

SECTION 3.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED AND DETERMINATION

Environmental Factors Potentially Affected

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

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

Determination

On the basis of this initial evaluation:

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

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

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

I find that the 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 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 Project, nothing further is required.



Sherri Metzker, Principal Planner

Oct 27, 2021

Date

DRAFT

**Initial Study and Mitigated Negative Declaration
City of Davis East Covell Bike Path – North Side Project**

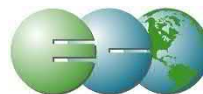
October 2021

Lead Agency:



**City of Davis
23 Russell Boulevard
Davis, CA 95616**

Prepared by:



ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

**55 Hanover Lane
Suite A
Chico, California 95973**

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**DRAFT MITIGATED NEGATIVE DECLARATION
EAST COVELL BIKE PATH – NORTH SIDE PROJECT**

Project Title/Purpose	East Covell Bike Path – North Side Project
Lead Agency:	City of Davis
Project Proponent:	City of Davis
Project Location:	The Project site is located adjacent to Covell Boulevard between J Street and Pole Line Road in the City of Davis. (<i>Figure 1. Regional Location</i> and <i>Figure 2. Project Location</i>). The site is within sections 3 and 10, Township 8 North, Range 2 East (Mount Diablo Base and Meridian) of the “Davis, California” 7.5-minute quadrangle. The approximate center of the site is located at latitude 38°33’41” N and longitude 121°44’04” W.
Project Description:	The Project is located within the City’s East Covell Corridor Plan and identified as a shared use path. The Proposed Project would create a new bicycle and pedestrian pathway on an existing street. The new pathway would run on the north side of Covell Boulevard from the Covell Boulevard/J Street intersection to Covell Boulevard/Pole Line Road intersection. The approximately 0.36 mile project would connect to an existing sidewalk at the Covell Boulevard/J Street intersection.
Public Review Period:	To be determined

Mitigation Measures Incorporated into the Project to Avoid Significant Effects:

BIO-1: Special-Status Plant Species

Due to the disturbed nature of most of the Project site, the potential for occurrence of special-status plants is low. The vegetated strip of land between the firebreak and East Covell may provide marginal habitat for depauperate milk-vetch, Ferris’ milk-vetch, or alkali milk-vetch. Depauperate milk-vetch is a CNPS 4.3 list species, Ferris’ milk-vetch is a CNPS 1B1 species, and alkali milk-vetch is a CNPS 1B.2 species. They are not listed and protected under either the federal or California ESAs.

In order to minimize potential impacts to special-status plants the following measures are required:

- Focused plant surveys shall be performed according to USFWS, CDFW, and CNPS protocol. Surveys shall be timed according to the blooming period for target species and known reference populations, if available, and/or local herbaria shall be visited prior to surveys to confirm the appropriate phenological state of the target species. The USFWS generally considers plant survey results valid for approximately three years.

- If special-status plant species are found, avoidance zones shall be established around plants to clearly demarcate areas for avoidance. Avoidance measures and buffer distances may vary between species and the specific avoidance zone distance shall be determined in coordination with appropriate resource agencies (CDFW and USFWS).
- If special-status plant species are found within the Project site and avoidance of the species is not possible, additional measures such as seed collection and/or translocation shall be developed in consultation with the appropriate agencies.
- If no special-status plants are found, no further measures pertaining to special-status plants are necessary.

Timing/Implementation: *Prior to commencement of construction and during construction*

Monitoring/Enforcement: *The City of Davis and the Project construction lead*

BIO-2: Special-Status Invertebrates

The vegetated strip of land between the firebreak and East Covell Boulevard may provide marginal habitat for Crotch’s bumble bee, a candidate for listing under California’s ESA. In order to minimize potential impacts to special-status invertebrates the following measures are required:

- A habitat assessment shall be performed by a qualified biologist to determine the presence and extent of potential habitat for this species.
- If potential habitat is deemed to be present, CDFW’s local office shall be contacted to determine whether surveys are warranted and to provide feedback regarding survey protocol, timing and qualifications of surveyors.
- If Crotch’s bumble bee is found, consultation shall take place with CDFW to establish mitigation, avoidance, and/or minimization measures.

Timing/Implementation: *Prior to commencement of construction and during construction*

Monitoring/Enforcement: *The City of Davis and the Project construction lead*

BIO-3: Special-Status and Migratory Bird Treaty Act Birds

The Project site provides potential foraging or nesting habitat for special-status bird species, as well as for common birds protected under the MBTA and CFG code.

The impacts to nesting special-status and MBTA-protected birds could be considered significant. As such, to ensure that there are no impacts to protected special-status birds, including their eggs and active nests, the following mitigation measures are required:

- Conduct a pre-construction nesting bird survey of all suitable habitat on the Project site within 14 days of the commencement of construction during the nesting season (February 1 - August 31). Surveys shall be conducted within 300 feet of the Project site for nesting raptors, and 100 feet of the Project site for nesting songbirds. If active nests are found, a no-disturbance buffer around

the nest shall be established. The buffer distance shall be established by a biologist in consultation with CDFW, the Yolo HCP/NCCP or the CEQA lead agency. The buffer shall be maintained until the fledglings are capable of flight and become independent of the nest tree, to be determined by a qualified biologist. Once the young are independent of the nest, no further measures are necessary. Pre-construction nesting surveys are not required for construction activity outside the nesting season. Impacts to foraging/wintering habitat of non-listed birds protected under the MBTA are typically considered less than significant.

- The Project applicant shall complete Yolo HCP/NCCP application package and submit this application for approval to the Yolo Habitat Conservancy as required.
- The Project applicant shall pay the HCP/NCCP fees as required.
- If Swainson’s hawk, white-tailed kite and/or burrowing owl active nests are found during the pre-construction survey, the Project applicant shall implement the AMMs established in the Yolo HCP/NCCP to the satisfaction of the Yolo Habitat Conservancy. The AMM references are as follows: for Swainson’s hawk and white-tailed kite (AMM15, AMM16), for Western burrowing owl (AMM18).

Timing/Implementation: *Prior to commencement of construction and during construction*

Monitoring/Enforcement: *The City of Davis and the Project construction lead*

BIO-4: Special- Status Mammals

The Project site provides marginal roosting habitat for western red bat. To ensure that there are no impacts to these special-status mammals, the following mitigation shall be performed:

- Prior to any disturbances to the trees, a qualified biologist shall conduct a preconstruction survey within seven days of tree disturbance activities to determine the presence of roosting bats.
- If roosting bats are found within the trees, a qualified biologist shall determine what types of roosts are present. If non-maternity and non-hibernaculum day or night roosts are present, a qualified biologist shall use safe eviction methods to remove bats if direct impacts to these roosts cannot be avoided. If a winter hibernaculum or maternity roost is present, impacts to the resource (e.g., tree) shall not occur until the bats have vacated or are safely evicted using methods acceptable to CDFW.
- If no roosting bats are found during the preconstruction survey, no further measures are recommended.

Timing/Implementation: *Prior to commencement of construction and during construction*

Monitoring/Enforcement: *The City of Davis and the Project construction lead*

CUL-1: Cultural or Archaeological Resource Discovery

If subsurface deposits believed to be cultural or human in origin are discovered during construction, all work must halt within a 100-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior’s Professional Qualification Standards for prehistoric and historic archaeologist, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find:

- If the professional archaeologist determines that the find does not represent a cultural resource, work may resume immediately, and no agency notifications are required.
- If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, he or she shall immediately notify the City and landowner. If the find is determined to be eligible for inclusion in the NRHP or CRHR, the City shall consult on a finding of eligibility and implement appropriate treatment measures. Work may not resume within the no-work radius until the City, through consultation as appropriate, determines that the site either: 1) is not eligible for the NRHP or CRHR; or 2) that the treatment measures have been completed to its satisfaction.
- If the find includes human remains, or remains that are potentially human, he or she shall ensure reasonable protection measures are taken to protect the discovery from disturbance (Assembly Bill [AB] 2641). The archaeologist shall notify the Yolo County Coroner (in accordance with § 7050.5 of the Health and Safety Code). The provisions of § 7050.5 of the California Health and Safety Code, § 5097.98 of the California PRC, and AB 2641 will be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, the Coroner will notify the NAHC, which then will designate a Native American Most Likely Descendant (MLD) for the project (§ 5097.98 of the PRC). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (§ 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (§ 5097.98 of the PRC). This will also include either recording the site with the NAHC or the appropriate information center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction.

Timing/Implementation:

During construction

Monitoring/Enforcement:

The City of Davis and Project construction lead

GEO-1: Paleontological or Sensitive Geologic Resource Discovery

If paleontological or other geologically sensitive resources are identified during any phase of Project development, the construction manager shall cease operation at the site of the discovery and immediately

notify the City of Davis The City of Davis shall retain a qualified paleontologist to provide an evaluation of the find and to prescribe mitigation measures to reduce impacts to a less-than-significant level. In considering any suggested mitigation proposed by the qualified paleontologist, the City shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, land use assumptions, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the Project site while mitigation for paleontological resources is carried out.

Timing/Implementation: *During construction*
Monitoring/Enforcement: *The City of Davis and the Project construction lead*

HYD-1: Stormwater Management

Pursuant to the requirements of the City’s MS4 Permit, the following stormwater management requirement shall be included in Project design:

- The Project will be designed to either include pervious surfaces for the pathway allowing for stormwater percolation or be designed to direct all stormwater runoff into adjacent vegetated areas or a combination of both.

Timing/Implementation: *As a part of Project approval*
Monitoring/Enforcement: *The City of Davis and the Project construction lead*

TRI-1: Tribal Cultural Resources Sensitivity Training

Prior to any construction or ground disturbing activities, the Project proponent shall provide tribal cultural resources sensitivity training to all construction personnel. As the Project site is located in the aboriginal territory of the Yocha Dehe Wintun Nation, the Project proponent shall request that a member of the Yocha Dehe Wintun Nation provide this training. To schedule cultural sensitivity training, prior to the start of the project, the Project proponent shall contact:

CRD Administrative Staff
Yocha Dehe Wintun Nation
Office: (530) 796-3400
Email: THPO@yochadehe-nsn.gov

Refer to identification number YD – 09022021-01 in correspondence concerning this project.

Timing/Implementation: *Prior to any construction or ground disturbing activities*
Monitoring/Enforcement: *The City of Davis and Project construction lead*

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**Draft Initial Study and Mitigated Negative Declaration
East Covell Bike Path – North Side Project**

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LIST OF ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
AADT	Average Annual Daily Trip
AMSL	Above mean sea level
APE	Area of Potential Effects
APN	Accessor Parcel Number
BMPs	Best Management Practices
BP	Before present
CAL FIRE	California Department of Forestry and Fire Protection
CalEEMod	California Emissions Estimator Model
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation

LIST OF ACRONYMS AND ABBREVIATIONS

D- CAAP	Davis Climate Action and Adaptation Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CCR	California Code of Regulations
CFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
cfs	Cubic feet per second
CGS	California Geological Survey
CH ₄	Methane
CHRIS	California Historical Resources Information System
CNEL	Community noise equivalent level
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
County	Yolo County
CPUC	California Public Utilities Commission
CRHR	California Register of Historic Places
CSU-Sonoma	California State University, Sonoma
dBA	Decibels
DMR	Division of Mine Reclamation
DOC	California Department of Conservation
DOF	Department of Finance
DPM	Diesel Particulate Matter
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
EIR	Environmental Impact Report
fc	Foot-candle
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FTA	Federal Transit Administration
General Permit	General Construction Activity Stormwater Permit
GHGs	Greenhouse Gases
GLO	General Land Office
I-5	Interstate 5
IS	Initial Study
IS/MND	Initial Study Mitigated Negative Declaration
ITE	Institute of Transportation Engineers

LIST OF ACRONYMS AND ABBREVIATIONS

kWh	Kilowatt hours
Lbs/day	Pounds per day
L _{dn}	Day-night average sound level
L _{eq}	Equivalent continuous sound level
LOS	Level of service
MBTA	Migratory Bird Treaty Act
MLD	Most Likely Descendent
MND	Mitigated Negative Declaration
MRZ	Mineral Resource Zones
NAHC	Native American Heritage Commission
NEIC	North Central Information Center
NHTSA	National Highway Transportation Safety Administration
N ₂ O	Nitrous oxide
NO ₂	Nitrogen dioxide
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
O ₃	Ozone
OHWM	Ordinary high water mark
O&M building	Operation and maintenance building
PG&E	Pacific Gas and Electric
PM ₁₀ and PM _{2.5}	Particulate Matter
PRC	Public Resource Code
Project/ Proposed Project	East Covell Bike Path- North Side Project
ROG	Reactive Organic Gases
RWQCB	Regional Water Quality Control Board
YSAQMD	Yolo-Solano Air Quality Management District
SO ₂	sulfur dioxide
SRWP	Sacramento River Watershed Program
SSC	Species of Special Concern
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminants
USACE	United States Army Corps of Engineers
UCMP	California Museum of Paleontology
USC	U.S. Code
USEPA	Environmental Protection Agency
USGS	U.S. Geological Survey
VMT	Vehicle miles traveled
WRM	Wildland Resource Managers

SECTION 1.0 BACKGROUND

1.1 Summary

Project Title:	East Covell Bike Path – North Side Project
Lead Agency Name and Address:	City of Davis 23 Russell Boulevard Davis, CA 95616
Lead Agency Contact Person and Phone Number:	Michael Mitchell, PE Principal Civil Engineer 530-757-5846
Project Owner	City of Davis
Project Location:	The Project site is located adjacent to Covell Boulevard between J Street/Cannery Avenue and Pole Line Road in the City of Davis. (<i>Figure 1. Regional Location</i> and <i>Figure 2. Project Location</i>). The Project site corresponds to a portion of Sections 3 and 10, Township 8 North, Range 2 East (Mount Diablo Base and Meridian) of the "Davis, California" 7.5-minute quadrangle. The approximate center of the site is located at latitude 38°33'41" N and longitude 121°44'04" W.
General Plan Designation:	n/a (city street right-of-way)
Zoning:	Planned Development (PD 1-11, PD 2-87, PD 6-85, and PD 16-75B)

1.2 Introduction

The City of Davis is the Lead Agency for this Initial Study / Mitigated Negative Declaration (IS/MND), which has been prepared to identify and assess the anticipated environmental impacts of the East Covell Bike Path – North Side Project (Project or Proposed Project) and mitigate potentially significant environmental effects. This document has been prepared to satisfy the California Environmental Quality Act (CEQA) (Public Resource Code [PRC], § 21000 et seq.) and State CEQA Guidelines (14 California Code of Regulations [CCR] 15000 et seq.). CEQA requires that all state and local government agencies consider the environmental consequences of Projects over which they have discretionary authority before acting on those Projects. A CEQA IS/MND is generally used to determine the potentially significant environmental affects and mitigate those to be less than significant.

1.3 Project Location and Surrounding Land Uses

The Project site is located on the north side of Covell Boulevard between the Covell Boulevard/J Street intersection and the Covell Boulevard/Pole Line Road intersection in north Davis. The Project site borders the boundary between Yolo County and the City of Davis.

The Project site consists of a currently undeveloped 0.36 mile long piece of land situated north of an existing roadway and south of an agriculture field. The Proposed Project is identified in the East Covell Corridor Plan as a shared-use path. There is an existing buffered Class I bike lane along both sides of Covell Boulevard. As illustrated in *Figure 1. Regional Location* and *Figure 2. Project Location* maps, the Proposed Project is located directly north of residential neighborhoods and a commercial center, which includes businesses such as a SuperCuts, dry cleaners, credit union, CVS Pharmacy, and Nugget Market. The land to the north of the Project site is comprised of land currently under agricultural use. The land to the east and the west of the Project site consists of mixed residential and commercial use. The Cannery, a community focused on alternative transportation and sustainable living in general, is located at the west end of the Project Site, on Cannery Avenue. There is an existing driveway from Covell Boulevard providing access to the agricultural land north of the site. See *Figure 3. Surrounding Uses*.

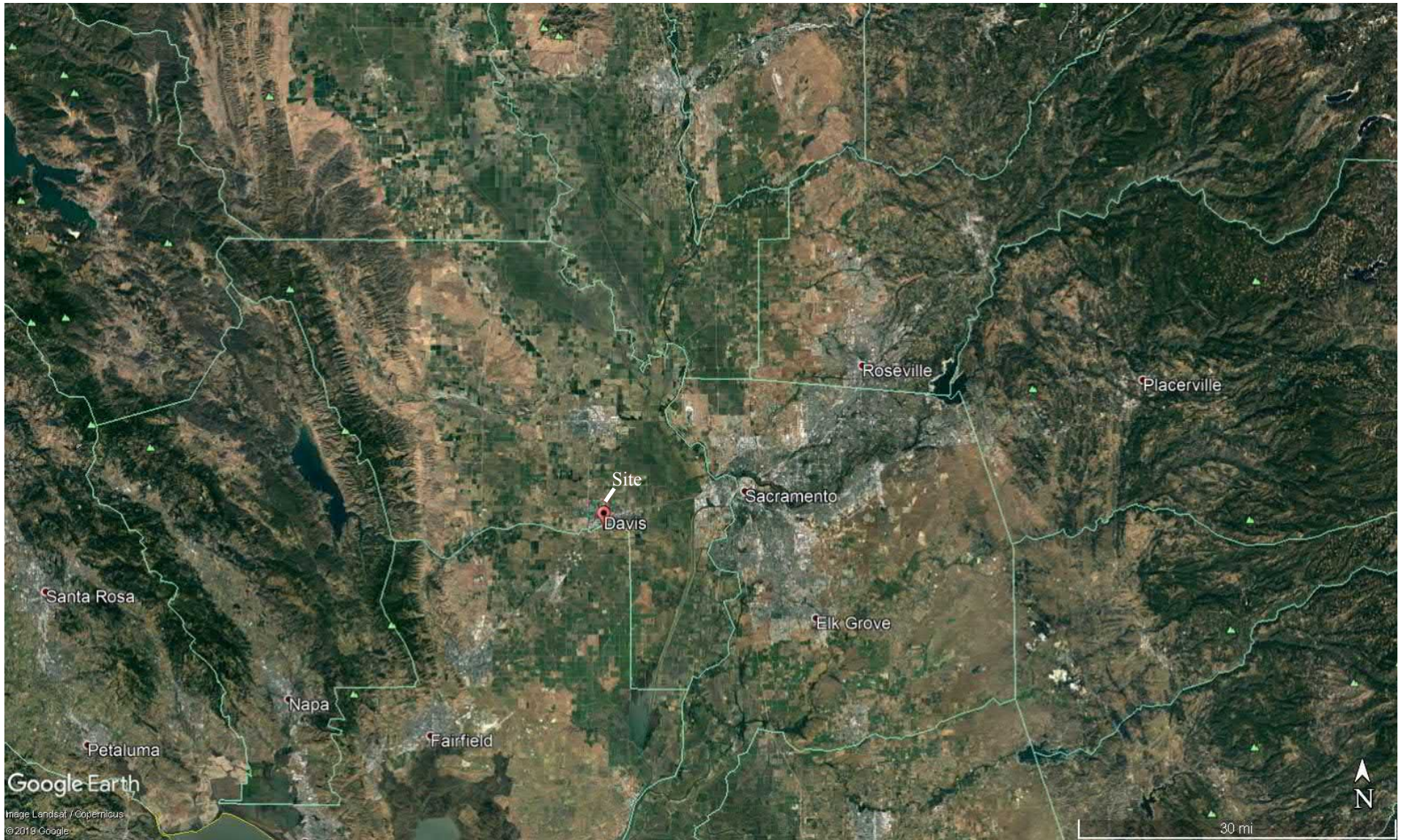
1.4 Environmental Setting

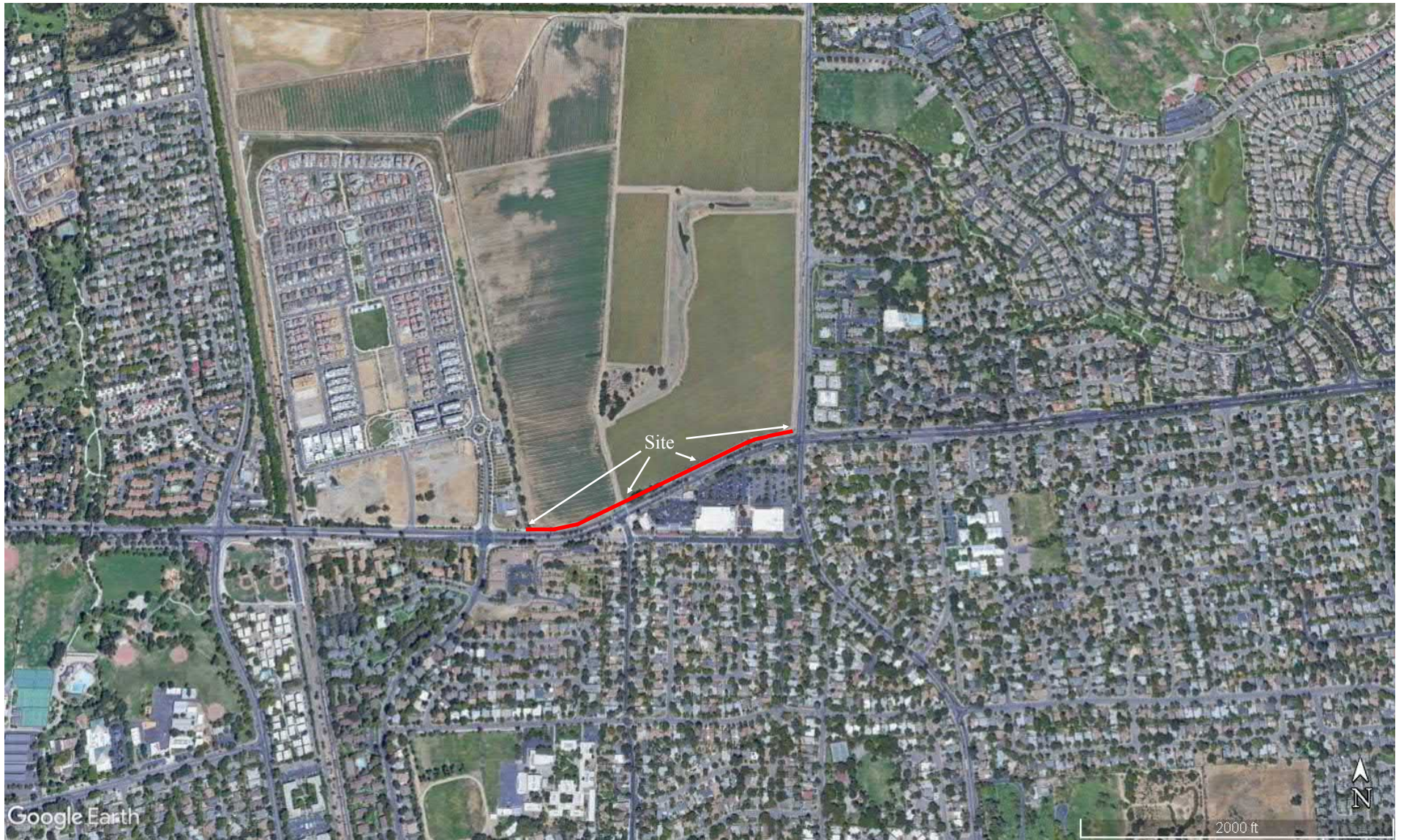
The Proposed Project is located in the northern portion of the City of Davis in a mostly developed area. The site is within the Covell Boulevard right-of-way and zoned *Planned Development*. The environmental setting is characterized by typical urban development on three sides including office, residential and commercial uses, with agricultural uses directly north and adjacent to the site. The site is directly adjacent to Covell Boulevard, which is just south of the proposed bike path.

