	2.7000e-003	0.0000	8.4274
Total	**7.9300e-003**	**0.0827**	**0.0492**	**1.0000e-004**	**0.0215**	**4.0300e-003**	**0.0255**	**0.0113**	**3.7100e-003**	**0.0150**	**0.0000**	**8.3598**	**8.3598**	**2.7000e-003**	**0.0000**	**8.4274**

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	1.8000e-004	1.3000e-004	1.4700e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3071	0.3071	1.0000e-005	1.0000e-005	0.3106
Total	**1.8000e-004**	**1.3000e-004**	**1.4700e-003**	**0.0000**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.3071**	**0.3071**	**1.0000e-005**	**1.0000e-005**	**0.3106**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0324	0.0000	0.0324	0.0144	0.0000	0.0144	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.7900e-003	0.0834	0.0611	1.2000e-004		3.7600e-003	3.7600e-003		3.4600e-003	3.4600e-003	0.0000	10.4219	10.4219	3.3700e-003	0.0000	10.5062
Total	**7.7900e-003**	**0.0834**	**0.0611**	**1.2000e-004**	**0.0324**	**3.7600e-003**	**0.0361**	**0.0144**	**3.4600e-003**	**0.0179**	**0.0000**	**10.4219**	**10.4219**	**3.3700e-003**	**0.0000**	**10.5062**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.6600e-003	0.3863	0.0758	1.5500e-003	0.0438	3.9700e-003	0.0477	0.0120	3.7900e-003	0.0158	0.0000	148.9831	148.9831	5.6000e-004	0.0234	155.9768
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	2.4000e-004	1.8000e-004	1.9600e-003	0.0000	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4094	0.4094	2.0000e-005	1.0000e-005	0.4141
Total	**9.9000e-003**	**0.3865**	**0.0777**	**1.5500e-003**	**0.0442**	**3.9700e-003**	**0.0482**	**0.0122**	**3.7900e-003**	**0.0160**	**0.0000**	**149.3925**	**149.3925**	**5.8000e-004**	**0.0234**	**156.3908**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0146	0.0000	0.0146	6.4700e-003	0.0000	6.4700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.7900e-003	0.0834	0.0611	1.2000e-004		3.7600e-003	3.7600e-003		3.4600e-003	3.4600e-003	0.0000	10.4219	10.4219	3.3700e-003	0.0000	10.5062
Total	**7.7900e-003**	**0.0834**	**0.0611**	**1.2000e-004**	**0.0146**	**3.7600e-003**	**0.0183**	**6.4700e-003**	**3.4600e-003**	**9.9300e-003**	**0.0000**	**10.4219**	**10.4219**	**3.3700e-003**	**0.0000**	**10.5062**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.6600e-003	0.3863	0.0758	1.5500e-003	0.0438	3.9700e-003	0.0477	0.0120	3.7900e-003	0.0158	0.0000	148.9831	148.9831	5.6000e-004	0.0234	155.9768
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	2.4000e-004	1.8000e-004	1.9600e-003	0.0000	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4094	0.4094	2.0000e-005	1.0000e-005	0.4141
Total	**9.9000e-003**	**0.3865**	**0.0777**	**1.5500e-003**	**0.0442**	**3.9700e-003**	**0.0482**	**0.0122**	**3.7900e-003**	**0.0160**	**0.0000**	**149.3925**	**149.3925**	**5.8000e-004**	**0.0234**	**156.3908**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1194	1.0931	1.1454	1.8900e-003		0.0566	0.0566		0.0533	0.0533	0.0000	162.2077	162.2077	0.0389	0.0000	163.1792
Total	**0.1194**	**1.0931**	**1.1454**	**1.8900e-003**		**0.0566**	**0.0566**		**0.0533**	**0.0533**	**0.0000**	**162.2077**	**162.2077**	**0.0389**	**0.0000**	**163.1792**

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	1.9200e-003	0.0467	0.0144	1.8000e-004	5.5600e-003	5.2000e-004	6.0800e-003	1.6100e-003	5.0000e-004	2.1000e-003	0.0000	17.0018	17.0018	1.0000e-004	2.5300e-003	17.7592
Worker	0.0219	0.0164	0.1781	4.1000e-004	0.0435	2.8000e-004	0.0438	0.0116	2.5000e-004	0.0118	0.0000	37.2571	37.2571	1.4800e-003	1.2900e-003	37.6797
Total	**0.0239**	**0.0631**	**0.1925**	**5.9000e-004**	**0.0491**	**8.0000e-004**	**0.0499**	**0.0132**	**7.5000e-004**	**0.0139**	**0.0000**	**54.2589**	**54.2589**	**1.5800e-003**	**3.8200e-003**	**55.4389**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1194	1.0931	1.1454	1.8900e-003		0.0566	0.0566		0.0533	0.0533	0.0000	162.2075	162.2075	0.0389	0.0000	163.1790
Total	**0.1194**	**1.0931**	**1.1454**	**1.8900e-003**		**0.0566**	**0.0566**		**0.0533**	**0.0533**	**0.0000**	**162.2075**	**162.2075**	**0.0389**	**0.0000**	**163.1790**

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	1.9200e-003	0.0467	0.0144	1.8000e-004	5.5600e-003	5.2000e-004	6.0800e-003	1.6100e-003	5.0000e-004	2.1000e-003	0.0000	17.0018	17.0018	1.0000e-004	2.5300e-003	17.7592
Worker	0.0219	0.0164	0.1781	4.1000e-004	0.0435	2.8000e-004	0.0438	0.0116	2.5000e-004	0.0118	0.0000	37.2571	37.2571	1.4800e-003	1.2900e-003	37.6797
Total	**0.0239**	**0.0631**	**0.1925**	**5.9000e-004**	**0.0491**	**8.0000e-004**	**0.0499**	**0.0132**	**7.5000e-004**	**0.0139**	**0.0000**	**54.2589**	**54.2589**	**1.5800e-003**	**3.8200e-003**	**55.4389**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0708	0.6473	0.7310	1.2100e-003		0.0315	0.0315		0.0296	0.0296	0.0000	104.3121	104.3121	0.0248	0.0000	104.9325
Total	**0.0708**	**0.6473**	**0.7310**	**1.2100e-003**		**0.0315**	**0.0315**		**0.0296**	**0.0296**	**0.0000**	**104.3121**	**104.3121**	**0.0248**	**0.0000**	**104.9325**