The Project site is located in the Sacramento Valley subregion of the California Floristic Province. This subregion is the smaller, wetter, colder area of the Great Central Valley Region. Climate is Mediterranean which is comprised of hot and dry summer months and cold and moderately wet winter months. The long term (years 1883 – 2016) average annual precipitation for Davis WSW Experimental Farm is 17.55 inches (with the wettest period during December and February), and average maximum daily temperatures range from 54.0 degree Fahrenheit (°F) in January to 94.0°F in July (ECORP 2020a).

The site is vacant grassland with a sparse covering of trees, shrubs, and low-lying vegetation. A single row of mature elm trees occurs immediately adjacent to the roadway between the firebreak and the pavement just east of the north/south access road extension of L Street. A few other, smaller trees are scattered along the easement, including silk tree, small live oaks, and small almond trees.

Elevation of the site ranges from 37 to 45 feet above mean sea level (AMSL). The nearest waterway to the site is a freshwater emergent wetland approximately 1,000 feet north of the Project site (ECORP 2020a).



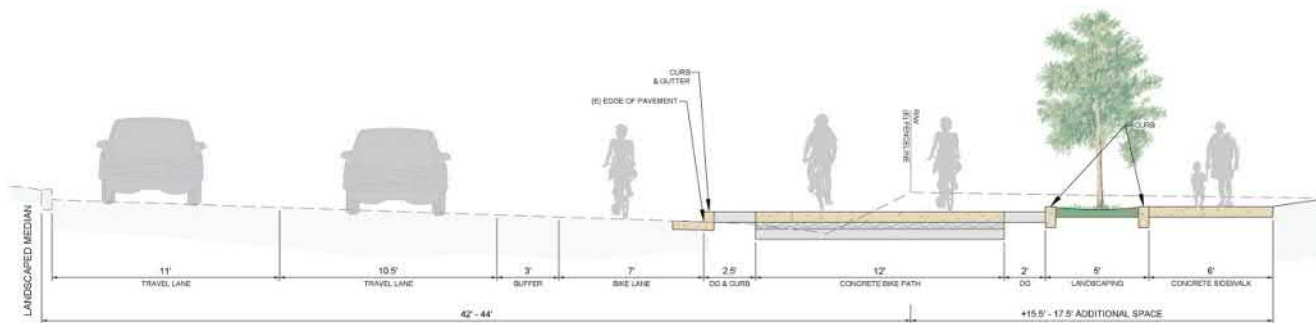


ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 2. Project Location
East Covell Bike Path – North Side Project



Figure 3. Surrounding Uses
East Covell Bike Path – North Side Project



SECTION A-A': ALTERNATIVE 3 - SIDE PATH WITH SIDEWALK

DRAFT

REV.	DATE	DESCRIPTION	BY	EAST COVELL BIKE PATH - NORTH SIDE CROSS-SECTIONS C.I.P. # 8284			100 WEBSTER ST. SUITE 300 OAKLAND, CA 94607 (916) 460-8008		alta	Davis California	CITY OF DAVIS PUBLIC WORKS DEPARTMENT	DESIGNED BY: CHECKED BY: DRAWN BY:	DATE: DWG. NO.:
											SHEET 4 OF 4 SHEETS		

SECTION 2.0 PROJECT DESCRIPTION

2.1 Project Description

The Proposed Project is for the construction of a shared-use pedestrian and bicycle path within the Covell Boulevard right-of way. The Project will connect to an existing sidewalk at the northeast corner of the Covell Blvd./J St./Cannery Ave. intersection and run approximately 0.36 miles east to the Covell Blvd./Pole Line Rd. intersection.

The Project would involve several pathways and features, from closest to furthest from the roadway as follows: a seven-foot-wide bike lane separated from car traffic by a three-foot-wide buffer, a 2.5-foot-wide curb and decomposed granite strip, a 12-foot-wide concrete bike path, a two-foot-wide decomposed granite strip, a five-foot-wide landscape buffer, and a 6-foot-wide sidewalk. The existing driveway to the agricultural land north of the Project site will remain. The final design has not yet been determined. However, although the final design may have minor design variations when it is completed, it will contain same general features and elements described and analyzed.

Based on the preliminary All sidewalks and pathways would be composed of concrete with decomposed granite buffers and a landscaping area will be utilized as depicted in *Figure 4. Cross Section*.

2.1.1 Construction and Timing

The Project is anticipated to be constructed in summer of 2021. The construction period is anticipated to last 60 working days with between six and ten workers on-site daily. Project construction may require shoulder closures and require lane closures. Grading, paving, and installation of landscaping will be required as part of Project construction.

2.2 Regulatory Requirements, Permits, and Approvals

The following approvals and regulatory permits would be required for implementation of the Proposed Project.

2.2.1 Lead Agency Approval

The City of Davis is the lead agency for the Proposed Project. In order to approve the Proposed Project, the Davis City Council must first adopt the IS/MND, approve the Proposed Project, and file a Notice of Determination within five working days. The Council will consider the information contained in the IS/MND in making its decision to approve or deny the Proposed Project. The IS/MND is intended to disclose to the public the Proposed Project's details, analyses of the Proposed Project's potential environment impacts, and identification of feasible mitigation that will reduce potentially significant impacts to less than significant levels.

Other agency approvals include the following:

Central Valley Regional Water Quality Control Board

The Regional Water Quality Control Board (RWQCB) typically requires that a Construction General Permit be obtained for projects that disturb more than one acre of soil. The Project may disturb more than one acre of soil. As such, a SWPP may be required for the Project. Typical conditions issued with such a permit include the submittal of and adherence to a stormwater pollution prevention plan (SWPPP), as well as prohibitions on the release of oils, grease, or other hazardous materials.

Yolo-Solano Air Quality Management District

The Proposed Project is located in an area under the jurisdiction of the Yolo-Solano Air Quality Management District (YSAQMD). Construction equipment used for the Project that meets certain horsepower or emitting specifications will be required to have Portable Equipment Registrations from the YSAQMD (YSAQMB 2019).

2.2.2 Relationship of Project to Other Plans and Projects

City of Davis General Plan

The City of Davis' General Plan (Davis 2007) articulates the community's vision of its long-term physical form and development. The General Plan is comprehensive in scope and represents the City's expression of quality of life and community values; it includes social and economic concerns, as well. General plans are prepared under a mandate from the State of California, which requires that each city and county prepare and adopt a comprehensive, long-term general plan for its jurisdiction and any adjacent related lands. The general plan serves as a basis for decision-making. The plan directs decisionmakers, who must balance competing community objectives, which sometimes present trade-offs. The City of Davis General Plan consists of ten individual sections. These sections include individual chapters related to:

- Land Use and Growth Management;
- Mobility;
- Urban Design, Neighborhood Preservation and Community Forest Management;
- Housing;
- Economic and Business Development;
- Water;
- Materials, Solid Waste and Recycling;
- Computers and Technology;
- Parks, Recreation and Open Space;
- Youth and Education;
- Human Services;
- Art and Culture;
- Diversity;
- Habitat and Natural Areas;
- Agriculture, Soils and Minerals;
- Historic and Archaeological Resources;
- Energy;
- Police and Fire;
- Hazards;
- Air Quality; and
- Noise.

In addition, the City adopted a Transportation Element in 2013. The Transportation Element establishes goals and policies to guide the evolution and development of the Davis transportation system to year 2035. The Element provides a framework that reflects community values regarding transportation planning, infrastructure, and related investments.

City of Davis East Covell Corridor Plan

The East Covell Corridor Plan (ECCP) is a comprehensive look at the existing transportation systems and community assets on East Covell Boulevard between F Street and Birch Lane. The goal of the plan is to identify realistic transportation improvements to the corridor that will enhance safety, circulation, identity, and access for all modes of transportation. The purpose of the document is to set a vision for the future development of East Covell Boulevard so that policy makers can make informed decisions about its future infrastructure development.

City of Davis Bicycle Action Plan – Beyond Platinum

The Bicycle Action Plan – Beyond Platinum is designed to provide a detailed road map for implementing bike programs that will help Davis achieve its long-term emissions reductions and mode share goals. By implementing these strategies, the City will dramatically increase the safety and ease of use of active transportation options throughout Davis. The Bicycle Action Plan is an active transportation plan that focuses on bicycling as the primary mode, and also integrates walking and transit. The combination of the three modes creates the perfect trifecta to achieve a sustainable transportation system.

2.2.3 Consultation with California Native American Tribe(s)

Assembly Bill (AB) 52 requires that prior to the release of a CEQA document for a project, an agency begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the Proposed Project if: (1) the California Native American tribe requested to the lead agency, in writing, to be informed by the Lead Agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe and (2) the California Native American tribe responds in writing, within 30 days of receipt of the formal notification, and requests the consultation. The City received a letter from the Yocha Dehe Wintun Nation about the Project. The Yocha Dehe determined that while the Project site is not within an area of known cultural resources, however it is within the aboriginal territory of the tribe. The tribe recommended that cultural sensitivity training mitigation be included in the IS. Further information on potential Tribal Cultural Resources in the Project Area is provided in Section 4.18 of this IS/MND.

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SECTION 3.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED AND DETERMINATION

Environmental Factors Potentially Affected

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

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

Determination

On the basis of this initial evaluation:

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

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

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

I find that the 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 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 Project, nothing further is required.

Sherri Metzker, Principal Planner

Date

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SECTION 4.0 ENVIRONMENTAL CHECKLIST AND DISCUSSION

4.1 Aesthetics

4.1.1 Environmental Setting

The Project site is situated in a mostly developed area in the City of Davis. The City of Davis General Plan and General Plan EIR do not identify any specific areas or features considered to be of a scenic resource to the City. The General Plan does not include goals polices or programs for the protection of specific scenic vistas or resources. However, the General Plan includes goals and policies related to enhancing and preserving the aesthetics of the City. Many of these goals and policies are directed at urban design and encouraging the incorporation of trees into urban design.

The General Plan goals and policies (Chapter 3) related to aesthetics that are relevant to the Proposed Project are as follows:

GOAL UD 2. Maintain an aesthetically pleasing environment and manage a sustainable community forest to optimize environmental, aesthetic, social and economic benefits.

Policy UD 2.1- *Preserve and protect scenic resources and elements in and around Davis, including natural habitat and scenery and resources reflective of place and history.*

Policy UD 2.2- *Maintain and increase the amount of greenery, especially street trees, in Davis, both for aesthetic reasons and to provide shade, cooling, habitat, air quality benefits, and visual continuity.*

Standards

- a) *New local streets in residential areas, collector streets and arterial streets should have landscaped strips with trees between sidewalks and streets.*
- b) *Arterial and collection streets in new developments should have planted medians, but with widths sized to accommodate tree and shrub plantings. Medians on collector streets should be limited to locations where the median contributes to a specific purpose or solves a specific problem, such as enhancing a neighborhood entry, calming traffic, or providing a needed pedestrian refuge at intersections. Removal of street trees to accommodate an increase in vehicular traffic shall occur only as a last resort, after review by appropriate boards and commissions.*
- c) *Streets that are planted in the future are expected to have wide canopies, sufficient to eventually provide, at maturity, at least 50 percent shade coverage of the pavement area of local streets and 30 percent shade coverage of the pavement area of collector and arterial streets.*
- d) *New developments should include Greenstreets, where appropriate.*
- e) *Existing arterial and collector streets should be converted to Greenstreets where appropriate and existing local streets should be evaluated for adequate tree canopies.*
- f) *Removal of street trees to accommodate increased vehicular traffic shall occur only as a last resort.*

Actions

- a) *Maintain existing street trees and implement a program of replacement street tree planting using large canopy deciduous trees where appropriate.*

- b) *In redevelopment or new development areas, plant trees and other vegetation to the greatest extent possible, with a minimum of pavement.*
- c) *Develop a street tree master plan that specifies the species of trees to be planted on each roadway segment in Davis and provides a strategy for funding, maintenance and replacement.*

Policy UD 3.2- *Provide exterior lighting that enhances safety and night use in public spaces, but minimizes impacts on surrounding land uses.*

Standards

- a) *Outdoor lighting should not unreasonably interfere with the use and enjoyment of dark-sky activities and near-by residences.*

Policy HAB 1.4- *Preserve and protect scenic resources.*

Actions

- a) *Study and implement options for the preservation and protection of scenic resources.* (Davis 2007)

In addition, the City of Davis Municipal Code contains regulations which pertain to the Proposed Project:

- **Section 8.17.030- General Requirements:** Outdoor lighting control requirements aimed at minimizing nighttime light glare in (Davis 2020a).

Visual Character of the Project Site

The Project site is located between a four-lane city arterial street (Covell Boulevard) and an actively farmed alfalfa field located outside the City's jurisdiction. The Project site consists of a firebreak/agricultural access road and roadside vegetation along the north side of Covell Boulevard between Cannery Avenue and Pole Line Rd. The firebreak averages approximately 20 ft wide appears frequently disked and had only small, early growth plants during the site visit. North of the firebreak is a monoculture of alfalfa, while the vegetated strip south of the firebreak comprised annual grasses.

A single row of mature elm trees occurs immediately adjacent to the roadway between the firebreak and the pavement just east of the north/south access road extension of L Street. Groundcover beneath the elms includes straw and abundant leaf litter. A few smaller trees are scattered along the easement, including silk tree, small live oaks, and small almond trees.

A row of vegetation and trees runs north from the western endpoint of the proposed bike trail. Trees here are larger, and include mature valley oaks, blackwood acacia, oleander, northern California black walnut, and almond. Representative site photos are shown in *Appendix B*. Based on a review of imagery from Google Earth, the alfalfa field north of the project site appears to have been in cultivation for a long period of time. There are no trees within the survey area that are listed on Davis' Landmark Tree List (ECORP 2020a). Elevation of the site ranges from 37 to 45 feet above mean sea level (AMSL).

The general environmental setting is characterized by a mixed commercial and urban environment to the east, south, and west, with actively farmed farmland to the north. East Covell Boulevard is a four-lane arterial street, approximately 80 feet wide from shoulder to shoulder, with a landscaped median between

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the east and westbound lanes. It is in good condition and presently heavily trafficked and well maintained. The bike and pedestrian pathway will be located on the north side of East Covell Boulevard, between the roadway and the farmland. See *Figure 1. Regional Location* and *Figure 2. Project Location*. Any additional right-of-way required for the Project would be acquired by the City prior to commencement of construction.

State Scenic Highways

The California Scenic Highway Program protects and enhances the scenic beauty of California’s highways and adjacent corridors. A highway can be designated as scenic based on how much natural beauty can be seen by users of the highway, the quality of the scenic landscape, and if development impacts the enjoyment of the view. There are no officially designated state scenic highways within the City of Davis or Yolo County (Caltrans 2020).

4.1.2 Aesthetics (I) Environmental Checklist and Discussion

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The City of Davis does not have officially designated scenic vistas. However, the General Plan Urban Design, Neighborhood Preservation and Community Forest Management Element (Chapter 3) includes goals and policies aimed at preserving and enhancing scenic resources with a focus on trees.

The Proposed Project may require the modification and/or removal of up to 39 of 48 existing trees within the Project Area depending on design chosen, as calculated by Rolls Anderson & Rolls. However, the trees are not identified as scenic resources within the General Plan or as reflective of place or history and therefore, not considered an identified scenic resource or vista. Rather, these trees are located on disturbed land between a four-lane roadway and actively farmed land. In addition, any right-of-way necessary for the pathway would be acquired by the City prior to commencement of Project construction, and as such no trees would be removed from private property. Only trees located on private property may be protected as Landmark Trees or Trees of Significance under Chapter 37 of the City’s Municipal Code. Furthermore, the Project includes landscaping which will include a combination of groundcover, shrubbery, and/or trees that comply with the recommendations of the General Plan and requirements of the Municipal Code. The addition of landscaping would enhance the Project’s aesthetic value by providing an attractive walking/biking trail in the City.

As such, the Project will have a less than significant impact on a scenic vista.

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Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Proposed Project is not located within the vicinity of an officially designated scenic highway. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) In a non-urbanized area substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The City of Davis General Plan Urban Design, Neighborhood Preservation and Community Forest Management Element (Chapter 3) includes goals and policies establishing the importance of preserving the aesthetic qualities of the City. The goals and policies focus on aesthetic design, use of trees in landscaping, and minimizing the impact of light glare due to outdoor lights. In addition, as stated previously, designated Landmark Trees and Trees of Significance are protected under Chapter 37 of the Municipal Code (Davis 2007).

The Project is the addition of a bike path and pedestrian pathway, that includes landscaping with a combination of groundcover, shrubbery, and/or trees in its design, along a 0.36 mile portion of an existing roadway. The Project may require removal and/or modification of existing trees in the Project Area. However, the removal of these trees will not conflict with an applicable Municipal Code or General Plan regulation related to protection of trees of aesthetic value.

The Project also includes landscaping which will comply with the recommendations of the General Plan and requirements of the Municipal Code. The Project plans include a landscaped area to be planted with a combination of groundcover, shrubbery, and/or trees which will replace any existing trees lost due to the Project. In addition, the Project is the extension of an existing bicycle and pedestrian pathway. Furthermore, the Proposed Project will not significantly decrease the quality of the scenic views from current levels as viewed from the Project Area. As stated previously, the City does not have officially designated scenic vistas. In addition, the Project will not create a significant source of light glare; as explained under item d) below. Therefore, the Project would have a less than significant impact on scenic quality on the site and surrounding area.

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Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Street lighting currently exists at regular intervals, between the sidewalk and the roadway, on the south side of East Covell Boulevard. Streetlamps are also located intermittently along the roadway median and on the north side of the roadway. Additional lighting is not currently planned for the Proposed Project. However, if additional lighting is installed for the Project, it will be done so in order to facilitate pedestrian, cyclist, and vehicle movement and safety.

The City of Davis Municipal Code *Section 8.17.030- General Requirements* provides the requirements for outdoor lighting fixtures located upon public property or in the public right-of-way. Any outdoor lighting installed for the Project shall be fully shielded pursuant to the Municipal Code (City of Davis 2020a). Compliance with the City of Davis Municipal Code requirements will ensure that the Project will not create a new source of substantial light glare. As such, the Project will have a less than significant impact in this area.

4.1.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.2 Agriculture and Forestry Resources

4.2.1 Environmental Setting

The California Department of Conservation (DOC) manages the Farmland Mapping and Monitoring Program, which identifies and maps significant farmland. Farmland is classified using a system of five categories including Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land. The classification of farmland as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance is based on the suitability of soils for agricultural production, as determined by a soil survey conducted by the Natural Resources Conservation Service (NRCS). The California DOC manages an interactive website, the California Important Farmland Finder. This website program identifies the Project site as being within an area of Urban and Built-Up Land. As Urban and Built-Up Land, this site is not under a Williamson Act contract. The agricultural land directly north of the Project site is identified as Prime Farmland (DOC 2020).

The Project site is located in an urban area and does not contain possible forest or timber resources.

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4.2.2 Agriculture and Forestry Resources (II) Environmental Checklist and Discussion

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The DOC identifies the Project site as Urban and Built-Up Land. As the Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), the Project would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

This site is not subject to a Williamson Act contract. The Project would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Project site is not located in a forestland protection or timber production area. The Project would have no impact in this area.

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Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

No identified forest lands exist on the Project site or within the vicinity of the Project. The Project would have no impact in this area.

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

While existing agricultural uses are directly adjacent to the Project site, the construction and use of a shared-use path adjacent to an existing roadway with existing bicycle lanes would not result in the conversion of farmland to non-agricultural. No forest land exists within the Project vicinity. The Project would have no impact in this area.

4.2.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.3 Air Quality

4.3.1 Environmental Setting

The California Air Resources Board (CARB) and the U.S. Environmental Protection Agency (USEPA) focus on the following criteria pollutants to determine air quality: ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), coarse particulate matter (PM₁₀), fine particulate matter (PM_{2.5}), and lead. In Shasta County, the majority of criteria pollutant emissions come from mobile sources.

Toxic air contaminants (TACs) are distinguished from criteria air pollutants and are separated into categories of carcinogens and noncarcinogens. Carcinogens, such as diesel particulate matter (DPM), are considered dangerous at any level of exposure. Noncarcinogens, however, have a minimum threshold for dangerous exposure. Common sources of TACs include, but are not limited to gas stations, dry cleaners, diesel generators, ships, trains, construction equipment, and motor vehicles.

4.3.1.1 Topography and Air Quality

The California Air Resources Board (CARB) divides the state into air basins that share similar meteorological and topographical features. The Proposed Project is located in the southeast portion of Yolo County, which is in southern end of the Sacramento Valley within the Sacramento Valley Air Basin (SVAB) (ECORP 2020d). The SVAB consists of a total of eleven counties: Shasta, Tehama, Glenn, Butte, Colusa, Yuba, Sutter, Placer, Yolo, Sacramento, and Solano (CARB 2019). The NSVAB is bounded by the Coast and Diablo Mountain Ranges on the west, the Sierra Nevada Mountain Range to the east, and the San Joaquin Valley to the south. Air flows into the SVAB through the Carquinez Strait, moving air across the Sacramento Delta, and bringing with it pollutants from the San Francisco Bay Area. The climate is characterized by hot, dry summers and cold, rainy winters.

The local air quality agency regulating air quality in the Project Area is the Yolo-Solano Air Quality Management District (YSAQMD). The YSAQMD is the local agency with primary responsibility for compliance with both federal and state standards and for ensuring that air quality conditions are maintained. The YSAQMD is required, pursuant to the federal Clean Air Act, to reduce emissions of criteria pollutants for which the SVAB is in nonattainment. In order to reduce such emissions, the YSAQMD drafted the “Reasonably Available Control Technology (RACT) State Implementation Plan” (RACT SIP), a regional blueprint for achieving air quality standards and healthful air in the portions of the SVAB that are under YSAQMD’s jurisdiction. The RACT SIP establishes a program of rules and regulations directed at reducing air pollutant emissions and achieving state (California) and national air quality standards. The RACT SIP incorporates the latest scientific and technical information and planning assumptions, including the latest population growth forecasts for the YSAQMD jurisdiction.

Projections for achieving RACT SIP air quality goals are based on assumptions regarding population, housing, and growth trends. Thus, determining Project consistency with the RACT SIP focuses on whether or not the Proposed Project exceeds the assumptions utilized in preparing the forecasts presented its air quality planning documents. The primary source of data employed to form the basis for the projections of air pollutant emissions in Davis, which encompasses the Project site, is the City of Davis General Plan (ECORP 2020d).

Ambient Air Quality Standards

Air quality standards are set at both the federal and state levels of government. The federal Clean Air Act requires the USEPA to establish ambient air quality standards for six criteria air pollutants: O₃, CO, NO₂, SO₂, lead, PM₁₀, and PM_{2.5}. The California Clean Air Act also sets ambient air quality standards. The state standards are more stringent than the federal standards, and they include other pollutants in addition to those regulated by the federal standards. When the concentrations of pollutants are below the maximum allowed standards in an area, that area is considered to be in attainment of the standards. The Project site lies within the boundaries of the SVAB and is in nonattainment for exceeding state and federal criteria pollutant levels.

YSAQMD significance thresholds are used to determine air quality impacts in this analysis. The thresholds of significance are summarized in *Table 4.3-1*.

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Table 4.3-1. Yolo- Solano Air Quality Management District Thresholds of Significance – Tons per Year

Construction Year	Pollutant					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
<i>YSAQMD Potentially Significant Impact Threshold</i>	<i>10 tons/year</i>	<i>10 tons/year</i>	<i>n/a</i>	<i>n/a</i>	<i>80 lbs/day</i>	<i>n/a</i>

Source: YSAQMD 2007

If a project exceeds the YSAQMD thresholds, the Project will result in a potentially significant impact. Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant and unavoidable impact.

4.3.2 Air Quality (III) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

As part of its enforcement responsibilities, the EPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in areas that do not meet federal and/or state air quality standards (nonattainment areas), using a combination of performance standards and market-based programs. Similarly, under state law, the California Clean Air Act requires an air quality attainment plan to be prepared for areas designated as nonattainment with regard to the federal and state ambient air quality standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date. The Project site lies within the boundaries of the SVAB, which is in nonattainment for state O₃ and PM₁₀ standards and federal O₃ and PM_{2.5} standards.

The YSAQMD is the local agency with primary responsibility for compliance with both federal and state standards and for ensuring that air quality conditions are maintained. The YSAQMD is required, pursuant to the federal Clean Air Act, to reduce emissions of criteria pollutants for which the SVAB is in nonattainment. In order to reduce such emissions, the YSAQMD drafted the "Reasonably Available Control Technology (RACT) State Implementation Plan" (RACT SIP), a regional blueprint for achieving air quality standards and healthful air in the portions of the SVAB that are under YSAQMD's jurisdiction. The RACT SIP establishes a program of rules and regulations directed at reducing air pollutant emissions and achieving state (California) and national air quality standards. The RACT SIP incorporates the latest scientific and technical information and planning assumptions, including the latest population growth forecasts for the YSAQMD jurisdiction.

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Projections for achieving RACT SIP air quality goals are based on assumptions regarding population, housing, and growth trends. Thus, determining Project consistency with the RACT SIP focuses on whether or not the Proposed Project exceeds the assumptions utilized in preparing the forecasts presented its air quality planning documents. The primary source of data employed to form the basis for the projections of air pollutant emissions in Davis, which encompasses the Project site, is the City of Davis General Plan.

The Proposed Project does not conflict with any of the land use assumptions in the City General Plan. Specifically, the Project does not propose to amend the General Plan, does not include development of new housing or employment centers and would not induce population or employment growth. Therefore, the Project would not affect local plans for population growth, and the Proposed Project would be considered consistent with the population, housing, and employment growth projections utilized in the preparation of the RACT SIP. Furthermore, once the Project is completed, there will be no resultant increase in automobile trips to the area because the proposed improvements will not require daily visits by vehicle for operation, maintenance, repair, or any other reason. Improvements proposed by the Project would make the corridor more bicycle and pedestrian-friendly, and thus potentially reduce daily vehicle miles traveled (VMT) within Davis. Vehicles produce criteria air pollutants while operating. The amount of air pollutants produced is directly correlated with VMT. As such, increasing opportunity for use of alternative modes of travel in the City will help reduce VMT and subsequently reduce emissions of criteria air pollutants.

For these reasons, the Project would be consistent with the emission-reduction goals of the RACT SIP. The Project will have a less than significant impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's individual emissions exceed its identified significance thresholds, the project would be cumulatively considerable. Projects that do not exceed significance thresholds would not be considered cumulatively considerable.

The Proposed Project is a pedestrian and bike pathway. As such, the great majority of the air quality emissions produced by the Project are attributable to construction activities. Long term impacts due to motor vehicles traveling to and from the site will be very minimal, as the completion of this 0.36-mile pathway would not result in a substantial increase of motor vehicles driving to the site to use the pathway. For purposes of impact assessment, air quality impacts have been separated into construction impacts and operational impacts.

Construction Emissions

Construction-generated emissions are temporary and short-term but have the potential to represent a significant air quality impact. Three basic sources of short-term emissions will be generated through construction of the Proposed Project: operation of the construction vehicles (i.e., excavators, trenchers, dump trucks), the creation of fugitive dust during clearing and grading, and the use of asphalt or other oil-based substances during paving activities. Construction activities such as excavation and grading operations, construction vehicle traffic, and wind blowing over exposed soils would generate exhaust emissions and fugitive PM emissions that affect local air quality at various times during construction. Effects would be variable depending on the weather, soil conditions, the amount of activity taking place, and the nature of dust control efforts. The dry climate of the area during the summer months creates a high potential for dust generation.

Construction-generated emissions associated the Proposed Project were calculated using the CARB-approved CalEEMod computer program, which is designed to model emissions for land use development projects, based on typical construction requirements. See *Appendix A* for more information regarding the construction assumptions, including construction equipment and duration, used in this analysis. Predicted maximum construction-generated emissions for the Proposed Project are summarized in *Table 4.3-2*.

Table 4.3-2. Construction-Related Emissions

Construction Year	Pollutant					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Full Project Construction						
Year 2021	0.06 tons/year	0.48 tons/year	-	-	27.7 lbs/day	-
<i>YSAQMD Potentially Significant Impact Threshold</i>	<i>10 tons/year</i>	<i>10 tons/year</i>	<i>n/a</i>	<i>n/a</i>	<i>80 lbs/day</i>	<i>n/a</i>
Exceed YSAQMD Threshold?	No	No	No	No	No	No

Source: CalEEMod version 2016.3.2. Refer to **Appendix A** for Model Data Outputs.

Notes: Emissions calculations account for demolition, site preparation and paving of 0.87 acres. The demolition phase account for the removal of 915 tons of debris from the Project Area.

As shown in *Table 4.3-2*, all criteria pollutant emissions would remain below their respective thresholds during Project construction. It is noted that the Project would temporarily affect the amount of time local vehicular traffic idles due to potentially increased delays caused by Project construction. The longer a vehicle idles in a single location, the more air pollutant emissions are generated over the course of its travel than would otherwise have been emitted with reduced idling. Project construction could also instigate a temporary change in traffic patterns in the area as local commuters choose different routes in order to avoid potential delays caused by Project construction. Change in traffic patterns can result in increased vehicle miles traveled and thus, increased emissions.

However, according to CARB's EMFAC2017 emission program, which was developed by CARB to assess emissions from on-road vehicles including cars, trucks, and buses in California, the fleet-wide combined average emission rate for idling automobiles in Yolo County equates to 0.00000051 tons per second of

ROG, 0.0000676 tons per second of NO_x, 0.0000002 tons (0.0005 pounds) per second of PM₁₀ and PM_{2.5}. Thus, the Project would have to result in a combined vehicle delay of 19,490,196 seconds (5,413 hours) over the course of a year to exceed the YSAQMD ROG threshold and 140,828 seconds (39 hours) over the course of a year to exceed the YSAQMD NO_x threshold.¹ As noted in *Table 4.3-2*, the YSAQMD regulates PM₁₀ with a daily emission significance threshold and therefore the Project would need to result in a combined vehicle delay of 104,600 seconds (29 hours) over the course of a single day to exceed this threshold. Implementation the Project is not expected to instigate the level of delay necessary to surpass a significance threshold.²

EMFAC calculates a fleet-wide combined average emission rate of 0.0007 tons of ROG, 0.00001 tons of NO_x, and 0.0000002 tons (0.0005 pounds) of both PM₁₀ and PM_{2.5} per each mile traveled in Yolo County, assuming a 25 miles per hour rate of travel. Therefore, the Project would have to result in an addition of 14,200 vehicle miles traveled over the course of a year to exceed the YSAQMD ROG threshold and 952,000 vehicle miles traveled to exceed the YSAQMD NO_x threshold.³ The Project would have to instigate 104,600 vehicle miles traveled in a single day in order to exceed the YSAQMD PM₁₀ threshold. Implementation the Project is not expected to instigate a change in local traffic patterns intense enough to surpass a significance threshold.⁴ Criteria pollutant emissions generated during Project construction would not result in a violation of air quality standards.

Operational Emissions

The Proposed Project will not include the provision of new permanent stationary or mobile sources of emissions, and therefore, by its very nature, will not generate quantifiable air quality emissions from Project operations. The Project does not propose any buildings and therefore no permanent source or stationary source emissions. Once the Project is completed, there will be no resultant increase in automobile trips to the area because the proposed improvements will not require daily visits by vehicle for operation, maintenance, repair, or any other reason. As such, the Project will have a less than significant impact in this area.

¹ As shown in *Table 4.3-2*, Project construction would result in 0.06 tons of ROG and 0.48 tons of NO_x over the course of construction. The significance threshold for each of these pollutants is 10 tons per year. Thus, 0.00000051 tons per second of ROG x 19,490,196 seconds = 9.94 tons (the difference between 10 tons and 0.06 tons) and 0.0000676 tons per second of NO_x x 140,828 seconds = 9.52 tons (the difference between 10 tons and 0.48 tons).

² As shown in *Table 4.3-2*, Project construction would result in 27.7 pounds of PM₁₀ daily, over the course of construction. The significance threshold for this pollutant is 80 pounds daily. Thus, 0.0005 pounds per second of PM₁₀ x 104,600 seconds = 52.3 pounds (the difference between 80 pounds and 27.7 pounds).

³As shown in *Table 4.3-2*, Project construction would result in 0.06 tons of ROG and 0.48 tons of NO_x over the course of construction. The significance threshold for each of these pollutants is 10 tons per year. Thus, 0.0007 tons of ROG per mile x 14,200 vehicle miles = 9.94 tons and 0.00001 tons of NO_x per mile x 952,000 vehicle miles traveled = 9.52 tons.

⁴ As shown in *Table 4.3-2*, Project construction would result in 27.7 pounds of PM₁₀ daily, over the course of construction. The significance threshold for this pollutant is 80 pounds daily. Thus, 0.0005 pounds of PM₁₀ per mile x 104,600 vehicle miles traveled = 52.3 pounds.

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Would the Project:		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
c)	Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. There nearest sensitive receptors to the Project site are residents located approximately 170 feet away.

Project Construction

Construction-related activities would result in temporary, short-term Project-generated emissions of diesel particulate matter (DPM) from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., clearing, grading); soil hauling truck traffic; paving; and other miscellaneous activities. For construction activity, DPM is the primary TAC of concern. Particulate exhaust emissions from diesel-fueled engines (i.e., DPM) were identified as a TAC by the CARB in 1998. The potential cancer risk from the inhalation of DPM, as discussed below, outweighs the potential for all other health impacts (i.e., non-cancer chronic risk, short-term acute risk) and health impacts from other TACs. Accordingly, DPM is the focus of this discussion.

Based on the emission modeling conducted the maximum construction-related emissions of exhaust PM2.5, considered a surrogate for DPM, would be 0.02 pounds per day (see *Appendix A*) during construction activity (PM2.5 is considered a surrogate for DPM because more than 90 percent of DPM is less than 1 microgram in diameter and therefore is a subset of particulate matter under 2.5 microns in diameter (i.e., PM2.5), according to CARB. Most PM2.5 derives from combustion, such as use of gasoline and diesel fuels by motor vehicles.) Furthermore, even during the most intense month of construction, emissions of DPM would be generated from different locations on the Project site, rather than a single location, because different types of construction activities (e.g., site preparation, grading, paving) would not occur at the same place at the same time.

The dose to which receptors are exposed is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for any exposed receptor. Thus, the risks estimated for an exposed individual are higher if a fixed exposure occurs over a longer period of time. According to the Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments, which determine the exposure of sensitive receptors to TAC emissions, should be based on a 70-, 30-, or 9-year exposure period; however, such assessments

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should be limited to the period/duration of activities associated with the Proposed Project. Consequently, an important consideration is the fact that construction of the Proposed Project is anticipated to last a matter of months. Therefore, considering the relatively low mass of DPM emissions that would be generated during even the most intense season of construction, the relatively short duration of construction activities required to develop the site and the highly dispersive properties of DPM, construction-related TAC emissions would not expose sensitive receptors to substantial amounts of air toxics. Once operational the Proposed Project would not be a source of TAC emissions.

Project Operations

Operation of the Proposed Project would not result in the development of any substantial sources of air toxics. There are no stationary sources associated with the operations of the Project; nor would the Project attract mobile sources that spend long periods queuing and idling at the site.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person’s reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another. It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word “strong” to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

Project Construction

During construction, the Proposed Project presents the potential for generation of objectionable odors in the form of diesel exhaust in the immediate vicinity of the site. However, these emissions are short-term in nature and will rapidly dissipate and be diluted by the atmosphere downwind of the emission sources. Additionally, odors would be localized and generally confined to the construction area.

Project Operations

Land uses commonly considered to be potential sources of obnoxious odorous emissions include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The Proposed Project does not include any uses identified as being associated with odors. The project will have a less than significant impact in this area.

4.3.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.4 Biological Resources

ECORP Consulting, Inc. conducted a Biological Resources Assessment (BRA) for the Proposed Project (ECORP 2020a). The purpose of the BRA was to collect information on the biological resources present within the Project site such as potential Waters of the U.S./State or habitat for sensitive plant and animals sufficient to support the California Environmental Quality Act (CEQA). The BRA is included as *Appendix B* of this IS/MND.

4.4.1 Environmental Setting

The Project site is located in the Sacramento Valley subregion of the California Floristic Province. This subregion is the smaller, wetter, colder area of the Great Central Valley Region. Elevation is low and ranges between 37 and 45 feet above mean sea level (AMSL). Established housing is located to the east across Pole Line Road, a commercial/retail center is located to the south across Covell Boulevard, newly planned and developed housing is to the west, and an open field of alfalfa is to the north. The climate is Mediterranean and comprised of hot and dry summer months and cold and moderately wet winter months. The long term (years 1883 – 2016) average annual precipitation for Davis WSW Experimental Farm is 17.55 inches (with the wettest period during December and February), and average maximum daily temperatures range from 54.0 degree Fahrenheit (°F) in January to 94.0°F in July (ECORP 2020a).

4.4.1.1 Vegetation Communities

The Project site consists of a firebreak/agricultural access road and roadside vegetation along the north side of Covell Boulevard between Cannery Avenue and Pole Line Rd. The firebreak averages approximately 20 ft wide appears frequently disked and had only small, early growth plants during the site visit. North of the firebreak is a monoculture of alfalfa (*Medicago sativa*), while the vegetated strip south of the firebreak comprised annual grasses (*Avena fatua*, *Bromus hordeaceus*, *Cynodon dactylon*, *Sorghum halpense*, *Hordeum vulgare*), Mediterranean mustard (*Hirschfeldia incana*), willow herb (*Epilobium* sp.), Italian thistle

(*Carduus pycnocephalus*), annual bindweed (*Convolvulus arvensis*), annual sunflower (*Helianthus annua*), cheeseweed (*Malva parviflora*), storksbill (*Erodium botrys*), turkey mullein (*Croton setigerus*), and Russian thistle (*Salsola tragus*). A single row of mature elm trees (*Ulmus* sp.) occurs immediately adjacent to the roadway between the firebreak and the pavement just east of the north/south access road extension of L Street. Groundcover beneath the elms includes bedstraw (*Galium aparine*), field hedge parsley (*Torilis arvensis*), and abundant leaf litter. A few other, smaller trees are scattered along the easement, including silk tree (*Albizia julibrissin*), small live oaks (*Quercus wizlizeni*), and small almond (*Prunus dulcis*) trees.

A row of vegetation and trees runs north from the western endpoint of the proposed bike trail. Trees here are larger, and include mature valley oaks (*Q. lobata*), blackwood acacia (*Acacia melanoxydon*), oleander (*Nerium oleander*), northern California black walnut (*Juglans hindsii*), and almond. Representative site photos are shown in *Appendix B*. Based on a review of imagery from Google Earth, the alfalfa field north of the project site appears to have long been in cultivation, appearing at times to be dry-farmed. There are no trees within the survey area listed on Davis' Landmark Tree List.