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	6.3000e-004	0.0243	7.8700e-003	1.1000e-004	3.5700e-003	1.6000e-004	3.7300e-003	1.0300e-003	1.5000e-004	1.1800e-003	0.0000	10.5416	10.5416	4.0000e-005	1.5700e-003	11.0095
Worker	0.0129	9.1300e-003	0.1033	2.5000e-004	0.0280	1.7000e-004	0.0282	7.4400e-003	1.5000e-004	7.5900e-003	0.0000	23.1819	23.1819	8.5000e-004	7.6000e-004	23.4285
Total	**0.0135**	**0.0335**	**0.1112**	**3.6000e-004**	**0.0316**	**3.3000e-004**	**0.0319**	**8.4700e-003**	**3.0000e-004**	**8.7700e-003**	**0.0000**	**33.7235**	**33.7235**	**8.9000e-004**	**2.3300e-003**	**34.4380**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0708	0.6473	0.7310	1.2100e-003		0.0315	0.0315		0.0296	0.0296	0.0000	104.3120	104.3120	0.0248	0.0000	104.9324
Total	**0.0708**	**0.6473**	**0.7310**	**1.2100e-003**		**0.0315**	**0.0315**		**0.0296**	**0.0296**	**0.0000**	**104.3120**	**104.3120**	**0.0248**	**0.0000**	**104.9324**

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	6.3000e-004	0.0243	7.8700e-003	1.1000e-004	3.5700e-003	1.6000e-004	3.7300e-003	1.0300e-003	1.5000e-004	1.1800e-003	0.0000	10.5416	10.5416	4.0000e-005	1.5700e-003	11.0095
Worker	0.0129	9.1300e-003	0.1033	2.5000e-004	0.0280	1.7000e-004	0.0282	7.4400e-003	1.5000e-004	7.5900e-003	0.0000	23.1819	23.1819	8.5000e-004	7.6000e-004	23.4285
Total	**0.0135**	**0.0335**	**0.1112**	**3.6000e-004**	**0.0316**	**3.3000e-004**	**0.0319**	**8.4700e-003**	**3.0000e-004**	**8.7700e-003**	**0.0000**	**33.7235**	**33.7235**	**8.9000e-004**	**2.3300e-003**	**34.4380**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.2600e-003	0.0791	0.1097	1.7000e-004		3.9200e-003	3.9200e-003		3.6200e-003	3.6200e-003	0.0000	14.7407	14.7407	4.6300e-003	0.0000	14.8565
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**8.2600e-003**	**0.0791**	**0.1097**	**1.7000e-004**		**3.9200e-003**	**3.9200e-003**		**3.6200e-003**	**3.6200e-003**	**0.0000**	**14.7407**	**14.7407**	**4.6300e-003**	**0.0000**	**14.8565**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.6000e-004	4.7000e-004	5.3000e-003	1.0000e-005	1.4400e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1888	1.1888	4.0000e-005	4.0000e-005	1.2015
Total	**6.6000e-004**	**4.7000e-004**	**5.3000e-003**	**1.0000e-005**	**1.4400e-003**	**1.0000e-005**	**1.4400e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.1888**	**1.1888**	**4.0000e-005**	**4.0000e-005**	**1.2015**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.2600e-003	0.0791	0.1097	1.7000e-004		3.9200e-003	3.9200e-003		3.6200e-003	3.6200e-003	0.0000	14.7407	14.7407	4.6300e-003	0.0000	14.8565
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**8.2600e-003**	**0.0791**	**0.1097**	**1.7000e-004**		**3.9200e-003**	**3.9200e-003**		**3.6200e-003**	**3.6200e-003**	**0.0000**	**14.7407**	**14.7407**	**4.6300e-003**	**0.0000**	**14.8565**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.6000e-004	4.7000e-004	5.3000e-003	1.0000e-005	1.4400e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1888	1.1888	4.0000e-005	4.0000e-005	1.2015
Total	**6.6000e-004**	**4.7000e-004**	**5.3000e-003**	**1.0000e-005**	**1.4400e-003**	**1.0000e-005**	**1.4400e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.1888**	**1.1888**	**4.0000e-005**	**4.0000e-005**	**1.2015**

Parsons Avenue Apartments - Merced County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3379					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7200e-003	0.0117	0.0163	3.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	2.2979	2.2979	1.4000e-004	0.0000	2.3014
Total	**0.3396**	**0.0117**	**0.0163**	**3.0000e-005**		**6.4000e-004**	**6.4000e-004**		**6.4000e-004**	**6.4000e-004**	**0.0000**	**2.2979**	**2.2979**	**1.4000e-004**	**0.0000**	**2.3014**

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	5.3000e-004	3.7000e-004	4.2400e-003	1.0000e-005	1.1500e-003	1.0000e-005	1.1600e-003	3.1000e-004	1.0000e-005	3.1000e-004	0.0000	0.9511	0.9511	3.0000e-005	3.0000e-005	0.9612
Total	**5.3000e-004**	**3.7000e-004**	**4.2400e-003**	**1.0000e-005**	**1.1500e-003**	**1.0000e-005**	**1.1600e-003**	**3.1000e-004**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**0.9511**	**0.9511**	**3.0000e-005**	**3.0000e-005**	**0.9612**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3379					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7200e-003	0.0117	0.0163	3.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	2.2979	2.2979	1.4000e-004	0.0000	2.3014
Total	**0.3396**	**0.0117**	**0.0163**	**3.0000e-005**		**6.4000e-004**	**6.4000e-004**		**6.4000e-004**	**6.4000e-004**	**0.0000**	**2.2979**	**2.2979**	**1.4000e-004**	**0.0000**	**2.3014**