The Project site is located within the Yolo Habitat Conservation Plan / Natural Community Conservation Plan (Yolo HCP/NCCP). The Yolo HCP/NCCP identifies the Project site with the Urban or Built-Up land cover type. The Yolo HCP/NCCP identifies that this type of land cover can, depending on their specific conditions, can support a number of common wildlife species, including the Nuttall's woodpecker, barn swallow, western scrub-jay, ruby-crowned kinglet, northern mockingbird, American robin, cedar waxwing, yellow-rumped warbler, white-crowned sparrow, dark-eyed junco, house finch, raccoon, and numerous nonnative species, including the European starling, house sparrow, Virginia opossum, eastern fox squirrel, house mouse, and black rat. Large trees in urban lands support roosting and nesting of the white-tailed kite and Swainson's hawk, and the western burrowing owl may be found in remnant fields within urban lands (Yolo Habitat Conservancy 2018).

4.4.1.2 Wildlife

The Project Area was visited on February 21, 2020 by an ECORP Consulting, Inc. biologist. No special-status species were observed during the survey, but the Project site supports potentially suitable habitat for several special-status species.

4.4.1.3 Soils

According to the Web Soil Survey, one soil unit has been mapped onsite. This is (St) Sycamore silty clay loam, drained, 0 percent slopes. This soil is listed as having hydric components (NRCS 2020).

4.4.1.4 Potential Aquatic Resources/ Waters of the U.S.

No potential aquatic resources were observed during the site visit performed by ECORP Consulting, Inc. The National Wetland Inventory indicates a freshwater emergent wetland approximately 1,000 feet north of the western end point of the Proposed Project. The freshwater emergent wetland was located well outside the biological resource assessment study area.

4.4.1.5 Evaluation of Potentially Occurring Special-Status Species

An evaluation of potentially occurring special-status species was completed as a part of the biological resources assessment, provided as *Appendix B*. Based on species occurrence information from the CNDDDB, the literature review, and observations in the field, a list of special-status plant and animal species that have the potential to occur within the Project site was generated. 12 wildlife and vegetation species were noted that either are considered (1) to be present, (2) have potential to occur, or (3) have low potential to occur. Species with potential or low potential to occur are listed in *Table 4.4-1* below. Three plant species, one invertebrate species, seven bird species, and one mammal species have low potential or potential to occur on the Project site. These species are discussed further below. Species that were considered to be absent from the Project Site due to lack of suitable habitat, or because the known distribution of the species does not include the Project Site vicinity, are not discussed further in this document.

A complete list of special-status species known to exist in the region and the results of the database queries are included in the biological resources assessment included in *Appendix B*.

Table 4.4-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential to Occur On-Site
	ESA	CESA/ NPPA	Other			
Plants						
Depauperate milk-vetch (<i>Astragalus pauperculus</i>)	-	-	4.3	Found in mesic areas on volcanic soils in chaparral, cismontane woodland, and valley/foothill grassland (200' – 4,000').	March-June	Low; marginal habitat on the site.
Ferris' milk-vetch (<i>Astragalus tener</i> var. <i>ferrisiae</i>)	-	-	1B.1	Found in vernal mesic meadows and seeps and in sub-alkaline flats within valley and foothill grasslands (7'–246').	April-May	Low; marginal habitat on the site.
Alkali milk-vetch (<i>Astragalus tener</i> var. <i>tener</i>)	-	-	1B.2	Found in playas, mesic areas within valley and foothill grasslands, and alkaline vernal pools (3'–197').	March-June	Low; marginal habitat on the site.
Invertebrates						
Crotch bumble bee (<i>Bombus crotchii</i>)	-	CE	-	A California near-endemic species, abundance in California has declined by over 97%. Now largely absent from the Central Valley. Found in open grassland and scrub habitats, where it generally nests underground.		Low potential to occur. Vegetated strip along roadside provides potential nesting habitat, and adjacent alfalfa field may provide forage.

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Birds						
White-tailed kite (<i>Elanus leucurus</i>) (nesting)	-	-	CFP	Breeding occurs within trees in low elevation grassland, agricultural, wetland, oak woodland, riparian, savannah, and urban habitats.	March-June	Potential to occur. Elms on-site provide potential nesting substrates, but proximity to busy road and development make nesting less likely.
Swainson's hawk (<i>Buteo swainsoni</i>) (nesting)	-	CT	BCC	Nesting occurs in trees in agricultural, riparian, oak woodland, scrub, and urban landscapes. Forages over grassland, agricultural lands, particularly during disking/harvesting, irrigated pastures	March-August	Potential to occur. Numerous sightings of foraging and nesting Swainson's hawks are reported for the area, and the adjacent field provides foraging habitat.
Merlin (<i>Falco columbarius</i>) (Wintering)	-	-	CDFW WL	Breeds in Oregon, Washington north into Canada. Winters in southern Canada to South America, including California. Breeds near forest openings, fragmented woodlots, riparian areas. Wintering habitat includes wide variety, open forests, grasslands, tidal flats, plains, and urban settings.	September-April	Potential to occur while wintering.
Burrowing owl (burrow sites) (<i>Athene cunicularia</i>)	-	-	BCC, CSC	Breeds in burrows or burrow surrogates in open, treeless, areas within grassland, steppe, and desert biomes. Often with other burrowing mammals (e.g. prairie dogs, California ground squirrels). May also use human-made habitat such as agricultural fields, golf courses, cemeteries, roadside, airports, vacant urban lots, and fairgrounds.	March-August	Low potential to occur. A few California ground squirrel burrows were noted immediately along Covell Blvd., but these were deep in dense groundcover and within 1 meter of the road pavement.

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Nuttall's woodpecker (<i>Picoides nuttallii</i>)	-	-	BCC	Resident from northern California south to Baja California. Nests in tree cavities in oak woodlands and riparian woodlands.	April-July	Potential to occur. Larger elm trees in the vicinity of the project site provide potential nesting habitats, although cavities and evidence of woodpecker use were not documented during the field visit.
Yellow-billed magpie (nesting) (<i>Pica nuttallii</i>)	-	-	BCC	Endemic to California; found in the Central Valley and coast range south of San Francisco Bay and north of Los Angeles County. Nesting habitat includes oak savannah with large expanses of open ground; also found in urban, parklike settings.	April-June	Potential to occur. Breeds in area and trees onsite may provide nesting habitat.
Oak titmouse (<i>Baeolophus inornatus</i>)	-	-	BCC	Nests in tree cavities within dry oak or oak-pine woodland and riparian; where oaks are absent, they nest in juniper woodland, open forests (gray, Jeffrey, Coulter, pinyon pines and Joshua tree).	March-July	Potential to occur.
Mammals						
Western red bat (<i>Lasiurus blossevillii</i>)	-	-	SSC	Roosts in foliage of trees or shrubs; Day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas. There may be an association with intact riparian habitat (particularly willows, cottonwoods, and sycamores) (WBWG 2020).	April-September	Low potential to occur. Marginal roosting habitat occurs within the vegetation of the trees on site

Status Codes NOTE:

FESA	Federal Endangered Species Act
CESA	California Endangered Species Act
FE	FESA listed, Endangered.
FPT	Formally Proposed for FESA listing as Threatened.
FT	FESA listed, Threatened.
FC	Candidate for FESA listing as Threatened or Endangered.
Fd	Formally Delisted (delisted species are monitored for 5 years).
BCC	USFWS Bird of Conservation Concern (USFWS 2002).
CT	CESA- or NPPA-listed, Threatened.
CC	Candidate for CESA listing as Endangered or Threatened.
CE	CESA or NPPA listed, Endangered.
CFP	California Fish and Game Code Fully Protected Species (§ 3511-birds, § 4700-mammals, §5 050-reptiles/amphibians).
CDFW WL	CDFW Watch List
NPPA	California Native Plant Protection Act
SSC	CDFW Species of Special Concern (CDFW, updated August 2019).
1B	CRPR/Rare or Endangered in California and elsewhere.

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2B	Plants rare, threatened, or endangered in California but more common elsewhere.
3	CRPR/Plants About Which More Information is Needed – A Review List.
4	CRPR/Plants of Limited Distribution – A Watch List.
0.1	Threat Rank/Seriously threatened in California (over 80 percent of occurrences threatened / high degree and immediacy of threat)
0.2	Threat Rank/Moderately threatened in California (20-80 percent occurrences threatened / moderate degree and immediacy of threat)
0.3	Threat Rank/Not very threatened in California (<20 percent of occurrences threatened / low degree and immediacy of threat or no current threats known)

4.4.2 Evaluation of Special-Status Plants

No special-status plants were found during the field assessment. A number of special-status plants have been documented in the CNDDDB to occur in the vicinity of the Project site, and vegetation communities onsite represent potentially suitable habitat for three regionally occurring special-status plants (*Table 4.4-1*). Based on current site conditions, three potentially occurring special-status plants include depauperate milk-vetch (*Astragalus pauperculus*), Ferris' milk-vetch (*A. tener var. ferrisiae*), and alkali milk-vetch (*Astragalus tener var. tener*).

Depauperate Milk-vetch

Depauperate milk-vetch is not listed as pursuant to either the federal or California ESAs, but is designated as a California Native Plant Society California Rare Plant Rank (CRPR) 4.3 species. Depauperate milk-vetch is an herbaceous annual that is endemic to California with a blooming period between March and June. This plant occurs within vernal mesic and volcanic soils in chaparral, cismontane woodland and valley, and foothill grasslands at 197 to 3,986 feet. The current range for depauperate milk-vetch is Butte, Placer, Shasta, Tehama, and Yuba counties.

There is one CNDDDB documented occurrence of depauperate milk-vetch more than five miles from the Project site. The valley and foothill grassland within the Project site provide marginally suitable habitat for this species. Depauperate milk-vetch has low potential to occur onsite.

Ferris' Milk-vetch

Ferris' milk-vetch is not listed pursuant to either the federal or California ESAs but is designated as a CRPR 1B.1 species. This species is an herbaceous annual that occurs in vernal mesic meadows and seeps, and in subalkaline flats within valley and foothill grasslands and blooms from April through May and is known to occur at elevations ranging from 7 to 246 feet above MSL. Ferris's milk-vetch is endemic to California; the current range of this species includes Butte, Colusa, Glenn, Solano, Sutter, and Yolo counties and it is likely extirpated from Solano County. Two records occur from the area, one from 1954 is suspected to be from along the Yolo Causeway and the other, from 1926, lists the plant as a volunteer among agriculture plants.

Alkali Milk-vetch

Alkali milk-vetch is not listed pursuant to either the federal or California ESAs but is designated as a CRPR 1B.2 species. This species is an herbaceous annual that occurs in alkaline areas of playas, adobe clay valley and foothill grasslands, and vernal pools. Alkali milk-vetch blooms from March through June and is known

to occur at elevations ranging from 3 to 197 feet above MSL. Alkali milk-vetch is endemic to California; the current range of this species includes Alameda, Contra Costa, Merced, Monterey, Napa, San Benito, Santa Clara, San Francisco, San Joaquin, Solano, Sonoma, Stanislaus, and Yolo counties and is likely extirpated from Contra Costa, Monterey, San Benito, Santa Clara, San Francisco, San Joaquin, Sonoma, and Stanislaus counties. One occurrence is known from near the area, near the prior Hunt and Wesson Tomato canning plant and the railroad tracks west of the survey area.

4.4.3 Evaluation of Special-Status Animals

No special-status animals were found during the field assessment. A number of special-status animals have been documented in the CNDDDB within five miles of the Project site. The habitats and vegetation communities found onsite represent potentially suitable habitat for several special-status animal species (Table 4.4-1), including crotch bumble bee (*Bombus crotchii*), white-tailed kite (*Elanus leucurus*), Swainson's hawk (*Buteo swainsoni*), merlin (*Falco columbarius*) (Wintering), burrowing owl (*Athene cunicularia*), Nuttall's woodpecker (*Picoides nuttallii*), yellow-billed magpie (*Pica nuttallii*), oak titmouse (*Baeolophus inornatus*), and western red bat (*Lasiurus blossevillii*). Detailed descriptions of these species are provided below.

In addition to bird species listed above, while not considered special status as previously defined in this BRA, many birds are provided protection under the MBTA. The list of protected migratory birds includes most common species such as house finch (*Haemorhous mexicanus*), northern mockingbird (*Mimus polyglottos*), and American robin (*Turdus migratorius*), which have potential to nest and forage onsite.

Crotch Bumble Bee

The Crotch bumble bee is a candidate for listing as endangered under the California Endangered Species Act (CESA). The species was historically common throughout the southern two-thirds of its range but is now largely absent from much of that area and is nearly extirpated from the center of its historic range; the Central Valley.

The Crotch bumble bee inhabits open grassland and scrub habitats. The species visits a wide variety of flowering plants, although its very short tongue makes it best suited to forage at open flowers with short corollas. The species primarily nests underground. Little is known about overwintering sites for the species, but bumble bees generally overwinter in soft, disturbed soils or under leaf litter or other debris. The flight period for Crotch bumble bee queens in California is from late February to late October, peaking in early April with a second pulse in July. The flight period for workers and males in California is from late March through September with peak abundance in early July. One record for Crotch bumble bee exists for the Davis area, from the UC Davis arboretum.

White-tailed Kite

White-tailed kite is not listed pursuant to either the California or federal Endangered Species Acts; however, the species is fully protected pursuant to Section 3511 of the California Fish and Game Code. In addition, this species is covered by the Yolo HCP/NCCP. This species is a common resident in the Central Valley and the entire length of the California coast, and all areas up to the Sierra Nevada foothills and southeastern deserts. In northern California, white-tailed kite nesting occurs from March through early

August, with nesting activity peaking from March through June. Nesting occurs in trees within riparian, oak woodland, savannah, and agricultural communities that are near foraging areas such as low elevation grasslands, agricultural, meadows, farmlands, savannahs, and emergent wetlands. Numerous records exist for the area, but no nests have been recorded from the Project Area.

Swainson's Hawk

The Swainson's hawk is listed as a threatened species and are protected pursuant to the California Endangered Species Act. In addition, this species is covered by the Yolo HCP/NCCP. This species nests in North America (Canada, western United States, and Mexico) and typically winters from South America north to Mexico. However, a small population has been observed wintering in the Sacramento-San Joaquin River Delta. In California, the nesting season for Swainson's hawk ranges from mid-March to late August.

Swainson's hawks nest within tall trees in a variety of wooded communities including riparian, oak woodland, roadside landscape corridors, urban areas, and agricultural areas, among others. Foraging habitat includes open grassland, savannah, low-cover row crop fields, and livestock pastures. In the Central Valley, Swainson's hawks typically feed on a combination of California vole, California ground squirrel, ring-necked pheasant, many passerine birds, and grasshoppers. Swainson's hawks are opportunistic foragers and will readily forage in association with agricultural mowing, harvesting, disking, and irrigating. The removal of vegetative cover by such farming activities results in more readily available prey items for this species. Many nesting records exist for the general area, including one for just north of the survey area.

Merlin

The Merlin is not listed pursuant to either the California or federal Endangered Species Acts but is a CDFW "watch list" species and currently tracked in the CNDDDB. This falcon breeds in Canada and Alaska and occurs in California as a migrant and during the non-breeding season (September through April). Foraging habitat in winter includes open forests, grasslands, and tidal flats. Merlin do not nest in the region but may occasionally forage within grassland and woodland communities on-site during winter or migration. The nearest observation of this species is from more than one mile north of the project site.

Burrowing Owl

The burrowing owl is not listed pursuant to either the California or federal Endangered Species Acts; however, it is designated as a bird of conservation concern (BCC) by the USFWS and a species of special concern (SSC) by the CDFW. In addition, this species is covered by the Yolo HCP/NCCP. Burrowing owls inhabit dry open rolling hills, grasslands, desert floors, and open bare ground with gullies and arroyos. They can also inhabit developed areas such as golf courses, cemeteries, roadsides within cities, airports, vacant lots in residential areas, school campuses, and fairgrounds. This species typically uses burrows created by fossorial mammals, most notably the California ground squirrel but may also use man-made structures such as concrete culverts or pipes; concrete, asphalt, or wood debris piles; or openings beneath concrete or asphalt pavement. The breeding season typically occurs between February 1 and August 31. Numerous records exist for this species with one mile of the study area.

Nuttall's Woodpecker

The Nuttall's woodpecker is not listed and protected under either state or federal Endangered Species Acts but is considered a USFWS bird of conservation concern. They are resident from Siskiyou County south to Baja California. Nuttall's woodpeckers nest in tree cavities primarily within oak woodlands, but also can be found in riparian woodlands. Breeding occurs during April through July. This species is not tracked by CNDDDB but is common around Davis.

Yellow-Billed Magpie

The yellow-billed magpie is not listed pursuant to either the California or federal Endangered Species Acts but is considered a USFWS bird of conservation concern. This endemic species is a yearlong resident of the Central Valley and Coast Ranges from San Francisco Bay to Santa Barbara County. Yellow-billed magpies build large, bulky nests in trees in a variety of open woodland habitats, typically near grassland, pastures or cropland. Nest building begins in late-January to mid-February, which may take up to 6-8 weeks to complete, with eggs laid during April-May, and fledging during May-June. The young leave the nest at about 30 days after hatching. Yellow-billed magpies are highly susceptible to West Nile Virus, which may have been the cause of death to thousands of magpies during 2004-2006. This species is not tracked by CNDDDB but is common around Davis.

Oak Titmouse

The oak titmouse is not listed and protected under either state or federal Endangered Species Acts but is considered a USFWS bird of conservation concern. Oak titmouse breeding range includes southwestern Oregon south through California's Coast, Transverse and Peninsular ranges, western foothills of the Sierra Nevada, into Baja California; they are absent from the humid northwestern coastal region and the San Joaquin Valley. They are found in dry oak or oak-pine woodlands but may also use scrub oaks or other brush near woodlands. Nesting occurs during March through July. This species is not tracked by CNDDDB but is common around Davis.

Western Red Bat

The western red bat is not listed pursuant to either the California or federal ESAs; however, this species is considered a SSC by CDFW. The western red bat is easily distinguished from other western bat species by its distinctive red coloration. This species is broadly distributed, its range extending from southern British Columbia in Canada through Argentina and Chile in South America, and including much of the western U.S. This solitary species day roosts primarily in the foliage of trees or shrubs in edge habitats bordering streams or open fields, in orchards, and occasionally urban areas. They may be associated with intact riparian habitat, especially with willows, cottonwoods, and sycamores. This species may occasionally utilize caves for roosting as well. They feed on a variety of insects, and generally begin to forage one to two hours after sunset. This species is considered highly migratory; however, the timing of migration and the summer ranges of males and females may be different. Winter behavior of this species is poorly understood. There are no CNDDDB documented occurrences of western red bat from the Davis area.

4.4.4 Wildlife Movement Corridors

The Project site is a linear project adjacent to a busy four-lane commuter route. South of the Project is a commercial retail center and dense urban housing. There is a single strip of trees adjacent to the road with sparse underlying vegetation and leaf litter. The trees likely provide a movement corridor for common birds such as mourning doves (*Zenaida macroura*), California scrub jays (*Aphelocoma californica*), European starlings (*Sturnus vulgaris*), and others. North of the Project site is a cultivated agricultural field. The study area does not represent a significant wildlife movement corridor due to the developed nature and absence of habitat in the surrounding lands.

4.4.5 Biological Resources (IV) Environmental Checklist and Discussion

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 Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

According to the biological surveys completed by ECORP Consulting, Inc. (2020c), the Project site is potential habitat for numerous candidate, sensitive, or special status species. The Project site may serve as habitat for vegetation including depauperate milk-vetch, Ferris’ milk-vetch, and alkali milk-vetch, which are listed as CRPR 4.3, 1B.1, and 1B.2 Species respectively. The Project site may also serve as habitat for a special-status invertebrate: Crotch’s bumble bee, a candidate for listing under California’s ESA. Furthermore, the Project site provides nesting habitat for several special-status bird species and bird species protected under the Migratory Bird Treaty Act (MBTA), California Department of Fish and Game (CFG) code California Department of Fish and Wildlife (CDFW), and United States Fish and Wildlife Service (USFWS). Finally, the Project site may serve as marginal roosting habitat for western red bat. The species is a species of special concern under the CDFW. As such, mitigation measures **BIO-1**, **BIO-2**, **BIO-3**, and **BIO-4** are incorporated to mitigate these impacts. Impacts to special status species would be less than significant with mitigation incorporated.

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Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

No potential aquatic resources or riparian habitats were observed during the site visit and field survey. However, the National Wetland Inventory indicates a freshwater emergent wetland approximately 1,000 feet north of the western end point of the Proposed Project. The freshwater emergent wetland does not support riparian habitat and is located well outside of the biological resource assessment study area. As such, there would be a less than significant impact to riparian habitat or other sensitive natural communities.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

As stated previously, no potential aquatic resources or riparian habitats were observed during the site visit and field survey, but the National Wetland Inventory indicates a freshwater emergent wetland approximately 1,000 feet north of the western end point of the Proposed Project. However, the Project, a bike and pedestrian pathway, will not significantly impact the wetland due to the nature of the Project and the distance of the wetland from the Project. As such, this is a less than significant impact.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The Project site is located in a disturbed area between an alfalfa field and a four-lane roadway. However, the Project Area does contain trees which may serve as marginal roosting habitat for the western red bat

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and nesting habitat for special-status bird species, as well as birds protected under the MBTA and the CFG Code. The Project Area may also serve as foraging habitat for these bird species. As such, mitigation measures **BIO-3** and **BIO-4** shall be implemented to reduce potential impacts to migratory and nesting birds, and roosting bats which may utilize the site as a maternity site, to less than significant. As such, following the implementation of these mitigation measures, there will be a less than significant impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The City of Davis maintains a list of landmark trees (Davis 2020f). These are trees that may be an outstanding specimen of a tree species, one of the largest or oldest trees in Davis, a tree of historical interest, or a tree of an unusual species, a significant grove, or that is otherwise unique. Landmark trees must be located on private property. Trees of significance are trees located on private property that are at least five inches in diameter and of a significant species as listed in the Municipal Code or as determined by an arborist.

As observed during the field survey, a single row of mature elm trees occurs immediately adjacent to the roadway between the firebreak and the pavement just east of the north/south access road extension of L Street. A few other, smaller trees are scattered along the easement, including silk tree, small live oaks, and small almond trees.

A row of vegetation and trees runs north from the western endpoint of the proposed bike trail. Trees here are larger, and include mature valley oaks, blackwood acacia, oleander, northern California black walnut, and almond. Representative site photos are included in *Attachment C*. There are no trees within the survey area listed on Davis' Landmark Tree List. Tree removal and modification would be minimized and done only as necessary to meet the design requirements of the Project, and no trees would be removed from private property. Thus, there will be no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The Yolo HCP/ NCCP was approved and adopted in January 2019. The City of Davis is a member agency of the Yolo Habitat Conservancy and thus are obligated to participate and enforce the mitigation defined in the Yolo HCP/NCCP. Swainson's hawk, the white-tailed kite, and the burrowing owl are all covered species within the Yolo HCP/NCCP. If the species are confirmed present or if habitat will be removed,

mitigation via a land cover fee payment and associated impact Avoidance and Minimization Measures (AMM) as defined by the Yolo HCP/NCCP are required. Mitigation measure BIO-3 includes this requirement. Implementation of BIO-3 would reduce this impact to a less than significant level.

4.4.6 Mitigation Measures

BIO-1: Special-Status Plant Species

Due to the disturbed nature of most of the Project site, the potential for occurrence of special-status plants is low. The vegetated strip of land between the firebreak and East Covell may provide marginal habitat for depauperate milk-vetch, Ferris' milk-vetch, or alkali milk-vetch. Depauperate milk-vetch is a CNPS 4.3 list species, Ferris' milk-vetch is a CNPS 1B1 species, and alkali milk-vetch is a CNPS 1B.2 species. They are not listed and protected under either the federal or California ESAs.

In order to minimize potential impacts to special-status plants the following measures are required:

- Focused plant surveys shall be performed according to USFWS, CDFW, and CNPS protocol. Surveys shall be timed according to the blooming period for target species and known reference populations, if available, and/or local herbaria shall be visited prior to surveys to confirm the appropriate phenological state of the target species. The USFWS generally considers plant survey results valid for approximately three years.
- If special-status plant species are found, avoidance zones shall be established around plants to clearly demarcate areas for avoidance. Avoidance measures and buffer distances may vary between species and the specific avoidance zone distance shall be determined in coordination with appropriate resource agencies (CDFW and USFWS).
- If special-status plant species are found within the Project site and avoidance of the species is not possible, additional measures such as seed collection and/or translocation shall be developed in consultation with the appropriate agencies.
- If no special-status plants are found, no further measures pertaining to special-status plants are necessary.

Timing/Implementation: Prior to commencement of construction and during construction

Monitoring/Enforcement: The City of Davis and the Project construction lead

BIO-2: Special-Status Invertebrates

The vegetated strip of land between the firebreak and East Covell Boulevard may provide marginal habitat for Crotch's bumble bee, a candidate for listing under California's ESA. In order to minimize potential impacts to special-status invertebrates the following measures are required:

- A habitat assessment shall be performed by a qualified biologist to determine the presence and extent of potential habitat for this species.

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- If potential habitat is deemed to be present, CDFW's local office shall be contacted to determine whether surveys are warranted and to provide feedback regarding survey protocol, timing and qualifications of surveyors.
- If Crotch's bumble bee is found, consultation shall take place with CDFW to establish mitigation, avoidance, and/or minimization measures.

Timing/Implementation: *Prior to commencement of construction and during construction*

Monitoring/Enforcement: *The City of Davis and the Project construction lead*

BIO-3: Special-Status and Migratory Bird Treaty Act Birds

The Project site provides potential foraging or nesting habitat for special-status bird species, as well as for common birds protected under the MBTA and CFG code.

The impacts to nesting special-status and MBTA-protected birds could be considered significant. As such, to ensure that there are no impacts to protected special-status birds, including their eggs and active nests, the following mitigation measures are required:

- Conduct a pre-construction nesting bird survey of all suitable habitat on the Project site within 14 days of the commencement of construction during the nesting season (February 1 - August 31). Surveys shall be conducted within 300 feet of the Project site for nesting raptors, and 100 feet of the Project site for nesting songbirds. If active nests are found, a no-disturbance buffer around the nest shall be established. The buffer distance shall be established by a biologist in consultation with CDFW, the Yolo HCP/NCCP, or the CEQA lead agency. The buffer shall be maintained until the fledglings are capable of flight and become independent of the nest tree, to be determined by a qualified biologist. Once the young are independent of the nest, no further measures are necessary. Pre-construction nesting surveys are not required for construction activity outside the nesting season. Impacts to foraging/wintering habitat of non-listed birds protected under the MBTA are typically considered less than significant.
- The Project applicant shall complete Yolo HCP/NCCP application package and submit this application for approval to the Yolo Habitat Conservancy as required.
- The Project applicant shall pay the HCP/NCCP fees as required.
- If Swainson's hawk, white-tailed kite and/or burrowing owl active nests are found during the pre-construction survey, the Project applicant shall implement the AMMs established in the Yolo HCP/NCCP to the satisfaction of the Yolo Habitat Conservancy. The AMM references are as follows: for Swainson's hawk and white-tailed kite (AMM15, AMM16), for Western burrowing owl (AMM18).

Timing/Implementation: *Prior to commencement of construction and during construction*

Monitoring/Enforcement: *The City of Davis and the Project construction lead*

BIO-4: Special- Status Mammals

The Project site provides marginal roosting habitat for western red bat. To ensure that there are no impacts to these special-status mammals, the following mitigation shall be performed:

- Prior to any disturbances to the trees, a qualified biologist shall conduct a preconstruction survey within seven days of tree disturbance activities to determine the presence of roosting bats.
- If roosting bats are found within the trees, a qualified biologist shall determine what types of roosts are present. If non-maternity and non-hibernaculum day or night roosts are present, a qualified biologist shall use safe eviction methods to remove bats if direct impacts to these roosts cannot be avoided. If a winter hibernaculum or maternity roost is present, impacts to the resource (e.g., tree) shall not occur until the bats have vacated or are safely evicted using methods acceptable to CDFW.
- If no roosting bats are found during the preconstruction survey, no further measures are recommended.

Timing/Implementation: *Prior to commencement of construction and during construction*

Monitoring/Enforcement: *The City of Davis and the Project construction lead*

4.5 Cultural Resources

4.5.1 Cultural Resources Inventory Report

A Cultural Resources Inventory and Evaluation Report was prepared by ECORP Consulting, Inc. (2020b) for the Proposed Project to determine if cultural resources were present in or adjacent to the Project Area and assess the sensitivity of the Project Area for undiscovered or buried cultural resources. The analysis of cultural resources was based on a records search for the property at the Northwest Information Center (NWIC) of the CHRIS at Sonoma State University on February 14, 2020. The purpose of the records search was to determine the extent of previous surveys within a 0.5-mile (800-meter) radius of the Proposed Project location, and whether previously documented prehistoric or historic archaeological sites, architectural resources, or traditional cultural properties exist within this area. A historic General Land Office (GLO) land patent records search and search of numerous historic records, including but not limited to, official records and maps for archaeological sites and surveys in Yolo County were also performed.

As a part of the Cultural Survey, ECORP Consulting, Inc. contacted the California Native American Heritage Commission (NAHC) on February 13, 2020 to request a search of the Sacred Lands File for the APE. This search was requested to determine whether there are sensitive or sacred Native American resources in the vicinity of the Project Area that could be affected by the Proposed Project. A search of the Sacred Lands File by the NAHC failed to indicate the presence of Native American cultural resources in the Project Area.

ECORP Consulting, Inc. mailed a letter to the Yolo County Historical Society on February 13, 2020, to solicit comments or obtain historical information that the repository might have regarding events, people, or resources of historical significance in the area. No responses to the letters sent to the Yolo County Historical Society were received as of the preparation of this document (ECORP 2020b).

AB 52 requires that prior to the release of a CEQA document for a project, an agency begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the Proposed Project if: (1) the California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe and (2) the California Native American tribe responds, in writing, within 30 days of receipt of the formal notification, and requests the consultation. The City received a letter from the Yocha Dehe Wintun Nation about the Project. The Yocha Dehe determined that while the Project site is not within an area of known cultural resources, however it is within the aboriginal territory of the tribe. This is further discussed in Section 4.18 Tribal Cultural Resources.

4.5.2 Confidentiality Restrictions

Sections 6253, 6254, and 6254.10 of the California Code authorize state agencies to exclude archaeological site information from public disclosure under the Public Records Act. In addition, the California Public Records Act (Government Code § 6250 et seq.) and California's open meeting laws (The Brown Act, Government Code § 54950 et seq.) protect the confidentiality of Native American cultural place information. Under Exemption 3 of the federal Freedom of Information Act (5 U.S. Code 5 [USC]), because the disclosure of cultural resources location information is prohibited by the Archaeological Resources Protection Act of 1979 (16 USC 470hh) and Section 304 of the National Historic Preservation Act, it is also exempted from disclosure under the Freedom of Information Act. Likewise, the Information Centers of the California Historical Resources Information System maintained by the California Office of Historic Preservation prohibit public dissemination of records search information. In compliance with these requirements, the results of this cultural resource investigation were prepared as a confidential document, which is not intended for public distribution in either paper or electronic format. As such, the Cultural Resources Inventory and Evaluation Report is not included as an appendix in this IS/MND. While information describing the various Cultural Resources time periods is included in the IS/MND discussion, all references to location of artifacts have been removed for confidentiality and protection of these resources.

4.5.3 Area of Potential Affects

The APE consists of the horizontal and vertical limits of the Project and includes the area within which significant impacts or adverse effects to Historical Resources or Historic Properties could occur as a result of the Project⁵. The APE is defined for projects subject to regulations implementing Section 106 (federal law and regulations). For projects subject to CEQA, the term Project Area is used rather than APE. For the purpose of this document, the terms Project Area and APE are interchangeable.

The horizontal APE consists of all areas where activities associated with the Project are proposed and, in the case of the current Project, equals the Project Area subject to environmental review under the National Environmental Policy Act (NEPA) and CEQA. This includes areas proposed for trail construction, installation, grading, stockpiling, staging, paving, and other elements described in the official Project

⁵ In this case, the APE consists of the approximately one to two-acre Project Area.

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description. The horizontal APE also represents the survey coverage area. It measures approximately 0.36 mile (1,943 feet) in length and 50 feet in width.

The vertical APE is described as the maximum depth below the surface to which excavations for Project foundations and facilities will extend. Therefore, the vertical APE includes all subsurface areas where archaeological deposits could be affected. The path will be constructed on existing streets and sidewalks, and the subsurface vertical APE is not expected to reach below one foot below the current ground surface. Therefore, a review of geologic and soils maps was necessary to determine the potential for buried archaeological sites that cannot be seen on the surface.

The vertical APE also is described as the maximum height of structures that could impact the physical integrity and integrity of setting of cultural resources, including districts and traditional cultural properties. For the current Project, the above-surface vertical APE is anticipated to be less than five feet above the current ground surface.

4.5.4 Records Search

Prior to conducting the intensive-level field survey, a records search for the property at the Northwest Information Center (NWIC) of the CHRIS at Sonoma State University on February 14, 2020. The purpose of the records search was to determine the extent of previous surveys within a 0.5-mile (800-meter) radius of the Proposed Project location, and whether previously documented pre-contact or historic archaeological sites, architectural resources, or traditional cultural properties exist within this area.

4.5.4.1 Previous Archaeological Survey

Nine previous cultural resources investigations have been conducted within 0.5 mile of the APE, covering approximately 25 percent of the total area surrounding the APE within the record search radius (*Table 4.5-1*). The previous studies were conducted between 1996 and 2014.

Table 4.5-1. Previous Cultural Studies in or Within 0.5 Mile of the Project Area

Report Number	Author(s)	Report Title	Year	Includes Portion of the APE?
18788	Jones and Stokes Associates, Inc.	Cultural Resources Inventory and Evaluation of the Harby ranch Parcel 1 for the Covell Center Project Davis, California	1996	Yes
28992	Brown and Mills, Inc.	Historical and Cultural Resources Assessment	2001	No
29706	Peak and Associates, Inc.	Cultural Resources Assessment of the Proposed Covell Village in the City of Davis, Yolo County, California	2004	Yes
46673	Katherine Anderson and Scott Baxter	City of Davis Water Quality Improvements Project Phase I Cultural Resources Study	2014	Yes
46943	Scott Crull	The History and Archaeology of the California-Pacific; the Central Pacific; the Southern-Pacific; and the California-Northern Railroad Routes Through Yolo County, California: 1869-Present	ND	No
29422	Sandra Massey	Phase I Cultural Resources Study for the City of Davis, Well Capacity Replacement Project, Davis, Yolo County, California	2004	No

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Report Number	Author(s)	Report Title	Year	Includes Portion of the APE?
12219	Eleanor H. Derr	A Cultural Resource Study for Environmental Impact Report for Wildhorse Golf Club and Residential Community, Yolo County, California	1990	No
24422	Architectural Resources group	City of Davis Cultural Resources Inventory and Context Statement	1996	No
33470	Michelle St. Clair	Verizon Cellular Communications Tower Site-- Davis High School, Covell Boulevard/F Street, Davis, CA 95616	2005	No

The results of the records search indicate that the entire property has been surveyed for cultural resources as recently as 2014; however, these surveys were done under obsolete standards and therefore an update survey conducted under current (2014) standards and protocols was warranted.

The records search also determined that there are six previously recorded historic-period cultural resources located within 0.5 mile of the Project Area, none of which were within the Project Area (*Table 4.5-2*).

Table 4.5-2. Previously Recorded Cultural Resources in or Within 0.5 Mile of the APE

Site Number CA-YOL-	Primary Number P-57-	Recorder and Year	Age/ Period	Site Description	Within APE?
-	199	B. Scott, B. Norton, and C. Ryan 1996	Historic	Historic period building complex	No
-	294	Dr. Scott Crull 2018	Historic	Davis Cemetery	No
-	295	Robert Haussler 1996	Historic	Building – Residence at 2002 Renior	No
-	970	Dr. Scott Crull 2015	Historic	California-Pacific RR Route through Yolo County	No
-	977	Dr. Scott Crull 2015	Historic	California-Pacific RR Route through Yolo County	No
-	1231	Steve Lindley 2016	Historic	Concrete box culvert	No

4.5.4.2 Recorded Cultural Resources

According to the NEIC files, six previously recorded pre-contact or historic-period cultural resources are located within 0.5 mile of the Project Area.

The Office of Historic Preservation’s Directory of Properties, Historic Property Data File for Yolo County (dated April 5, 2012) did not include any resources within the Project Area (OHP 2012).

The National Register Information System (NPS 2020) did not list any properties within the Project Area. The nearest National Register property is the Animal Science Building at UC Davis in Davis, approximately two miles southwest of the Project Area.

Resources listed as California Historical Landmarks (OHP 1996, 2020) were reviewed on February 13, 2020. The nearest listed landmarks are located in the City of Woodland, approximately 10 miles north of the Project Area.

A review of Historic Spots in California (Kyle 2002) mentions the ranchos, and that Jerome C. Davis settled in the area in the early 1850s, and Davis was originally called Davisville. The Davis ranch totaled 13,000 acres by 1864. By 1905, the University Farm was established.

Historic GLO land patent records from the BLM's patent information database (BLM 2020) showed that the State of California received a serial patent for the southern half of Section 3 of Township 8 North Range 2 east under the Swamp Land Grant Act of 1850 (9 Stat. 519). This act provided federally owned swampland to states with the agreement that states would drain the swamps and use the land as means of agricultural production.

The Caltrans Bridge Local and State Inventories (Caltrans 2019, 2018) listed one bridge within 0.5 mile of the Project Area: Bridge No. 22C0072, Covell Boulevard over PS RR and Bike Path, is a prestressed concrete cast-in-place bridge located 0.22 mile west of the Project Area. It was evaluated by Caltrans as a Category 5 bridge, not eligible for the National Register of Historic Places (NRHP) under Criterion C.

The Handbook of North American Indians (Johnson 1978) lists the nearest Native American settlement as Liwai, approximately 12 miles west of the Project Area near the City of Winters.

4.5.4.3 Other Sources Consulted

In addition to the archaeological records of Yolo County as maintained by the NEIC, the following sources were also consulted:

- Historic Property Data File for Yolo County;
- *The National Register Information System;*
- *Office of Historic Preservation, California Historical Landmarks;*
- *California Historical Landmarks;*
- *California Points of Historical Interest;*
- *Directory of Properties in the Historical Resources Inventory;*
- *Caltrans Local Bridge Survey;*
- *Caltrans State Bridge Survey;*
- *Historic Spots in California;*
- 1863 BLM GLO Plat Image for Township 8N Range 2E;
- 1865 BLM GLO Plat Image for Township 8N Range 2E;
- 1872 BLM GLO Plat Image for Township 8N Range 2E;

- 1907 Davisville, California USGS Topographic Quadrangle Map, 1:62,500 scale;
- 1952 Davis, California USGS Topographic Quadrangle Map, 1:24,000 scale;
- 1954 Davis, California USGS Topographic Quadrangle Map, 1:62,500 scale;
- 1952 (PR 1968) Davis, California USGS Topographic Quadrangle Map, 1:24,000 scale;
- 1952 (PR 1981) Davis, California USGS Topographic Quadrangle Map, 1:24,000 scale;
- Historic aerial photos taken in 1968, 1993, 2001, 2003, 2005, 2009, 2010, 2012, and 2014; and
- A list of Points of Historical Interest in Yolo County.

4.5.4.4 Field Survey

On February 14, 2020, ECORP Consulting, Inc. subjected the APE to an intensive pedestrian survey under the guidance of the *Secretary of the Interior's Standards for the Identification of Historic Properties* using transects spaced 15 meters apart. ECORP Consulting, Inc. expended ¼ person-day in the field. At that time, any non-paved, exposed ground surface was examined for indications of surface or subsurface cultural resources. The general morphological characteristics of the ground surface were inspected for indications of subsurface deposits that may be manifested on the surface, such as circular depressions or ditches. Whenever possible, the locations of subsurface exposures caused by such factors as rodent activity, water or soil erosion, or vegetation disturbances were examined for artifacts or for indications of buried deposits. No subsurface investigations or artifact collections were undertaken during the pedestrian survey.

4.5.5 Environmental Setting

The Project Area is located in a developed mixed use residential and commercial area to the south, east, and west and agricultural fields bordering to the north in the City of Davis. Commercial businesses, recreational facilities, residential housing developments, and apartment complexes surround the immediate vicinity, and agricultural fields and farmland make up the surrounding landscape. The area is situated amidst the larger northern Central Valley, where the southeastern portion of the Capay Valley opens up into a flat area that was seasonal marshlands in prehistoric times and is currently home to vast agricultural fields. Elevations range from 39 to 45 feet above mean sea level, and Putah Creek runs east to west, 1.7 miles south of the Project Area.

The region's climate is characterized as Mediterranean, with cool, wet winters and hot, dry summers. The Project Area contains very little exposed area that contains nonnative trees and ornamental shrubs along the boulevard and median.

Alluvium is present along Putah Creek, deposited by flood episodes. Given the likelihood of pre-contact (prehistoric) and historic archaeological sites to be located along perennial waterways, there exists the potential for buried archaeological sites in the Project Area.

4.5.5.1 Regional Pre-Contact History

It is generally believed that human occupation of California began at least 10,000 years before present (BP). The archaeological record indicates that between approximately 10,000 and 8,000 BP, a predominantly hunting economy existed, characterized by archaeological sites containing numerous projectile points and butchered large animal bones. Groups from this time period included only small numbers of individuals who did not often stay in one place for extended periods.