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	5.3000e-004	3.7000e-004	4.2400e-003	1.0000e-005	1.1500e-003	1.0000e-005	1.1600e-003	3.1000e-004	1.0000e-005	3.1000e-004	0.0000	0.9511	0.9511	3.0000e-005	3.0000e-005	0.9612
Total	**5.3000e-004**	**3.7000e-004**	**4.2400e-003**	**1.0000e-005**	**1.1500e-003**	**1.0000e-005**	**1.1600e-003**	**3.1000e-004**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**0.9511**	**0.9511**	**3.0000e-005**	**3.0000e-005**	**0.9612**

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

Increase Density

Increase Diversity

Improve Destination Accessibility

Increase Transit Accessibility

Integrate Below Market Rate Housing

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.2490	0.4634	1.8959	3.9600e-003	0.3287	4.2200e-003	0.3329	0.0882	3.9700e-003	0.0922	0.0000	367.6042	367.6042	0.0244	0.0276	376.4238
Unmitigated	0.3117	0.7270	2.9767	7.1500e-003	0.6124	7.4800e-003	0.6199	0.1643	7.0500e-003	0.1713	0.0000	663.7447	663.7447	0.0338	0.0448	677.9258

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	587.52	530.28	441.72	1,626,790	873,152
Total	587.52	530.28	441.72	1,626,790	873,152

4.3 Trip Type Information

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	7.30	7.50	46.90	17.40	35.70	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.507674	0.048153	0.157435	0.157913	0.031283	0.007497	0.013742	0.047950	0.000797	0.000458	0.021748	0.002230	0.003119

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	56.2311	56.2311	6.3800e-003	7.7000e-004	56.6209
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	56.2311	56.2311	6.3800e-003	7.7000e-004	56.6209
NaturalGas Mitigated	6.8600e-003	0.0586	0.0250	3.7000e-004		4.7400e-003	4.7400e-003		4.7400e-003	4.7400e-003	0.0000	67.8944	67.8944	1.3000e-003	1.2400e-003	68.2979
NaturalGas Unmitigated	6.8600e-003	0.0586	0.0250	3.7000e-004		4.7400e-003	4.7400e-003		4.7400e-003	4.7400e-003	0.0000	67.8944	67.8944	1.3000e-003	1.2400e-003	68.2979

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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 Mid Rise	1.27229e+006	6.8600e-003	0.0586	0.0250	3.7000e-004		4.7400e-003	4.7400e-003		4.7400e-003	4.7400e-003	0.0000	67.8944	67.8944	1.3000e-003	1.2400e-003	68.2979
Total		**6.8600e-003**	**0.0586**	**0.0250**	**3.7000e-004**		**4.7400e-003**	**4.7400e-003**		**4.7400e-003**	**4.7400e-003**	**0.0000**	**67.8944**	**67.8944**	**1.3000e-003**	**1.2400e-003**	**68.2979**

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 Mid Rise	1.27229e+006	6.8600e-003	0.0586	0.0250	3.7000e-004		4.7400e-003	4.7400e-003		4.7400e-003	4.7400e-003	0.0000	67.8944	67.8944	1.3000e-003	1.2400e-003	68.2979
Total		**6.8600e-003**	**0.0586**	**0.0250**	**3.7000e-004**		**4.7400e-003**	**4.7400e-003**		**4.7400e-003**	**4.7400e-003**	**0.0000**	**67.8944**	**67.8944**	**1.3000e-003**	**1.2400e-003**	**68.2979**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	426037	56.2311	6.3800e-003	7.7000e-004	56.6209
Total		**56.2311**	**6.3800e-003**	**7.7000e-004**	**56.6209**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	426037	56.2311	6.3800e-003	7.7000e-004	56.6209
Total		**56.2311**	**6.3800e-003**	**7.7000e-004**	**56.6209**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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
Category	tons/yr										MT/yr					
Mitigated	0.4798	9.2500e-003	0.8021	4.0000e-005		4.4400e-003	4.4400e-003		4.4400e-003	4.4400e-003	0.0000	1.3099	1.3099	1.2600e-003	0.0000	1.3414
Unmitigated	0.4798	9.2500e-003	0.8021	4.0000e-005		4.4400e-003	4.4400e-003		4.4400e-003	4.4400e-003	0.0000	1.3099	1.3099	1.2600e-003	0.0000	1.3414

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	0.0338					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4218					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	0.0242	9.2500e-003	0.8021	4.0000e-005		4.4400e-003	4.4400e-003		4.4400e-003	4.4400e-003	0.0000	1.3099	1.3099	1.2600e-003	0.0000	1.3414
Total	**0.4797**	**9.2500e-003**	**0.8021**	**4.0000e-005**		**4.4400e-003**	**4.4400e-003**		**4.4400e-003**	**4.4400e-003**	**0.0000**	**1.3099**	**1.3099**	**1.2600e-003**	**0.0000**	**1.3414**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	0.0338					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4218					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	0.0242	9.2500e-003	0.8021	4.0000e-005		4.4400e-003	4.4400e-003		4.4400e-003	4.4400e-003	0.0000	1.3099	1.3099	1.2600e-003	0.0000	1.3414
Total	**0.4797**	**9.2500e-003**	**0.8021**	**4.0000e-005**		**4.4400e-003**	**4.4400e-003**		**4.4400e-003**	**4.4400e-003**	**0.0000**	**1.3099**	**1.3099**	**1.2600e-003**	**0.0000**	**1.3414**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