Around 8,000 BP, there was a shift in focus from hunting towards a greater reliance on plant resources. Archaeological evidence of this trend consists of a much greater number of milling tools (e.g., metates and manos) for processing seeds and other vegetable matter. This period, which extended until around 5,000 years BP, is sometimes referred to as the Millingstone Horizon. Some projectile points are found in archaeological sites from this period. An increase in the size of groups and the stability of settlements is indicated by deep, extensive middens at some sites from this period.

In sites dating to after about 5,000 BP, archaeological evidence indicates that reliance on both plant gathering and hunting continued as in the previous period, with more specialized adaptation to particular environments. Mortars and pestles were added to metates and manos for grinding seeds and other vegetable material. Flaked-stone tools became more refined and specialized, and bone tools were more common. During this period, new peoples from the Great Basin began entering southern California. These immigrants seem to have displaced or absorbed the earlier population of Hokan-speaking peoples. During this period, known as the Late Horizon, population densities were higher than before, and settlement became concentrated in villages and communities along the coast and interior valleys. Regional subcultures also started to develop, each with its own geographical territory and language or dialect. These were most likely the basis for the groups encountered by the first Europeans during the eighteenth century. Despite the regional differences, many material culture traits were shared among groups, indicating a great deal of interaction. The introduction of the bow and arrow into the region sometime around 2,000 BP is indicated by the presence of small projectile points.

4.5.5.2 Local Pre-Contact History

California's Great Central Valley has long held the attention of archaeologists and as such a cultural chronology and understanding of cultural patterns has been developed for the region.

The Project Area would encompass the area of the Valley Tradition class of the Middle Archaic. Functional artifact assemblages consisting primarily of locally sourced flaked-stone and groundstone cobbles characterize the Foothills Tradition, with very few trade goods. Sites that represent the Valley Tradition are much fewer in number and are generally characterized by much more diverse subsistence practices and extended periods of sedentism. Specialized tools, trade goods, and faunal refuse that indicate year-round occupation are evident on sites of the Valley Tradition. Distinct artifacts attributed to this tradition include one of the oldest dated shell bead lots in central California (4,160 BP) and a particular type of pestle used with a wooden mortar.

The Sierra Nevada experienced significant climactic shifts and concomitant vegetation change throughout the Holocene, but pollen analysis and climactic records indicate that the current climate pattern and

primary constituents of vegetation communities were in place by the Middle Archaic around 1,000 BC. Seasonal transhumance practiced by indigenous populations of the Sierra may have become more consistent during this period of relative environmental stasis.

Sites have been identified in the Project vicinity associated with the early and later Middle Archaic.

4.5.5.3 Project Area History

Yolo County was established in 1850 as one of the original 27 counties of California. Yolo County gained its name from the place inhabited by a group of Patwin Indians, who called it “a place abounding in rushes”. Woodland has been the County seat since 1862.

In 1843, Pio Pico, governor of the territory of Alta California, granted Rancho Cañada de Capay to Francisco Berryessa and his two brothers, Santiago and Demesio. The entire land grant consisted of 40,078 acres, including what is now known as Cache Creek. The Berryessa family owned several ranchos from the Santa Clara Valley to the village of Capay. It was in 1846 that the Bear Flag Revolt led to the imprisonment of the Berryessa brothers who bore witness to the execution of their father at the hands of John C. Fremont. For the Berryessa brothers, this led to increased violence in the area and they eventually lost their land holdings around the Capay Valley.

In 1850, George Dickson Stephens, a new immigrant to California from Missouri, camped near Cache Creek on what he believed was government land. Soon after, George’s brother, John, joined him and acquired the property and constructed an adobe granary. This became the first adobe structure in Yolo County.

The Stephens Ranch on Cache Creek was initially called the Oakdale Ranch, and the brothers raised cattle and farmed dry grains. As the brothers’ wealth increased, so did their business endeavors. The brothers eventually started the Stephens Agricultural and Livestock Company, where they raised mules, horses, sheep, and hogs. They also owned the Cottonwood Ditch Company, and at one point in time, the brothers owned 8,000 acres of land in Yolo County.

Another prominent figure in the early days of Yolo county farming was David Quincy Adams. Adams came to Yolo County in 1852 with money made from mining the Mother Lode and purchased 4,693 acres within the Cañada de Capay grant, north of the Stephens property. Adams began growing alfalfa using seeds brought from Chile by Gold Rush immigrants. In 1857, Adams constructed a number of dams and canals throughout Rancho Cañada de Capay, including the Adams Canal, which is adjacent to the current Project Area. Adams originally built the canal to provide water for 150 acres of alfalfa and 40 acres of gardens. The canal was originally a small ditch created to provide water for the crops mentioned above, and by 1888 the canal had been modified many times over and was moving 248 cubic feet of water per second.

Along with the increase of farmland and irrigation, a number of other enterprises began to emerge, most importantly, gravel mining in the 1870s. Exposed and easily accessible, gravel extraction along Cache Creek has a history that is more than 100 years old, making it one of the most historic enterprises in Yolo County today.

In May 1888, a 24-mile extension of the Vaca Valley and Clear Lake Railroad was completed from Madison to the head of Capay Valley. At this time a group of developers known as “Capay Valley Land Company,” purchased more than 9,000 acres. The town of Esperanza was soon built within the center of the development. This town grew slowly and in March 1890, opened a post office and at this same time changed its name to the town of Esparto.

The segment of railroad extending from Rumsey to Capay closed in 1934, and from Capay to Esparto in 1941. By 1975, 100 years after the Vaca Valley Railroad first reached Yolo County, the rails were removed. Today, Capay Valley includes the residential and agricultural communities of Madison, Esparto, Capay, Brooks, Guinda, Rumsey, and the surrounding area along SR-16. With its rich agricultural soil, Capay Valley farmers, including many organic farmers, produce lavender, olive oil, tomatoes, corn, vegetables, almonds, walnuts, fruits, and various grains.

City of Davis History

The City of Davis is north of the original streambed of Putah Creek, or Rio de las Putas, as it was known during the historic period. The original Mexican land grant in the area was Rancho Laguna de Santo Calle, and in the early 1850s as ranching and farming became more profitable in the Central Valley, many prospective ranchers and farmers sought land on parts of this grant. One of the most prominent cattle pioneers in the area was Joseph B. Chiles, who had extensive land holdings. Joseph’s son and daughter-in-law, Joseph and Mary Davis, settled around the Project Area in 1850, and their land holdings grew quickly. They started Davis Ranch, and by 1858 they had 13,000 acres. However, an area drought coupled with financial hardships in the country by the Civil War led the Davises to sell 7,000 acres of the ranch to the California Pacific Railroad for \$80,000.

This early pioneer line of the Central Pacific Railroad was surveyed in a triangular railroad junction, Davis Junction, which shaped the town around it that was to become Davis. Railroad service to the Junction commenced on August 24, 1868, and plans began for the residential and business construction of the town. In 1868, the official town plat of Davisville covered a 32-block area on the northern banks of Putah Creek. By 1870, the population was 400, and as it was one of only a few railroad stops, the town boomed and prospered until the later nineteenth century, when the railroad extended and reduced the local trade. The City of Davis was incorporated in 1917.

In 1905, the newly established University State Farm selected a 77-acre tract of land called the Sparks-Hamel-Wright tract in Davisville for the site of its university. In partial celebration, the local newspaper, the Davisville Enterprise, renamed itself the Davis Enterprise in April 1906 and started to refer to the town as simply “Davis.” The post office also changed in 1907, and shortly thereafter the University put up buildings and began holding instruction in 1908 with 15 students in attendance. The new university was under administrative control of the University of California (UC) Berkeley College of Agriculture and focused on short courses for farmers as well as agricultural research. The University became its own independent entity in the UC system separate from Berkeley in 1952.

In 1933, University Farm instituted a four-year degree program, which led to unprecedented growth of the surrounding area, and both the college and the community planned for expansions. The School of Veterinary Medicine was added in 1949, and the College of Letters and Sciences in 1951; in 1959, after

they became a general UC campus, UC Davis embraced all major disciplines. It added the School of Medicine in 1968 and UC Davis Medical Center in 1973. Today, at 5,300 acres, UC Davis is the largest of the 10 university campuses.

Historic Context of Road Development

Following is a brief context of the theme of road development in Davis. The context is included to better understand the social and economic factors associated with road development and how the resources fit within that context.

Road development in the U.S. primarily consisted of expanding local urban streets, utilitarian in design and function, in the eastern U.S. and moving westward across the nation. California roadways in particular largely consisted of dirt utilitarian roads from the period of the Gold Rush through the turn of the twentieth century. From 1890 to 1926, the groundwork was laid for the modern road network, largely due to a number of factors including the advent of the pneumatic tire and the expansion of production of the affordable personal automobile (the Ford Model T being the industry leader). These new convenient modes of transportation began the slow decline in the use of the railroad, consisting of several hundred thousand miles of track in the U.S. and previously considered the most efficient and reliable mode of transportation and shipping. This decline led automobile and automobile accessory manufacturers to usher in the “Good Roads Movement”.

The Good Roads Movement was first advocated by bicycle organizations seeking hard-surfaced roads. Automobile industry advocates, however, quickly found the development of a better planned road network a greater concern. Despite national efforts to develop hard-surface roads, the prohibitive cost caused a priority shift in the Good Roads Movement from hard-surface roads to a well-planned road network. In California, many of these road networks began to be constructed during the late part of the nineteenth and into the early part of the twentieth century, particularly in rural areas. Rural road development was crucial for the expansion of agricultural lands since farmers and ranchers needed a better network of roads to transport their crops or goods from the farms and fields to train stations for transport. Prior to the Good Roads Movement, rural farmers depended on extremely underdeveloped roads, consisting mostly of known paths or routes to get to those stations while access to urban or other rural areas was limited because existing road networks often did not connect simply with each other. The agricultural industry began to flourish with use of the new road networks as a result of the Good Roads Movement. Light-duty developed roads were constructed and used by rural farmers and ranchers to transport their goods not only to local train stations but, through the new networks of decent roads, to other urban areas or even other rural towns.

By the end of the Good Roads Movement, from 1910 to 1926, large intrastate and interstate highways, even transcontinental highways were constructed. These large networks of roads were primarily in response to the advent of World War I and the nation’s realization that if a war was ever fought on U.S. soil, the existing road networks could not support the necessary military mobilization for the war effort. Therefore, better connectivity in large roads and urban centers became a top priority toward the end of the Good Roads Movement. In addition, pavement became the new medium for these larger roads and was also used extensively in these larger highways and roads.

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The network of roads in the U.S. and California, was beginning to come together toward the end of the Good Roads Movement. One of the last stages of the Movement was the development of scenic roads. Scenic road development was largely advocated by the National Park Service (NPS) to allow automobile access within their parks. Prior to road development, access to National Parks was reliant on railroads and simple carriage rides within parks. At the end of the Good Roads Movement, however, automobile-safe routes were constructed within National Parks and other scenic roads were built to attract travelers away from the urban areas.

The interstate highway system in the U.S., originally known as the Dwight D. Eisenhower National System of Interstate and Defense Highways, is a network of controlled-access roads that form a national highway system, the construction of which was authorized by the Federal Aid Highway Act of 1956. During the Eisenhower administration, the scope of the national road grid thus far created from the Federal Aid Road Act of 1916 and Federal Aide Highway Act of 1921 was expanded and an interstate highway system that was developed, costing \$114 billion. Construction was partially funded by a federal fuel tax. In 1955, The General Location of National System of Interstate Highways, also known as The Yellow Book, was published an effectively laid out the plan for the highway system. It was claimed to be completed in 1992.

4.5.6 Cultural Resources (V) Environmental Checklist and Discussion

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 pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The Cultural Resources Inventory and Evaluation Report identified the 0.36-mile segment of Covell Boulevard as a historic-period resource that has been in continuous use and maintained since construction. A portion of this segment of road overlaps the Project Area on its northern edge. This segment of Covell Boulevard was built between 1952 and 1968; however, the segments of Covell Boulevard to the west and to the east were both present as early as 1907. The current segment appears to be a bypass that was constructed to ease congestion at the intersection of Pole Line Road and Claremont Drive. It is currently a four-lane roadway, approximately 80 feet wide from shoulder to shoulder, with a landscaped median between the east and westbound lanes. It is in good condition and presently heavily trafficked and well maintained.

However, the road segment does not meet the eligibility criteria for inclusion in the NRHP or California Register of Historical Resources (CRHR) as individual resources (i.e. integrity of location and setting; association with specific individuals or groups of people significant in history; or embodiment of any distinctive characteristics of a type, period, or method of road construction; nor does it possess any artistic value) and does not contribute to any known or suspected district. Thus, the road segment is not a historical resource pursuant to §15064.5.

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However, there always remains the potential for ground-disturbing activities to expose previously unrecorded historic resources. As such, mitigation measure **CUL-1** is required to reduce potential historic resource impacts to the less than significant level.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A review of maps and records in addition to the field survey does not indicate a high potential for the presence of buried historic-period archaeological deposits. However, the age of the underlying geomorphology, the soil type, and presence of alluvium in and around the Project Area suggests that there remains a potential for deeply buried pre-contact resources to be uncovered during ground disturbing activities.

While no known archaeological resources were found during the Cultural Resources Inventory and Evaluation Report analysis, there always remains the potential for ground-disturbing activities to expose previously unrecorded archaeological resources. As such, mitigation measure **CUL-1** is required to reduce potential historic resource impacts to the less than significant level.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

No known burial sites were identified during the field survey. A search of the Sacred Lands File by the NAHC failed to indicate the presence of Native American cultural resources in the Project area. Although Native American burial sites were not identified in the Project Area, there is a possibility that unanticipated human remains will be encountered during ground-disturbing project-related activities. Therefore, impacts to unknown human remains would be less than significant with incorporation of mitigation measure **CUL-1**.

4.5.7 Mitigation Measures

CUL-1: Cultural or Archaeological Resource Discovery

If subsurface deposits believed to be cultural or human in origin are discovered during construction, all work must halt within a 100-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior’s Professional Qualification Standards for prehistoric and historic archaeologist, shall be retained to evaluate the significance of the find, and shall have the authority to

modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find:

- If the professional archaeologist determines that the find does not represent a cultural resource, work may resume immediately, and no agency notifications are required.
- If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, he or she shall immediately notify the City and landowner. If the find is determined to be eligible for inclusion in the NRHP or CRHR, the City shall consult on a finding of eligibility and implement appropriate treatment measures. Work may not resume within the no-work radius until the City, through consultation as appropriate, determines that the site either: 1) is not eligible for the NRHP or CRHR; or 2) that the treatment measures have been completed to its satisfaction.
- If the find includes human remains, or remains that are potentially human, he or she shall ensure reasonable protection measures are taken to protect the discovery from disturbance (Assembly Bill [AB] 2641). The archaeologist shall notify the Yolo County Coroner (in accordance with § 7050.5 of the Health and Safety Code). The provisions of § 7050.5 of the California Health and Safety Code, § 5097.98 of the California PRC, and AB 2641 will be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, the Coroner will notify the NAHC, which then will designate a Native American Most Likely Descendant (MLD) for the project (§ 5097.98 of the PRC). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (§ 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (§ 5097.98 of the PRC). This will also include either recording the site with the NAHC or the appropriate information center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction.

Timing/Implementation:

During construction

Monitoring/Enforcement:

The City of Davis and Project construction lead

4.6 Energy

4.6.1 Environmental Setting

4.6.1.1 Introduction

Energy consumption is analyzed in this IS/MND due to the potential direct and indirect environmental impacts associated with the Project. Such impacts include the depletion of nonrenewable resources (i.e., oil, natural gas, coal) and emissions of pollutants during the construction phase. During operation, the bicycle and pedestrian pathways would provide alternatives to a motorized vehicle travel route, and as such would contribute positively to the reduction in energy use.

4.6.1.2 Electricity/Natural Gas Services

Valley Clean Energy (VCE) is the locally governed electricity provider for the City of Davis, the City of Woodland, and the unincorporated area of Yolo County. VCE aims to purchase a higher proportion of electricity from renewable resources than is typical so as to reduce greenhouse gas (GHG) emissions. If customers so choose, they may opt-out of VCE electricity and instead be supplied electricity by Pacific Gas and Electric (PG&E). Regardless of source, PG&E delivers electricity to the area and maintains the supply network (VCE N.D.). Natural gas is provided by PG&E. PG&E provides natural gas and electricity to most of the northern 2/3 of California, from Bakersfield and Barstow to near the Oregon, Nevada and Arizona State Lines. It provides 5.2 million people with electricity and/or natural gas across 70,000 square miles.

4.6.1.3 Energy Consumption

Electricity use is measured in kilowatt-hours (kWh), and natural gas use is measured in therms. Vehicle fuel use is typically measured in gallons (e.g., of gasoline or diesel fuel), although energy use for electric vehicles is measured in kWh.

The electricity consumption associated with all non-residential uses in Yolo County from 2014 to 2018 is shown in *Table 4.6-1*. As indicated, the demand has decreased since 2014.

Table 4.6-1. Non-Residential Electricity Consumption in Yolo County 2014-2018

Year	Non-Residential Electricity Consumption (kilowatt hours)
2018	1,203,321,346
2017	1,207,288,362
2016	1,197,331,724
2015	1,197,794,134
2014	1,231,610,772

Source: ECDMS 2019

The natural gas consumption associated with all non-residential uses in Yolo County from 2014 to 2018 is shown in *Table 4.6-2*. As indicated, the demand has increased since 2014.

Table 4.6-2. Non-Residential Natural Gas Consumption in Yolo County 2014-2018

Year	Non-Residential Natural Gas Consumption (therms)
2018	35,177,916
2017	35,177,916
2016	33,373,655
2015	32,445,632
2014	32,907,152

Source: ECDMS 2019

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Automotive fuel consumption in Yolo County from 2015 to 2019 is shown in *Table 4.6-3*. Fuel consumption has increased between 2015 and 2019.

Table 4.6-3. Automotive Fuel Consumption in Yolo County 2015-2019

Year	Total Fuel Consumption (gallons)
2019	126,016,578
2018	126,943,003
2017	127,430,645
2016	129,923,666
2015	124,808,919

Source: CARB 2017

4.6.2 Energy (VI) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The impact analysis focuses on the source of energy that is relevant to the Proposed Project: the equipment fuel necessary for Project construction. Addressing energy impacts requires an agency to make a determination as to what constitutes a significant impact. There are no established thresholds of significance, statewide or locally, for what constitutes a wasteful, inefficient, and unnecessary consumption of energy for a proposed land use project. For the purpose of this analysis, the amount of fuel necessary for Project construction is calculated and compared to that consumed in Yolo County. The Project will not consume electricity, natural gas, or fuel during operation.

Because the Project will only consume fuel during construction, the Project will have a nominal effect on local and regional energy supplies, especially over the long-term. Additionally, construction equipment fleet turnover and increasingly stringent state and federal regulations on engine efficiency combined with state regulations limiting engine idling times and require recycling of construction debris, will further reduce the amount of transportation fuel demand during Project construction.

In addition, the Proposed Project, a bike and pedestrian pathway, would encourage Davis citizens to walk or bike to their destination, thus reducing use of personal vehicles and in turn reducing vehicle fuel consumption. For these reasons, it is expected that construction fuel consumption associated with the Project would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature. For these reasons, this impact is less than significant.

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Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The Davis Climate Action and Adaptation Plan (D-CAAP) includes measures to reduce GHG emissions so as to achieve reduction targets adopted by the City Council. The D-CAAP reduction goals are based on various State reduction targets. The D-CAAP strategies utilize a system-based approach to address local GHG emissions from the following nine sectors; mobility, energy, land use and buildings, consumption and waste, food and agriculture, community engagement, government operations, advocacy, and climate change adaptation. Energy use associated with the Project would be in the form of fuel consumption during the construction phase. Notable energy use will not result from Project operation. Further, the Project will encourage Davis residents to walk and bike to and from destinations located in the proximity of the proposed bike and pedestrian pathway. Thus, the Project will help achieve reduced energy use goals and as discussed in under Item a), the energy consumption related to this Project would be minimal. For these reasons, this impact would be less than significant.

4.6.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.7 Geology and Soils

4.7.1 Environmental Setting

4.7.1.1 Geomorphic Setting

The Project site is located in the north-central portion of the Great Valley geomorphic province of California. The Great Valley is an alluvial plain, about 50 miles wide and 400 miles long, between the Coast Ranges and Sierra Nevada. The Great Valley is drained by the Sacramento and San Joaquin rivers, which join and enter San Francisco Bay. The eastern border is the west-sloping Sierran bedrock surface, which continues westward beneath alluvium and older sediments. The western border is underlain by east-dipping Cretaceous and Cenozoic strata that form a deeply buried synclinal trough, lying beneath the Great Valley along its western side. The southern part of the Great Valley is the San Joaquin Valley. Its great oil fields follow anticlinal uplifts that mark the southwestern border of San Joaquin Valley and its southern basin. To the north, the Sacramento Valley plain is interrupted by the Marysville Buttes, an isolated Pliocene volcanic plug about 2,000 feet high (California Geological Survey [CGS] 2002).