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	7.4457	0.1841	4.4100e-003	13.3614
Unmitigated	9.3071	0.2301	5.5100e-003	16.7017

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	7.03663 / 4.43614	9.3071	0.2301	5.5100e-003	16.7017
Total		**9.3071**	**0.2301**	**5.5100e-003**	**16.7017**

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 Mid Rise	5.62931 / 3.54891	7.4457	0.1841	4.4100e-003	13.3614
Total		**7.4457**	**0.1841**	**4.4100e-003**	**13.3614**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2.5212	0.1490	0.0000	6.2460
Unmitigated	10.0846	0.5960	0.0000	24.9842

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 Mid Rise	49.68	10.0846	0.5960	0.0000	24.9842
Total		**10.0846**	**0.5960**	**0.0000**	**24.9842**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	12.42	2.5212	0.1490	0.0000	6.2460
Total		**2.5212**	**0.1490**	**0.0000**	**6.2460**

9.0 Operational Offroad

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX B
BIOLOGICAL RESOURCE MATERIALS

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Merced County, California

Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

---

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
San Joaquin Kit Fox Vulpes macrotis mutica Wherever found No critical habitat has been designated for this species. http://ecos.fws.gov/ecp/species/2873	Endangered

Reptiles

NAME	STATUS
Blunt-nosed Leopard Lizard Gambelia silus Wherever found No critical habitat has been designated for this species. http://ecos.fws.gov/ecp/species/625	Endangered
Giant Garter Snake Thamnophis gigas Wherever found No critical habitat has been designated for this species. http://ecos.fws.gov/ecp/species/4482	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog Rana draytonii Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. http://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander Ambystoma californiense There is **final** critical habitat for this species. The location of the critical habitat is not available. http://ecos.fws.gov/ecp/species/2076	Threatened

Fishes

NAME	STATUS
Delta Smelt Hypomesus transpacificus Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. http://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus** Wherever found No critical habitat has been designated for this species. http://ecos.fws.gov/ecp/species/9743	Candidate
Valley Elderberry Longhorn Beetle *Desmocerus californicus dimorphus* Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. http://ecos.fws.gov/ecp/species/7850	Threatened

Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp *Branchinecta conservatio* Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. http://ecos.fws.gov/ecp/species/8246	Endangered
Vernal Pool Fairy Shrimp *Branchinecta lynchi* Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. http://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp *Lepidurus packardi* Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. http://ecos.fws.gov/ecp/species/2246	Endangered

Flowering Plants

NAME	STATUS
Colusa Grass *Neostapfia colusana* Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. http://ecos.fws.gov/ecp/species/5690	Threatened

Fleshy Owl's-clover Castilleja campestris ssp. succulenta — Threatened
Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
http://ecos.fws.gov/ecp/species/8095

Hairy Orcutt Grass Orcuttia pilosa — Endangered
Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
http://ecos.fws.gov/ecp/species/2262

San Joaquin Orcutt Grass Orcuttia inaequalis — Threatened
Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
http://ecos.fws.gov/ecp/species/5506

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php

- Measures for avoiding and minimizing impacts to birds
  http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds
  http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. http://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31

Clark's Grebe Aechmophorus clarkii This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jun 1 to Aug 31
Common Yellowthroat Geothlypis trichas sinuosa This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA http://ecos.fws.gov/ecp/species/2084	Breeds May 20 to Jul 31
Golden Eagle Aquila chrysaetos This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. http://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31
Nuttall's Woodpecker Picoides nuttallii This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA http://ecos.fws.gov/ecp/species/9410	Breeds Apr 1 to Jul 20
Yellow-billed Magpie Pica nuttalli This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. http://ecos.fws.gov/ecp/species/9726	Breeds Apr 1 to Jul 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

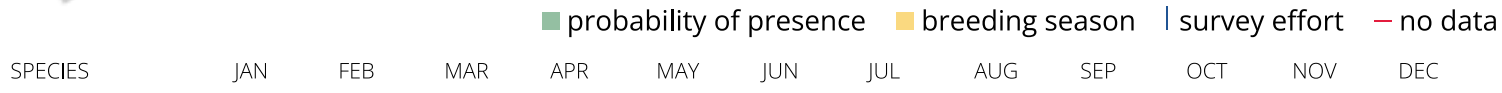
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

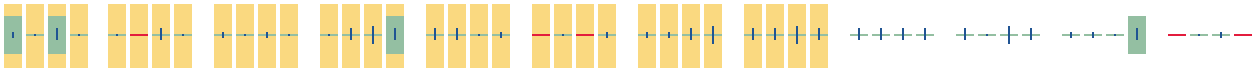
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

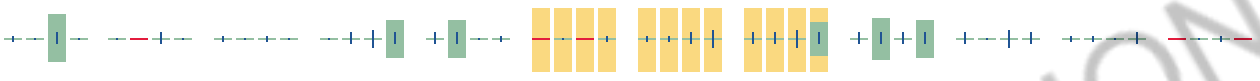
Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



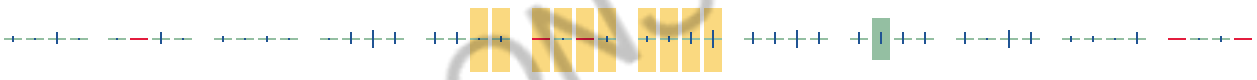
Bald Eagle Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



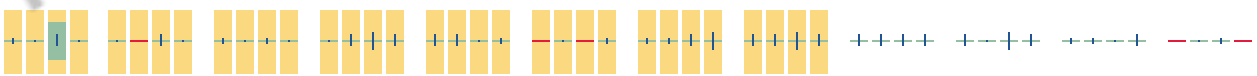
Clark's Grebe BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



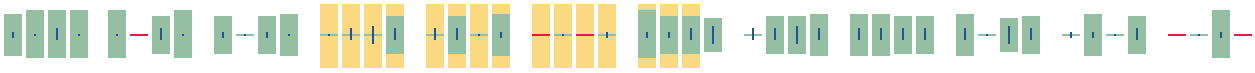
Common Yellowthroat BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



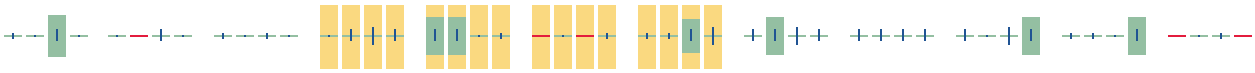
Golden Eagle Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



Nuttall's Woodpecker BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Yellow-billed Magpie BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

Wildlife refuges and fish hatcheries

REFUGE AND FISH HATCHERY INFORMATION IS NOT AVAILABLE AT THIS TIME

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

RIVERINE

R5UBFx

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

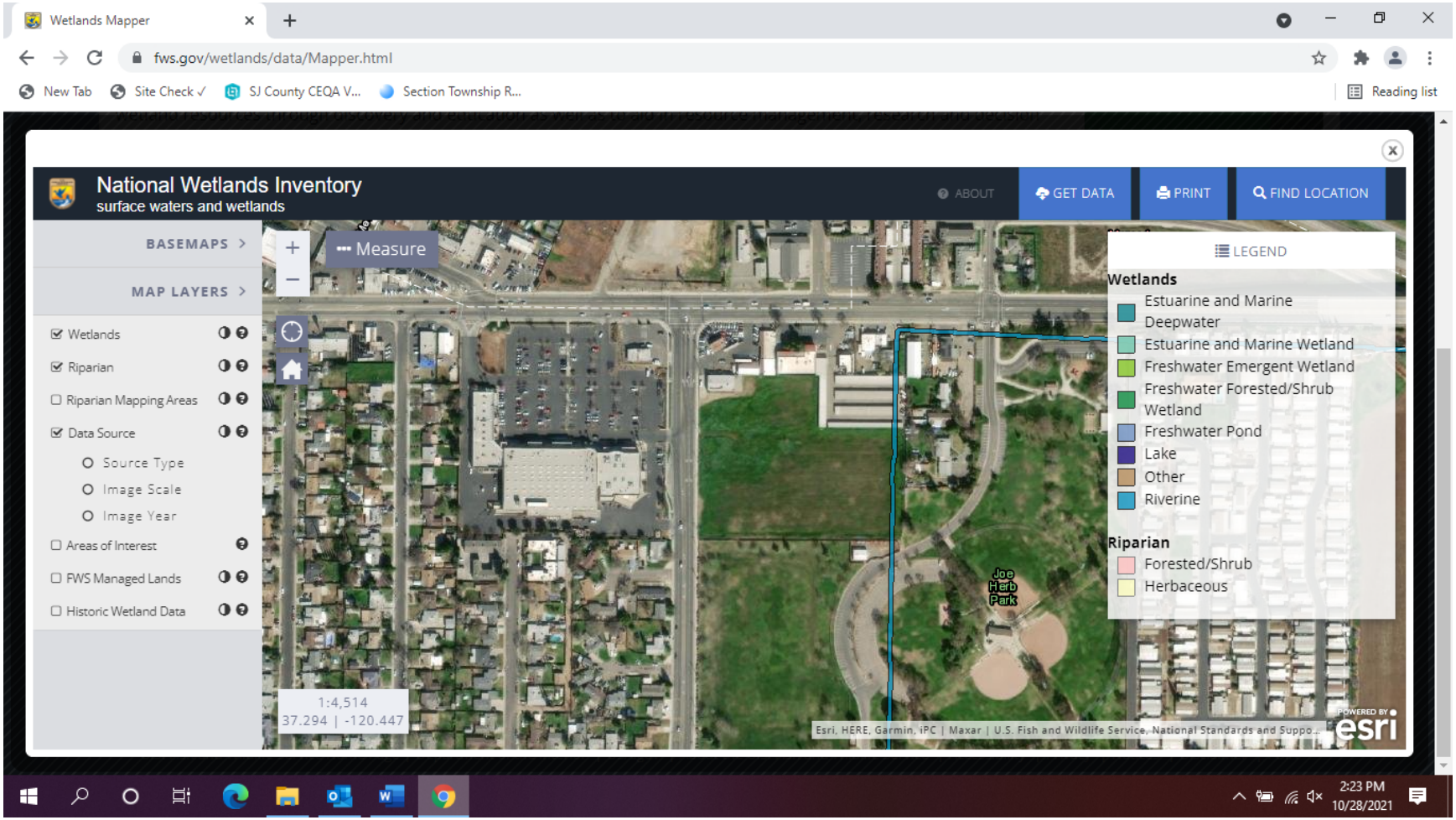
Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Element_Typ	Scientific_Na	Common_Na	Element_Coc	Federal_Stat	State_Status	CDFW_Statu
Animals - An	Ambystoma	California tig	AAAAA01181	Threatened	Threatened	WL
Animals - Bi	Buteo swain	Swainson's h	ABNKC1907C	None	Threatened	-
Animals - Bi	Haliaeetus le	bald eagle	ABNKC1001C	Delisted	Endangered	FP
Animals - Bi	Charadrius m	mountain plc	ABNNB0310(	None	None	SSC
Animals - Bi	Agelaius tric	tricolored bla	ABPBXB002C	None	Threatened	SSC
Animals - Bi	Athene cunic	burrowing ov	ABNSB1001C	None	None	SSC
Animals - Cr	Branchinecta	Conservancy	ICBRA03010	Endangered	None	-
Animals - Cr	Branchinecta	vernal pool f	ICBRA03030	Threatened	None	-
Animals - Cr	Branchinecta	midvalley fai	ICBRA03150	None	None	-
Animals - Cr	Linderiella oc	California lin	ICBRA06010	None	None	-
Animals - Cr	Lepidurus pa	vernal pool t	ICBRA10010	Endangered	None	-
Animals - Ma	Vulpes macr	San Joaquin	AMAJA03041	Endangered	Threatened	-
Animals - Ma	Eumops perc	western mas	AMACD0201	None	None	SSC
Animals - Re	Emys marmc	western pon	ARAAD0203C	None	None	SSC
Animals - Re	Thamnophis	giant garters	ARADB3615C	Threatened	Threatened	-
Plants - Vasc	Sagittaria sa	Sanford's arr	PMALI040Q0	None	None	-
Plants - Vasc	Eryngium spi	spiny-sepale	PDAPI0Z0Y0	None	None	-
Plants - Vasc	Hesperevax c	hogwallow s	PDASTE5020	None	None	-
Plants - Vasc	Lagophylla di	forked hare-l	PDAST5J070	None	None	-
Plants - Vasc	Brasenia sch	watershield	PDCAB01010	None	None	-
Plants - Vasc	Downingia p	dwarf downi	PDCAM060C(	None	None	-
Plants - Vasc	Convolvulus s	small-flower	PDCON0506(	None	None	-
Plants - Vasc	Phacelia cilia	Merced phac	PDHYD0C0S2	None	None	-
Plants - Vasc	Sidalcea kecl	Keck's checke	PDMAL110D(	Endangered	None	-
Plants - Vasc	Castilleja car	succulent ow	PDSCR0D3Z1	Threatened	Endangered	-
Plants - Vasc	Neostapfia c	Colusa grass	PMPOA4C01(	Threatened	Endangered	-
Plants - Vasc	Orcuttia inae	San Joaquin	PMPOA4G06	Threatened	Endangered	-
Plants - Vasc	Orcuttia pilo	hairy Orcutt	PMPOA4G04	Endangered	Endangered	-
Plants - Vasc	Navarretia ni	shining nava	PDPLM0C0J2	None	None	-