4.7.1.2 Site Geology

The Great Valley geomorphic province, which encompasses Davis, is a low fluvial plain composed of Cenozoic nonmarine sedimentary rocks and alluvial deposits (USFS N.D.). The Great Valley encompasses the Central Valley of California, but the Sutter Buttes, approximately 50 miles north of the Project Site, is a topographically unique feature within the basin. According to the City of Davis General Plan EIR, Davis is

located upon a layer of marine and sedimentary rock upon a layer of metamorphic and igneous rock. Above these non-water-bearing layers is 5,000 feet of semi-consolidated and non-consolidated alluvial sediments which are water-bearing (Jones & Stokes 2000).

4.7.1.3 Site Soils

According to the NRCS through the Web Soil Survey database, the Project site is composed of one soil unit, Sycamore silty clay loam, drained, 0 percent slopes, MLRA 17, as shown in *Table 4.7-1*. The Web Soil Survey also identifies drainage, flooding, erosion, runoff, and the linear extensibility potential for the Project soils. According to this survey, the Project soil is Somewhat poorly drained, has a moderate runoff potential, and has rare potential for flooding. The Project site soil has a slight erosion potential and moderate linear extensibility (shrink-swell) (NRCS 2019).

Table 4.7-1. Project Area Soil Characteristics

Soil	Percentage of Site	Drainage	Flooding Frequency Class	Erosion Hazard (Road, Trail) ¹
Sycamore silty clay loam, drained, 0 percent slopes, MLRA 17	100%	Somewhat poorly drained	Rare	Slight
	Runoff Potential ²	Linear Extensibility (Rating) ³	Frost Action ⁴	
Sycamore silty clay loam, drained, 0 percent slopes, MLRA 17	C (moderate)	4.0%, moderate	None	

Source: NRCS 2019

Notes:

1. The ratings are both verbal and numerical. The hazard is described as "slight," "moderate," "severe," or "very severe." A rating of "slight" indicates that erosion is unlikely under ordinary climatic conditions; "moderate" indicates that some erosion is likely and that erosion-control measures may be needed; "severe" indicates that erosion is very likely and that erosion-control measures, including revegetation of bare areas, are advised; and "very severe" indicates that significant erosion is expected, loss of soil productivity and offsite damage are likely, and erosion-control measures are costly and generally impractical.
2. Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation.
 Group A: Soils having a high infiltration rate (low runoff potential) when thoroughly wet.
 Group B: Soils having a moderate infiltration rate when thoroughly wet.
 Group C: Soils having a slow infiltration rate when thoroughly wet.
 Group D: Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet.
3. Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3%, moderate if 3 to 6%, high if 6 to 9%, and very high if more than 9%. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.
4. Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

4.7.1.4 Regional Seismicity and Fault Zones

In California, special definitions for active faults were devised to implement the Alquist-Priolo Earthquake Fault Zoning Act of 1972, which regulates development and construction in order to avoid the hazard of surface fault rupture. The State Mining and Geology Board established policies and criteria in accordance with the act. The board defined an active fault as one which has had surface displacement within

Holocene time (about the last 11,000 years). A potentially active fault was considered to be any fault that showed evidence of surface displacement during Quaternary time (last 1.6 million years). Because of the large number of potentially active faults in California, the State Geologist adopted additional definitions and criteria in an effort to limit zoning to only those faults with a relatively high potential for surface rupture. Thus, the term sufficiently active was defined as a fault for which there was evidence of Holocene surface displacement. This term was used in conjunction with the term well-defined, which relates to the ability to locate a Holocene fault as a surface or near-surface feature (CGS 2011).

According to the DOC Data Viewer interactive mapping program, the closest earthquake faults to the Project site are the Dunnigan Hills fault, approximately 12 miles northwest of the Project site and the Midland Fault, located 9.5 miles southwest of the Project site. Both of the faults are quaternary faults. The nearest Holocene fault is an unnamed fault located approximately 19 miles northwest of the Project site (CGS 2019).

4.7.1.5 Paleontological Resources

A paleontological records search was completed using the University of California Museum of Paleontology (UCMP) Locality Search website on February 19, 2020. The search included a review of the institution's paleontology specimen collection records for Yolo County, including the Project Area and vicinity. The purpose of the assessment was to determine the sensitivity of the Project Area, whether or not known occurrences of paleontological resources are present within or immediately adjacent to the Project Area, and whether or not implementation of the project could result in significant impacts to paleontological resources. Paleontological resources include mineralized (fossilized) or unmineralized bones, teeth, soft tissues, shells, wood, leaf impressions, footprints, burrows, and microscopic remains.

The results of the search of the UCMP indicated that 133 paleontological specimens were recorded from 96 identified localities and 37 unidentified localities in the Yolo County. Paleontological resources include fossilized remains of plants, mammals, fish, mollusks, and microfossils. No paleontological resources have been previously recorded within or near the Proposed Project site (UCMP 2020).

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4.7.2 Geology and Soils (VII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- i) The Proposed Project site is not located within an Alquist-Priolo Earthquake Zone (CGS 2011). There would be no impact related to fault rupture.
- ii) According to CGS Earthquake Shaking Potential for California map, the Proposed Project site is located in an area which has a low to moderate likelihood of experience ground shaking (CGS 2003). During most earthquakes, only weaker masonry buildings would be damaged. However, very infrequent earthquakes could still cause strong shaking in the area. The Proposed Project includes the construction of a bike and pedestrian pathway on level ground. In the event of strong seismic ground shaking, the pathway may experience cracking and lift. However, this would not result in potentially significant adverse effects including risk of loss injury, or death. Because of the distance from active faults and the nature of the Project, the Proposed Project would have a less than significant impact related to strong ground shaking.
- iii) Liquefaction occurs when loose sand and silt saturated with water behaves like a liquid when shaken by an earthquake. Liquefaction can result in the following types of seismic-related ground failure:
- Loss of bearing strength – soils liquefy and lose the ability to support structures
 - Lateral spreading – soils slide down gentle slopes or toward stream banks
 - Flow failures – soils move down steep slopes with large displacement

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- Ground oscillation – surface soils, riding on a buried liquefied layer, are thrown back and forth by shaking
- Flotation – floating of light buried structures to the surface
- Settlement – settling of ground surface as soils reconsolidate
- Subsidence – compaction of soil and sediment

Liquefaction potential has been found to be greatest where the groundwater level and loose sands occur within a depth of about 50 feet or less. DOC provides mapping for area susceptible to liquefaction in California. According to this mapping, the Project Area has not been evaluated for risk of liquefaction (CGS 2016). However, the soil within and in the vicinity of the Project site is a clay loam; a soil type not typically susceptible to liquefaction. As such, the Proposed Project would result in less than significant impacts with regard to seismic-related ground failure, including liquefaction.

- iv) The Project site is of minimal elevation gain and the site does not have steep hillsides or other formations susceptible to landslides during a seismic event. As such, the potential for landslides would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

As shown in *Table 4.6-1*, the Project soil has a slight erosion potential. Construction activities during Project site development, such as grading, excavation, and soil hauling, would disturb soils and potentially expose them to wind and water erosion.

Depending on the Project design ultimately chosen, the Project may disturb one or more acres of soil. If the Project does disturb one or more acres of soil, the Project applicant will be required to prepare a SWPPP to comply with the RWQCB General Construction Storm Water Permit. Furthermore, regardless of the Project’s size, the City of Davis Municipal Code Chapter 30.03.030 mandates that all discretionary development and redevelopment projects comply with the post-construction standards as described in the NPDES General Permit for Phase II Small Municipal Separate Storm Sewer System (MS4) (NPDES General Permit No. CAS000004).

BMPs are required for both an MS4 Permit and SWPPP and as such would be implemented to manage erosion and the loss of topsoil during construction-related activities (see Section 4.10.2(a)). Implementation of the Project’s required BMPs would reduce soil erosion impacts to a less than significant impact.

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Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

As discussed previously, the Project site has little potential for landslides.

Lateral spreading is a form of horizontal displacement of soil toward an open channel or other “free” face, such as an excavation boundary. Lateral spreading can result from either the slump of low cohesion and unconsolidated material or, more commonly, by liquefaction of either the soil layer or a subsurface layer underlying soil material on a slope, resulting in gravitationally driven movement. One indicator of potential lateral expansion is frost action. Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing (NRCS 2019). As indicated in *Table 4.7-1*, the Web Soil Survey identifies the Project site as having soils with a no frost action potential. Additionally, as discussed in Item a) iii) above, the Project site is not identified as susceptible to liquefaction. As such, the potential for impacts due to lateral spreading would be less than significant.

With the withdrawal of fluids, the pore spaces within the soils decrease, leading to a volumetric reduction. If that reduction is significant enough over an appropriately thick sequence of sediments, regional ground subsidence can occur. This typically only occurs within poorly lithified sediments and not within competent rock.⁶ No oil, gas, or high-volume water extraction wells are known to be present in the Project Area. According to the USGS, the City of Davis, including the Project site, is located in an area of land subsidence due to groundwater pumping (USGS 2018). However, the Proposed Project, a bike and pedestrian pathway alongside an existing roadway, would not be of the size or nature to exacerbate the existing soil subsidence condition. The Project would not significantly contribute to groundwater subsidence in the area, which is mainly a result of pumping of groundwater for agricultural use, as the Project would only require the use of water from the municipal water supply for the landscaping incorporated into the Project design. The Project’s landscaping will be required to comply with the Model Water Efficient Landscape Ordinance (MWELO) requirements to maximize water use efficiency. In addition, on average, 80 percent of the City’s water supply is comprised of surface water, and the remainder is sourced from the City’s groundwater wells. As such, the potential for impacts due to subsidence would be less than significant.

Collapse occurs when water is introduced to poorly cemented soils, resulting in the dissolution of the soil cementation and the volumetric collapse of the soil. In most cases, the soils are cemented with weak clay (argillic) sediments or soluble precipitates. This phenomenon generally occurs in granular sediments situated within arid environments. Collapsible soils will settle without any additional applied pressure

⁶ The processes by which loose sediment is hardened to rock are collectively called lithification.

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when sufficient water becomes available to the soil. Water weakens or destroys bonding material between particles that can severely reduce the bearing capacity of the original soil. The collapse potential of the Project Area soil must be determined for consideration in the foundation design.

Because of the distance from active faults and the nature of the Project, the potential for that settlement/collapse at the site is considered unlikely. As such, there is a less than significant impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Expansive soils are types of soil that shrink or swell as the moisture content decreases or increases. Structures built on these soils may experience shifting, cracking, and breaking damage as soils shrink and subside or expand. Expansive soils can be determined by a soil's linear extensibility. There is a direct relationship between linear extensibility of a soil and the potential for expansive behavior, with expansive soil generally having a high linear extensibility. Thus, granular soils typically have a low potential to be expansive, whereas clay-rich soils can have a low to high potential to be expansive. The shrink-swell potential is low if the soil has a linear extensibility of less than three percent, moderate if 3 to 6 percent, high if 6 to 9 percent, and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. As shown in *Table 4.7-1*, the Project Area soil exhibits a linear extensibility value of 4 percent. Soils with linear extensibility of 4 percent correlate to having a moderate expansion potential. Because the Proposed Project is a pedestrian and bike pathway, the Project will not create substantial direct or indirect risks to life or property due to expansive soil. Based on this information, the potential for impacts because of expansive soils would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Project does not include the installation of septic tanks or alternative waste disposal systems. As such, the Project would have no impact in this area.

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Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

No known paleontological resources sites were identified during the field survey of the Project site. A search of the UCMP failed to indicate the presence of paleontological resources in the Project Area (UCMP 2020). Although paleontological resources sites were not identified in the Project Area, there is a possibility that unanticipated paleontological resources will be encountered during ground-disturbing project-related activities. Therefore, impacts to unknown paleontological resources would be less than significant with incorporation of mitigation measure **GEO-1**.

4.7.3 Mitigation Measures

GEO-1: Paleontological or Sensitive Geologic Resource Discovery

If paleontological or other geologically sensitive resources are identified during any phase of Project development, the construction manager shall cease operation at the site of the discovery and immediately notify the City of Davis. The City of Davis shall retain a qualified paleontologist to provide an evaluation of the find and to prescribe mitigation measures to reduce impacts to a less-than-significant level. In considering any suggested mitigation proposed by the qualified paleontologist, the City shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, land use assumptions, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the Project site while mitigation for paleontological resources is carried out.

Timing/Implementation: *During construction*
Monitoring/Enforcement: *The City of Davis and the Project construction lead*

4.8 Greenhouse Gas Emissions

4.8.1 Environmental Setting

Greenhouse gases (GHGs) are released as byproducts of fossil fuel combustion, waste disposal, energy use, land use changes, and other human activities. This release of gases, such as carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and chlorofluorocarbons, creates a blanket around the earth that allows light to pass through but traps heat at the surface, preventing its escape into space. While this is a naturally occurring process known as the greenhouse effect, human activities have accelerated the generation of GHGs beyond natural levels. The overabundance of GHGs in the atmosphere has led to an unexpected warming of the earth and has the potential to severely impact the earth’s climate system (IPCC 2013, 2014).

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. CH₄ traps more than 25 times more heat per molecule than CO₂, and N₂O absorbs 298 times more heat per molecule than CO₂. Often, estimates of GHG emissions are presented in CO₂e. Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO₂ were being emitted (EPA 2016a, b, c).

State

At the federal and state level, laws are in place to set GHG reduction targets at regular intervals.

At the state level, Assembly Bill (AB) 32 (2006) and associated scoping plan updates (2008) set a goal for the state to reduce its GHG emissions by 30 percent below projected 2020 business-as-usual emissions levels. Further, Executive Order B-30-15 (2015) establishes a California GHG reduction target of 40 percent below 1990 levels by 2030 and aims to reach the ultimate goal of reducing emissions 80 percent below 1990 levels by 2050.

Senate Bill (SB) 32 and AB 197 of 2016 serve to extend California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the State's continuing efforts to pursue the long-term target expressed in EOs S-3-05 and B-30-15 of 80 percent below 1990 emissions levels by 2050.

In addition, SB X1-2 of 2011 requires all California utilities to generate 33 percent of their electricity from renewables by 2020. In October 2015, SB 350 was signed by Governor Brown, which requires retail sellers and publicly-owned utilities to procure 50 percent of their electricity from renewable resources by 2030. In 2018, SB 100 was signed by Governor Brown, codifying a goal of 60 percent renewable procurement by 2030 and 100 percent by 2045 RPS.

Local

Yolo- Solano County Air Quality Management District

The YSAQMD has not yet established significance thresholds for the emissions of GHG from land use development projects. However, the Project site is located within the SVAB and therefore, mass emission thresholds of significance developed by Sacramento Metropolitan Air Quality Management District (SMAQMD), another air district with jurisdiction over portions of the SVAB, have been used for evaluating construction- and operation-related GHG emissions associated with the Proposed Project. These thresholds are considered appropriate for the purposes of this analysis due to similarities between both the geomorphic and urban pattern of two neighboring air district jurisdictions. Therefore, the threshold used to analyze the Project is specific to the analysis herein and the lead agency retains the ability to develop and/or use different thresholds of significance for other projects in its capacity as lead agency and recognizing the need for the individual threshold to be tailored and specific to individual projects.

Davis Climate Action and Adaptation Plan (D-CAAP)

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As previously described, in November of 2008 the City of Davis adopted the Davis Climate Action and Adaptation Plan (D-CAAP) that places the community on a path to achieve the GHG emission reduction targets adopted by the City Council. The targets were based on a range that uses the State of California targets as a minimum goal and deeper reduction as the desired outcome. The D-CAAP strategies utilize a system-based approach to address local GHG emissions from the following nine sectors; mobility, energy, land use and buildings, consumption and waste, food and agriculture, community engagement, government operations, advocacy, and climate change adaptation.

4.8.2 Greenhouse Gas Emissions (VIII) Environmental Checklist and Discussion

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

As previously stated, the YSAQMD has not yet established significance thresholds for the emissions of GHG from land use development projects. However, the Project site is located within the SVAB and therefore, mass emission thresholds of significance developed by Sacramento Metropolitan Air Quality Management District (SMAQMD), another air district with jurisdiction over portions of the SVAB, have been used for evaluating construction- and operation-related GHG emissions associated with the Proposed Project. These thresholds are considered appropriate for the purposes of this analysis due to similarities between both the geomorphic and urban pattern of two neighboring air district jurisdictions. Therefore, the threshold used to analyze the Project is specific to the analysis herein and the lead agency retains the ability to develop and/or use different thresholds of significance for other projects in its capacity as lead agency and recognizing the need for the individual threshold to be tailored and specific to individual projects. *Table 4.8-1* illustrates the specific construction-generated GHG emissions that would result from construction of the Project and compares them to the SMAQMD construction-related GHG significance threshold.

Table 4.8-1. Construction-Related Greenhouse Gas Emissions

Construction Year	Carbon Dioxide Equivalents (CO ₂ e) (metric tons)
Year 2021	78
<i>Significant Impact Threshold</i>	1,100
Exceed Threshold?	No

Source: CalEEMod version 2016.3.2. Refer to **Attachment A** for Model Data Outputs.

Notes: Emissions calculations account for demolition, site preparation and paving of 0.87 acres. The demolition phase account for the removal of 915 tons of debris from the Project Area.

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As shown in *Table 4.8-1*, GHG emissions would remain below the respective threshold during Project construction.

No GHG emissions will result from operation of the Project. the Project will have a less than significant impact due to generation of GHG emissions.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

In November of 2008 the City of Davis adopted the Davis Climate Action and Adaptation Plan (D-CAAP) that places the community on a path to achieve the GHG emission reduction targets adopted by the City Council. The targets were based on a range that uses the State of California targets as a minimum goal and deeper reduction as the desired outcome. The D-CAAP strategies utilize a system-based approach to address local GHG emissions from the following nine sectors; mobility, energy, land use and buildings, consumption and waste, food and agriculture, community engagement, government operations, advocacy, and climate change adaptation.

The GHG emissions associated with the Project will be construction-related and will cease upon completion. The Proposed Project would not include the provision of new permanent stationary or mobile sources of emissions, and therefore, by its very nature, would not generate quantifiable GHG emissions from Project operations. Thus, the Project is consistent with the GHG inventory and forecast in the D-CAAP since it would not contribute to the generation of GHG emissions beyond that considered in the D-CAAP. Furthermore, the Project is focused on infrastructure improvements that would make the corridor more bicycle and pedestrian-friendly. This, in turn, could potentially reduce GHG emissions, the primary goal of the D-CAAP, due to the reduced reliance on automobiles; a primary source of GHG emissions. In addition, the Project directly implements the D-CAAP Goal to increase walking and the use of non-polluting forms of transportation, including bicycles.

The Project is consistent with the D-CAAP and would not conflict with GHG inventory or forecast and serves to directly implement D-CAAP Goals. A less than significant impact would occur.

4.8.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.9 Hazards and Hazardous Materials

4.9.1 Environmental Setting

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency or if it has characteristics defined as hazardous by such an agency. A hazardous material is defined by the California Health and Safety Code, § 25501 as follows:

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"Hazardous material" means any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

A hazardous material is defined in Title 22, Section 662601.10, of the CCR as follows:

A substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed.

The release of hazardous materials into the environment could potentially contaminate soils, surface water, and groundwater supplies.

Hazardous waste emergency response is provided by the Yolo County Environmental Health HazMat Unit. Examples of incidents requiring emergency response include chemical spills, fuel spills resulting from vehicle accidents, chemical leaks due to natural disasters, and radiological releases. Standard disposal of hazardous waste is performed by the Yolo County Central Landfill. The Yolo County Environmental Health Division handles disposal of special classes of hazardous waste, including infectious or medical waste (Davis 2020b). The Yolo County Environmental Health Division also provides hazardous material (HazMat) regulation and enforcement in the areas of aboveground storage tanks (ASTs), accidental release prevention, onsite HazMat treatment, and more.

Under Government Code § 65962.5, both the California Department of Toxic Substance Control (DTSC) and the State Water Resources Control Board (SWRCB) are required to maintain lists of sites known to have hazardous substances present in the environment. Both agencies maintain up-to-date lists on their websites. A search of the DTSC (2020) and the SWRCB (2020) identified no open cases of hazardous waste violations within 0.5 mile of the Project site.

4.9.2 Hazards and Hazardous Materials (IX) Environmental Checklist and Discussion

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The construction phase of the Proposed Project would require the transport and use of hazardous materials typically utilized for the paving of paths and roadways. The materials would be stored primarily

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off-site and may remain on-site for a short duration during construction, which is anticipated to last approximately sixty working days.

Potential construction-related hazards could be created during the course of Project construction at the site do to use of hazardous materials, given that construction activities involve the use of heavy equipment, which uses small and incidental amounts of oils and fuels and other potentially flammable substances. The level of risk associated with the accidental release of hazardous substances is not considered significant due to the small volume and low concentration of hazardous materials used during construction. The construction contractor would be required to use standard construction controls and safety procedures that would avoid and minimize the potential for accidental release of such substances into the environment. Standard construction practices would be observed such that any materials released are appropriately contained and remediated as required by local, state, and federal law.