CA_Rare_Pla		Quad_Code	Quad_Name	Data_Status	Taxonomic_Sort
-		3712034	MERCED	Mapped	Animals - Amphibians - Ambystomatida
-		3712034	MERCED	Mapped and	Animals - Birds - Accipitridae - Buteo sv
-		3712034	MERCED	Mapped	Animals - Birds - Accipitridae - Haliaeet
-		3712034	MERCED	Mapped	Animals - Birds - Charadriidae - Charadı
-		3712034	MERCED	Mapped and	Animals - Birds - Icteridae - Agelaius tri
-		3712034	MERCED	Mapped	Animals - Birds - Strigidae - Athene cun
-		3712034	MERCED	Mapped and	Animals - Crustaceans - Branchinectida
-		3712034	MERCED	Mapped and	Animals - Crustaceans - Branchinectida
-		3712034	MERCED	Mapped and	Animals - Crustaceans - Branchinectida
-		3712034	MERCED	Mapped and	Animals - Crustaceans - Chirocephalidae
-		3712034	MERCED	Mapped and	Animals - Crustaceans - Triopsidae - Lep
-		3712034	MERCED	Mapped	Animals - Mammals - Canidae - Vulpes
-		3712034	MERCED	Mapped	Animals - Mammals - Molossidae - Eun
-		3712034	MERCED	Unprocessed	Animals - Reptiles - Emydidae - Emys m
-		3712034	MERCED	Mapped	Animals - Reptiles - Natricidae - Thamr
1B.2		3712034	MERCED	Mapped	Plants - Vascular - Alismataceae - Sagit
1B.2		3712034	MERCED	Mapped	Plants - Vascular - Apiaceae - Eryngium
	4.2	3712034	MERCED	Unprocessed	Plants - Vascular - Asteraceae - Hespere
1B.1		3712034	MERCED	Mapped	Plants - Vascular - Asteraceae - Lagophy
2B.3		3712034	MERCED	Mapped	Plants - Vascular - Cabombaceae - Bras
2B.2		3712034	MERCED	Mapped	Plants - Vascular - Campanulaceae - Do
	4.2	3712034	MERCED	Unprocessed	Plants - Vascular - Convolvulaceae - Cor
	3.2	3712034	MERCED	Mapped	Plants - Vascular - Hydrophyllaceae - Ph
1B.1		3712034	MERCED	Mapped	Plants - Vascular - Malvaceae - Sidalcea
1B.2		3712034	MERCED	Mapped	Plants - Vascular - Orobanchaceae - Cas
1B.1		3712034	MERCED	Mapped	Plants - Vascular - Poaceae - Neostapfia
1B.1		3712034	MERCED	Mapped and	Plants - Vascular - Poaceae - Orcuttia ir
1B.1		3712034	MERCED	Mapped	Plants - Vascular - Poaceae - Orcuttia pi
1B.2		3712034	MERCED	Mapped	Plants - Vascular - Polemoniaceae - Nav

ae - Ambystoma californiense pop. 1
wainsoni
us leucocephalus
rius montanus
color
nicularia
e - Branchinecta conservatio
e - Branchinecta lynchi
e - Branchinecta mesovallensis
e - Linderiella occidentalis
pidurus packardi
macrotis mutica
nops perotis californicus
narmorata
nophis gigas
taria sanfordii
spinosepalum
evax caulescens
ylla dichotoma
enia schreberi
wningia pusilla
nvolvulus simulans
nacelia ciliata var. opaca
a keckii
stilleja campestris var. succulenta
a colusana
naequalis
ilosa
varretia nigelliformis ssp. radians


Wetlands Mapper
fws.gov/wetlands/data/Mapper.html
New Tab
Site Check ✓
SJ County CEQA V...
Section Township R...
Reading list
National Wetlands Inventory
surface waters and wetlands
ABOUT
GET DATA
PRINT
FIND LOCATION
BASEMAPS
MAP LAYERS
Wetlands
Riparian
Riparian Mapping Areas
Data Source
Source Type
Image Scale
Image Year
Areas of Interest
FWS Managed Lands
Historic Wetland Data
Measure
LEGEND
Wetlands
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Freshwater Emergent Wetland
Freshwater Forested/Shrub Wetland
Freshwater Pond
Lake
Other
Riverine
Riparian
Forested/Shrub
Herbaceous
Joe Herb Park
1:4,514
37.294 | -120.447
Esri, HERE, Garmin, iPC | Maxar | U.S. Fish and Wildlife Service, National Standards and Suppo...
POWERED BY esri
2:23 PM
10/28/2021

APPENDIX C
CENTRAL CALIFORNIA INFORMATION CENTER REPORT

CENTRAL CALIFORNIA INFORMATION CENTER
California Historical Resources Information System
Department of Anthropology – California State University, Stanislaus
One University Circle, Turlock, California 95382
(209) 667-3307

Alpine, Calaveras, Mariposa, Merced, San Joaquin, Stanislaus & Tuolumne Counties

Date: 10/19/2021

Records Search File #: 11950I
Project: Parson Apartments, 1808 Parsons Avenue, Merced, California

Terry L. Farmer
Senior Environmental Planner
BaseCamp Environmental, Inc.
802 W. Lodi Avenue
Lodi, CA 95240
209-224-8213 tfarmer@basecampenv.com

Invoice to: Rayanna Beck
rbeck@basecampenv.com

We have conducted a non-confidential extended records search as per your request for the above-referenced project area located on the Merced USGS 7.5-minute quadrangle map in Merced County.

Search of our files includes review of our maps for the specific project area and the immediate vicinity of the project area, and review of the following:

National Register of Historic Places (NRHP)
California Register of Historical Resources (CRHR)
California Inventory of Historic Resources (1976)
California Historical Landmarks
California Points of Historical Interest listing
Office of Historic Preservation Built Environment Resource Directory (BERD) and the Archaeological Determinations of Eligibility (ADOE)
Survey of Surveys (1989)
Caltrans State and Local Bridges Inventory
General Land Office Plats
Other pertinent historic data available at the CCaIC for each specific county

The following details the results of the records search:

Prehistoric or historic resources within the project area:

- There are no formally recorded prehistoric or historic archaeological resources or historic buildings within the project area.

- The project area is within the overall Merced Irrigation District (P-24-001904), encompassing portions of 14 USGS quadrangles in Merced and Mariposa counties. There are no contributing water conveyance elements of this district documented within the project area.

- The General Land Office Survey Plat for T7S R14E (dated 1854) does not show any historic features within the NE ¼ of the SE ¼ of Section 28.

- The 1914 and 1946 editions of the Merced USGS quadrangle do not reference any historic features within the project area.

Prehistoric or historic resources within the immediate vicinity of the project area: There are no formally recorded prehistoric or historic archaeological resources or historic buildings within the immediate vicinity of the project area. The expanse of the Merced Irrigation District proposed boundary referenced above extends into the area surrounding the project area.

Resources that are known to have value to local cultural groups: None has been formally reported to the Information Center.

Previous investigations within the project area: None has been formally reported to the Information Center.

Recommendations/Comments:

Please be advised that a historical resource is defined as a building, structure, object, prehistoric or historic archaeological site, or district possessing physical evidence of human activities over 45 years old. Since the project area has not been subject to previous investigations, there may be unidentified features involved in your project that are 45 years or older and considered as historical resources requiring further study and evaluation by a qualified professional of the appropriate discipline.

If the current project does not include ground disturbance, further study for archaeological resources is not recommended at this time. If ground disturbance is considered a part of the current project, we recommend further review for the possibility of identifying prehistoric or historic-era archaeological resources.

If the proposed project contains buildings or structures that meet the minimum age requirement (45 years in age or older) it is recommended that the resource/s be assessed by a professional familiar with architecture and history of the county. Review of the available historic building/structure data has included only those sources listed above and should not be considered comprehensive.

If at any time you might require the services of a qualified professional the Statewide Referral List for Historical Resources Consultants is posted for your use on the internet at http://chrisinfo.org

If archaeological resources are encountered during project-related activities**,** work should be temporarily halted in the vicinity of the discovered materials and workers should avoid altering the materials and their context until a qualified professional archaeologist has evaluated the situation and provided appropriate recommendations. Project personnel should not collect cultural resources.

If human remains are discovered, California Health and Safety Code Section 7050.5 requires you to protect the discovery and notify the county coroner, who will determine if the find is Native American. If the remains are recognized as Native American, the coroner shall then notify the Native American Heritage Commission (NAHC). California Public Resources Code Section 5097.98 authorizes the NAHC to appoint a Most Likely Descendant (MLD) who will make recommendations for the treatment of the discovery.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the State Office of Historic Preservation 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. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

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.

We thank you for contacting this office regarding historical resource preservation. Please let us know when we can be of further service. Thank you for submitting the signed **Access Agreement Short Form.**

Note: Billing will be transmitted separately via email from the Financial Services office ($150.00), payable within 60 days of receipt of the invoice.

If you wish to include payment by Credit Card, you must wait to receive the official invoice from Financial Services so that you can reference the CMP # (Invoice Number), and then contact the link below:
https://commerce.cashnet.com/ANTHROPOLOGY

Sincerely,

E. A. Greathouse

E. A. Greathouse, Coordinator
Central California Information Center
California Historical Resources Information System

* Invoice Request sent to: ARBilling@csustan.edu, CSU Stanislaus Financial Services

APPENDIX D
NOISE MODELING RESULTS

	A	B	C	D	E
8	**SEGMENT**	**1**	**2**	**3**	**4**
9	**INPUTS TO MODEL**				
10	Segment Name				
11	Average Daily Traffic	10817	9600	#REF!	#REF!
12	% Traffic, Day	90	90	90	90
13	% Traffic, Night	10	10	10	10
14	% Medium Trucks (2 axle)	3	3	3	3
15	% Heavy Trucks (3+ axle)	2	2	2	2
16	Speed (mph)				
17	Auto	35	35	45	35
18	Medium Truck	35	35	45	35
19	Heavy Truck	25	25	35	25
20	Hard (10) or Soft (15) Site	15	15	15	15
21	Ref dist (ft) to ROW	100	100	50	50
22	Ft from ROW to CL near lane	23	17	33	23
23	Ft from ROW to CL far lane	49	67	107	49
24	Upgrade Adjustment (Trucks)	0	0	0	0
25	≤2%=0;3-4%=2;5-6%=3;7+=5				
26	Distance observer - barrier	0	0	0	0
27	Auto attenuation (+)	0	0	0	0
28	Medium Truck atten (+)	0	0	0	0
29	Heavy Truck atten (+)	0	0	0	0
30	**MAKE NO CHANGES BELOW THIS LINE**				
31	**MODEL RESULTS**				
32	**SEGMENT**	**1**	**2**	**3**	**4**
33					
34	**Ldn @ REF. DISTANCE**	59.8	59.1	#REF!	#REF!
35	**DISTANCE TO Ldn CONTOURS (feet from edge of right of way)**				
36	55 dB	248	221	#REF!	#REF!
37	60 dB	96	81	#REF!	#REF!
38	65 dB	26	17	#REF!	#REF!
39	70 dB	-7	-14	#REF!	#REF!
40	75 dB	-22	-28	#REF!	#REF!
41					
42	Source: FHWA RD-77-108; Caltrans Calveno Noise Curves				
43					
44					

Date of Analysis: 1/18/22 Time: 10:30 AM

	F	G	H	I	J	K	L
8	**5**	**6**	**7**	**8**	**9**	**10**	**11**
9							
10							
11	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
12	90	90	90	90	90	90	90
13	10	10	10	10	10	10	10
14	3	3	3	3	3	3	3
15	2	2	7	4	2	2	2
16							
17	35	35	35	50	35	35	35
18	35	35	35	50	35	35	35
19	25	25	25	40	25	25	25
20	15	15	15	15	15	15	15
21	50	50	50	50	50	50	50
22	17	33	33	33	17	17	23
23	67	107	107	107	67	67	49
24	0	0	0	0	0	0	0
25							
26	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0
30							
31							
32	**5**	**6**	**7**	**8**	**9**	**10**	**11**
33							
34	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
35							
36	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
37	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
38	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
39	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
40	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
41							
42							
43							
44							

	M	N	O	P	Q	R	S
8	**12**	**13**	**14**	**15**	**16**	**17**	**18**
9							
10							
11	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
12	90	90	90	90	90	90	90
13	10	10	10	10	10	10	10
14	3	3	3	3	3	3	3
15	2	2	2	2	2	2	2
16							
17	35	35	35	35	50	50	35
18	35	35	35	35	50	50	35
19	25	25	25	25	40	40	25
20	15	15	15	15	15	15	15
21	50	50	50	50	50	50	50
22	23	23	23	23	17	17	23
23	49	49	49	49	67	67	49
24	0	0	0	0	0	0	0
25							
26	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0
30							
31							
32	**12**	**13**	**14**	**15**	**16**	**17**	**18**
33							
34	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
35							
36	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
37	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
38	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
39	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
40	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
41							
42							
43							
44							

	T	U	V	W	X	Y	Z
8	**19**	**20**	**21**	**22**	**23**	**24**	**25**
9							
10							
11	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
12	90	90	90	90	90	90	90
13	10	10	10	10	10	10	10
14	3	3	3	3	3	3	3
15	2	2	2	2	2	2	2
16							
17	35	35	35	35	35	25	25
18	35	35	35	35	35	25	25
19	25	25	25	25	25	25	25
20	15	15	15	15	15	15	15
21	50	50	50	50	50	50	50
22	23	23	23	23	23	17	23
23	49	49	49	49	49	67	49
24	0	0	0	0	0	0	0
25							
26	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0
30							
31							
32	**19**	**20**	**21**	**22**	**23**	**24**	**25**
33							
34	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
35							
36	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
37	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
38	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
39	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
40	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
41							
42							
43							
44							

	AA	AB	AC	AD	AE
8	**26**	**27**	**28**	**29**	**30**
9					
10					
11	#REF!	#REF!	#REF!	#REF!	#REF!
12	90	90	90	90	90
13	10	10	10	10	10
14	3	3	3	3	3
15	2	2	2	2	2
16					
17	35	35	35	35	35
18	35	35	35	35	35
19	25	25	25	25	25
20	15	15	15	15	15
21	50	50	50	50	50
22	23	23	23	23	23
23	49	49	49	49	49
24	0	0	0	0	0
25					
26	0	0	0	0	0
27	0	0	0	0	0
28	0	0	0	0	0
29	0	0	0	0	0
30					
31					
32	**26**	**27**	**28**	**29**	**30**
33					
34	#REF!	#REF!	#REF!	#REF!	#REF!
35					
36	#REF!	#REF!	#REF!	#REF!	#REF!
37	#REF!	#REF!	#REF!	#REF!	#REF!
38	#REF!	#REF!	#REF!	#REF!	#REF!
39	#REF!	#REF!	#REF!	#REF!	#REF!
40	#REF!	#REF!	#REF!	#REF!	#REF!
41					
42					
43					
44					