During operation, the Project would not involve the routine transport, use, or disposal of hazardous materials. As such, the Proposed Project would not create a significant hazard to the public or the environment due to handling of hazardous materials. Therefore, the Project would have a less than significant impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

As discussed in Issue a), the Project would not result in the routine transport, use, disposal, handling, or emission of any hazardous materials that would create a significant hazard to the public or the environment. During operation, no hazardous materials would be utilized, stored, or transported for the Project. Therefore, the Project would have a less than significant impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The Proposed Project is a bike and pedestrian trail. The nearest schools to the Project site are Oliver Wendell Holmes Junior High, 0.23 miles south of the Project site, and Birch Lane Elementary School, 0.20 miles southeast of the Project site. As explained under item a and b above, hazardous materials used for construction will be stored, used, and transported in compliance with applicable label directions and laws.

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The Proposed Project is not expected to emit hazardous emissions due to use of hazardous materials during construction and will not involve the use of hazardous materials during operation. Therefore, the Project will have a less than significant impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Under Government Code § 65962.5, both the DTSC and the SWRCB are required to maintain lists of sites known to have hazardous substances present in the environment. Both agencies maintain up-to-date lists on their websites. A search of the DTSC and SWRCB lists identified that the Proposed Project site is not located on a hazardous materials site. As such, the Project will have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the Project Area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The nearest airport to the Project site is the UC Davis University Airport, approximately 3 miles southwest of the Project site. The Project site is more than two miles away from the airport and the construction and operation of the bike and pedestrian trail would not result in noise or safety impacts related to the airport. As such, the Project would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The Proposed Project does not include any actions that would impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. Construction activities would occur on the shoulder of the 0.36 mile segment of road along East Covell Boulevard, between J street and Pole Line Road. Construction would minimally interfere with use of the roadway. Construction will require shoulder

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closures, and temporary lane closures may be required depending on the final pathway design chosen. However, construction is anticipated to last only approximately sixty working days, which equates to an approximately three-month total duration. If lane closures are required, emergency responders would be made aware of the Project, including construction location and effects on the adjacent roadway. Alternate routes would be available for use by emergency responders and for use in the event of an emergency evacuation. According to the City of Davis General Plan, the City’s Multi-Hazard Functional Planning Guide, which plans for emergency management and evacuation in the event of disasters, all major roads are available for evacuation, depending on the location and type of emergency that arises. Major roads identified for evacuation in the Guide are Russell Boulevard, Highway 113, Interstate 80, Richards Boulevard, Road 102/Pole Line Road, Mace Boulevard southbound, Road 32A, Covell Boulevard/Road 31, “F” Street and North Sycamore Frontage Road (Davis 2007).

Following construction, operation of the pedestrian trail and bike path would have no impact on emergency response or evacuation. Implementation of the Proposed Project would result in a less than significant impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The risk of wildfire is related to a variety of parameters, including fuel loading (vegetation), fire weather (winds, temperatures, humidity levels and fuel moisture contents), and topography (degree of slope). Steep slopes contribute to fire hazard by intensifying the effects of wind and making fire suppression difficult. Fuels such as grass are highly flammable because they have a high surface area to mass ratio and require less heat to reach the ignition point, while fuels such as trees have a lower surface area to mass ratio and require more heat to reach the ignition point.

The CAL FIRE Very High Fire Hazard Severity Zones in a State Responsibility Area map identifies the Project site as not being located in a Fire Hazard Severity Zone (HFSZ) (CAL FIRE 2008). The Project is located in an urbanized area not considered susceptible to wildland fire. The Project is the construction of a pedestrian and bike pathway located in an urbanized area. The Project would not result in the potential for wildfire impacts. The Project would have no impact in this area.

4.9.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.10 Hydrology and Water Quality

4.10.1 Environmental Setting

Regional Hydrology

Surface Water

The Project site is located in the greater Sacramento River hydrologic region. The Sacramento River hydrologic region covers ±17.4 million acres (27,200 square miles). The region includes all or large portions of Modoc, Siskiyou, Lassen, Shasta, Tehama, Glenn, Plumas, Butte, Colusa, Sutter, Yuba, Sierra, Nevada, Siskiyou, Sacramento, El Dorado, Yolo, Solano, Lake, and Napa counties. Small areas of Alpine and Amador counties are also within the region. Geographically, the region extends south from the Modoc Plateau and Cascade Range at the Oregon border, to the Sacramento-San Joaquin Delta (DWR 2004, 2016a).

The Project site is located within boundaries of the Cache Creek Watershed, which is 1,200 square miles in size. Cache Creek originates from and is the sole outlet of Clear Lake, the largest natural freshwater lake located entirely in California and among the world's oldest lakes. North Fork Cache Creek originates at Goat Mountain in the Mendocino National Forest and runs 16 miles before flowing into Indian Valley Reservoir. The North Fork joins the mainstem below Highway 20. Bear Creek, the other main tributary flows through Bear Valley, renowned for its wildflower displays. It joins Cache Creek, paralleling State Route 16, and then enters the bucolic Capay Valley in Yolo County. The creek winds its way through a predominantly agricultural setting before entering the Cache Creek Settling Basin, designed to capture sediment and enhance groundwater recharge before ultimately releasing water into the Yolo Bypass of the Sacramento River (SRWP 2020).

Groundwater

Groundwater in the State of California is managed and monitored by the DWR. The Project site is within the Sacramento Valley- Yolo (Yolo) Subbasin, (basin number 5-021.67) of the Sacramento Valley Hydrologic Region (DWR 2015). The original basin descriptions were provided in the 2004 Bulletin 118 (B118) Update completed by the DWR. The 2004 basin descriptions included available information on narrative descriptions of basin boundaries, summaries of the hydrologic and hydrogeologic setting, groundwater storage capacity and water budget, groundwater level and quality trends, well yields, basin management, and references.

The Yolo groundwater subbasin is in the southern portion of the Sacramento Valley Basin and includes the majority of Yolo County. The northern, eastern and southern boundaries are predominately defined by the Colusa, Sacramento and Solano County lines, respectively. The subbasin includes the Solano County portion of the University of California at Davis and does not include the Yolo County portions of Colusa County Water District, Reclamation Districts 150, 307, 999, 2068, and 2093. The basin extends to the coast range on the west. The Capay Hills provide a barrier between the main part of the subbasin and Capay Valley, but Capay Valley is interconnected and part of the Yolo subbasin. The subbasin is defined by 19 boundary line segments defined based on characteristics including county lines, water agency jurisdiction, and geologic characteristics (DWR 2016b).

Annual precipitation in the Sacramento Hydrologic Region varies widely, with an average of 18 inches per year in nearby Sacramento. Mountainous areas in the northern and eastern portions of the region have cold wet winters with large amounts of snow, which typically provide abundant runoff for summer supplies (DWR 2004).

4.10.1.1 Project Site Hydrology and Onsite Drainage

The Project site is located on relatively level terrain situated at an elevational range between 37 to 45 feet AMSL. The nearest waterway to the site is a freshwater emergent wetland approximately 1,000 feet north of the Project site (ECORP 2020a).

In the Project Area, the precipitation period of the year lasts for 5.2 months, from November 2 to April 9. The most rain/snow falls during the 31 days around February 16, with an average total accumulation of 4.1 inches. The rainless period of the year lasts for 4.2 months, from May 22 to September 29. The least rain falls around July 30, with an average total accumulation of 0.10 inch (Weatherspark 2018).

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for the Project Area (Map No. 06113C0603G) shows that the Project site is in unshaded Zone X, meaning that the area is outside of the 0.2 percent annual chance (500-year) floodplain (FEMA 2010).

4.10.2 Hydrology and Water Quality (X) Environmental Checklist and Discussion

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

In accordance with National Pollutant Discharge Elimination System (NPDES) regulations, the State of California requires that any construction activity affecting one acre or more obtain a General Construction Activity Stormwater Permit (General Permit) to minimize the potential effects of construction runoff on receiving water quality. As described previously, the Project design may meet the design specifications of Alternative 1, Alternative 2, or Alternative 3. All three alternative would result in a 0.36-mile bike path, but the width of the path, and thus total area of the Project, will vary based on the specific design. Depending on the Project design ultimately chose, the soil area disturbed by Project construction may equate to one acre or more.

Thus, if the Project disturbs one acre or more of soil, the Project will require the implementation of a SWPPP with minimum BMPs. Performance standards for obtaining and complying with the General Permit are described in NPDES General Permit No. CAS000002, Waste Discharge Requirements, Order No. 2009-0009-DWQ. In addition, regardless of the size of the Project, the City of Davis Municipal Code Chapter 30.03.030 mandates that all discretionary development and redevelopment projects comply with the post-construction standards as described in the NPDES General Permit for Phase II Small Municipal Separate Storm Sewer System (MS4) (NPDES General Permit No. CAS000004).

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A General Permit would be required for the Project regardless of the Project’s size. General Permit applicants are required to submit to the appropriate regional board Permit Registration Documents for the Project, which include a Notice of Intent (NOI), risk assessment, site map, signed certification statement, an annual fee, and a SWPPP and/or MS4 permit. The SWPPP and/or MS4 permit must include pollution prevention measures (erosion and sediment control measures and measures to control non-stormwater discharges and hazardous spills), demonstration of compliance with all applicable local and regional erosion and sediment control standards, identification of responsible parties, and a detailed construction timeline. The SWPPP and/or MS4 permit must also include implementation of BMPs to reduce construction effects on receiving water quality by implementing erosion control measures and reducing or eliminating non-stormwater discharges.

Examples of typical construction best management practices include, but are not limited to, using temporary mulching, seeding, or other suitable stabilization measures to protect uncovered soils; storing materials and equipment to ensure that spills or leaks cannot enter the storm drain system or surface water; developing and implementing a spill prevention and cleanup plan; and installing sediment control devices such as gravel bags, berms, inlet filters, fiber rolls, or silt fences to reduce or eliminate sediment and other pollutants from discharging to the drainage system or receiving waters. BMPs are recognized as effective methods to prevent or minimize the potential releases of pollutants into drainages, surface water, or groundwater.

Further, no waterbodies would be impacted by the Project. The closest water feature to the Project site is a freshwater emergent wetland located 1,000 feet to the north within an actively farmed area (ECORP 2020a). The Project site is also relatively flat, with elevations ranging from 37 to 45 feet AMSL. The level nature of the site reduces the potential for runoff into surface water or stormwater drainages. Strict SWPPP compliance, coupled with the use of appropriate BMPs, would reduce potential water quality impacts during construction activities.

Implementation of BMPs required as part of the SWPPP and/or MS4 permit would ensure that the Proposed Project would not create or contribute to any violations of water quality standards or waste discharge requirements. There would be a less than significant impact.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Following completion of the bike path and pedestrian trail, the water supply for the Project Area will continue to be derived from the City’s municipal system. The City’s water supply is sourced from both surface water and groundwater. On average, 80 percent of the water supply is comprised of surface water, and the remainder is sourced from the City’s wells. The surface water is treated at the Woodland-Davis Regional Water Treatment Facility, and Davis is allotted 10.2 million gallons of treated surface water per

day. The surface water is sourced from the Sacramento River. Surface water diversions may be limited during summer months, during which time more groundwater may need to be used to meet demand. The City's wells include five deep aquifer wells and four intermediate wells. The deep aquifer wells are used for almost all of the groundwater supply needs in the City and the intermediate wells are for water quality testing (Davis 2019). As such, during an average year, the City will use 10.2 million gallons of surface water and 2.55 million gallons of groundwater per day for a total of 12.75 million gallons. 12.75 million gallons per day equates to 4,653,750,000 gallons, or approximately 4.65 billion gallons, per year.

The Project entails the addition of an asphalt area along an existing roadway with a 3 to 6-foot-wide landscape area (depending on the design chosen) to travel the entire length of the 0.36-mile strip of roadway incorporated into the Project design. As such, the Project will increase the amount of impervious surface area up to 36,680 square feet or less (dependent upon final Project design), and as such will reduce groundwater recharge. The landscaping area, however, will continue to provide surface area for groundwater recharge.

The Proposed Project would increase the demand for water in the City for the irrigation of landscaping only. However, the City of Davis mandates compliance with the State Model Water Efficient Landscape Ordinance (MWELo). MWELo requirements apply to any landscaping project greater than 500 square feet that requires a permit, plan check or design review. The Proposed Project landscape area will be at least 5,702 square feet, and as such will be required to comply with MWELo regardless of the final Project design chosen. A project greater than 2,500 square feet is required to comply with the Performance Compliance Approach, the strictest approach. Thus, the landscaping must adhere to strict water efficiency and reporting standards. Irrigation controls must be installed and only drought-tolerance plants may be planted. Thus, compliance with MWELo will minimize the water use of the landscape component of the Project. Operation of the pedestrian and bicycle pathway will not use water for any other reason. Thus, the Project will not substantially decrease groundwater supplies.

The Proposed Project would have the potential to remove a portion of the Project site's surface area available for groundwater recharge due to the development of up to 36,680 square feet of this area with impervious surfaces. However, according to the City of Davis, the groundwater supply for the City comes from five deep aquifer wells drilled throughout the City of Davis and is stored in three water tanks prior to distribution. The City of Davis is 5,300 acres, or 8.28 square miles, in area. As such, the addition of the impervious surface area associated with the Proposed Project will not significantly impact the ability of groundwater to infiltrate within the basin. In addition, the Project Area has existing stormwater drainage systems designed for urban development and infiltration area located within the Project Area and along the East Covell Boulevard right of way. The landscape area to be incorporated into the bike and pedestrian pathway design will allow for rainwater infiltration. As such, development of this area would only minimally affect the groundwater recharge ability of the Project site. Therefore, the Project would have a less than significant impact on groundwater recharge.

The Project will have a less than significant impact in this area.

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Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner that would:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) result in substantial erosion or siltation on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- i) The proposed bike and pedestrian pathway are situated with existing multi-lane roadways to the east, south, and west, and farmland which is currently in use to the north. No waterways within the Project vicinity would be impacted by erosion or siltation, as no waterways are located adjacent to or in very close proximity to the Project site. As such, siltation into on- or off-site waterways has low potential to occur.

As explained in Section 4.10.2(a), the Project will be required to obtain a NPDES Construction General Permit prior to the start of a construction phase. Excavation and grading activities associated with the Project will reduce vegetative cover and expose bare soil surfaces making these surfaces more susceptible to erosion. To comply with the requirements of the NPDES Construction General Permit the City will be required to file a NOI with the State of California and submit an MS4 Permit and/or SWPPP defining BMPs for construction and post-construction so as to control Project site runoff and sediment transport. Requirements for the General Permit include incorporation of both erosion and sediment control BMPs.

Note that MS4 Permits and SWPPs are both considered “live” documents and should be kept current by the person responsible for its implementation (EPA 2007, 2010). Preparation of, and compliance with a required SWPPP would effectively prevent Project on-site erosion and sediment transport off-site. This will reduce potential runoff, erosion, and siltation associated with construction and operation of the Project. As such, the effects of the Project on onsite and offsite erosion and siltation, therefore, would be less than significant.

- ii) Implementation of the Project would not result in the substantial increase of the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite. The Project involves the construction of a pedestrian and bike pathway 0.36 mile in length along an existing roadway. With the implementation of BMPs, which may include the installation of berms or straw wattles during the construction phase and hydroseeding following disturbance outside of the trail footprint, where necessary, the increase in surface runoff will be minimal. As such, the drainage pattern at the Project site, as well as surface runoff conditions after implementation of the Proposed Project, would not result in onsite or offsite flooding. Therefore, the Proposed Project would have a less than significant impact with regard to causing flooding onsite or offsite.

However, the City's MS4 Permit requires certain post construction stormwater management measures to be implemented. Because the Project creates 5,000 square feet or more of contiguous impervious surfacing, the runoff from the Project is required to be either drained to vegetative landscaping or be directed to bioretention/treatment control measures. However, the Phase II Small MS4 General Permit Section E.12.c.(ii)(c)(4) does allow for specific exclusions including to following:

- c) Impervious trails built to direct storm water runoff to adjacent vegetated areas, or other non-erodible permeable areas, preferably away from creeks or towards the outboard side of levees.
- d) Sidewalks, bicycle lanes, or trails constructed with permeable surfaces.

Because the final design of the Project has not been completed at this time, the drainage features are currently not identified. As such, mitigation measure **HYD-1** is included to implement the MS4 stormwater management requirements.

- iii) See discussion of Issues i) and ii), above. There are existing stormwater drainage systems designed for urban development located within the Project Area, including along the existing footprint of East Covell Boulevard. In addition, the Project design includes a landscape area. There are several stormwater drainages located in the vicinity along existing roadways.

However, polluted runoff still has potential to result due to construction. Polluted runoff from the Project site during construction and operation could include sediment from soil disturbances, oil and grease from construction equipment, and pollutants such as trash and debris. Compliance with NPDES permit requirements would ensure that BMPs would be implemented during the construction phase to effectively minimize excessive soil erosion and sedimentation and eliminate non-stormwater discharge off-site. As required by law, BMPs would be included as part of the Project to ensure that potentially significant impacts are reduced to less than significant levels. Therefore, impacts associated with stormwater volumes and polluted runoff during the construction of the Project would be less than significant.

Activities associated with operation of the Project would contribute to stormwater flow and polluted runoff, as the Project will increase impervious surface area by up to 36,680 square feet. However, as discussed above, the Project Area includes existing stormwater drainage systems and

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a planned landscape area. The Project will include the construction of curbs along the pathway as is required by the City Code. Following implementation of these runoff reduction measures, runoff would be minimized and runoff from the site is not expected to be of sufficient quantity to overwhelm existing and proposed stormwater drainage facilities. As such, the Project’s impact during operation would be considered less than significant.

While potential impacts could result from vehicles and other users at the Proposed Project site during operation, all potential impacts to water quality would be reduced by stormwater pollution control measures and wastewater discharge BMPs required at the Project site as a part of Project development and operation. Therefore, impacts during operation would be considered less than significant.

- iv) FEMA flood hazard maps (Map No. 06113C0603G) shows that the Project site is in unshaded Zone X. The Project site is not located within a 100-year flood zone and all project improvements. Therefore, implementation of The Project will have no impact related to impeding or redirecting flood flows.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

FEMA flood hazard maps (No. 06113C0603G) shows that the Project site is in unshaded Zone X. The Project site is not located within a flood zone. Therefore, implementation of the Proposed Project will not have an impact related to flooding.

According to the California Dam Breach Inundation Map, the Project site is not located within the inundation area of any dams (DWR 2020). However, the Hazards Element (Chapter 19) of the General Plan states that flooding in the City is generally shallow sheet flooding in nature and occurs due to creeks and other waterways overflowing their banks along Putah Creek, Willow Slough, Dry Slough, and the edge of the Yolo Bypass. Davis is also in the path of flooding that would occur in the event of the failure of Monticello Dam on Putah Creek (Lake Berryessa). Flooding due to dam failure would not be significantly more severe than flooding during a 100-year flood event. The City of Davis Public Works Department and the Yolo County Flood Control and Water Conservation District and the State Department of Water Resources provide flood control to the area (Davis 2007).

Additionally, dams are regulated by DWR’s Division of Safety of Dams and are routinely inspected during their impoundment life, which includes monitoring for compliance with seismic stability standards. Prior to the terrorist attacks of September 11, 2001, public information was available that provided structural ratings for dams throughout the nation. Since that time, this information, as well as, dam inundation areas, have been classified and is not readily available. Thus, dam failure is not considered a reasonably foreseeable event, and the Proposed Project would not affect dam operations. As such, the Proposed Project would have a less than significant impact from dam or levee failure.

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Further, the Project site is not located within a potential tsunami or seiche inundation area. As such, damage due to a seiche, a seismic-induced wave generated in a restricted body of water would not occur.

Finally, in the event that the Project was inundated by water, the Project would not have potential to release pollutants because the Project does not include the use or storage of potential pollutants.

Based on the discussion above, the Project would not result in the release of pollutants due to Project inundation. Thus, there would be no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The City of Davis is a participating member of the Water Resources Association of Yolo County, which formed the Yolo Subbasin Groundwater Sustainability Agency (GSA) for Yolo County in June 2017. The Water Resources Association of Yolo County has been formed through a Memorandum of Understanding to sustainably manage groundwater in Yolo subbasin through the development of a groundwater sustainability plan (GSP). The GSA is developing water management tools which participating members, including the City of Davis, will implement to sustainably manage groundwater upon completion of groundwater sustainability plan (GSP). The GSA resolved to adopt the GSP by the January 31, 2022. The Project Area would be managed sustainably in accordance with California state law promulgated by DWR and with the Yolo subbasin GSP (YoloGroundwater 2020). As such, the Project would have a less than significant impact on the implementation of the groundwater management plan.

4.10.3 Mitigation Measures

HYD-1: Stormwater Management

Pursuant to the requirements of the City’s MS4 Permit, the following stormwater management requirement shall be included in Project design:

- The Project will be designed to either include pervious surfaces for the pathway allowing for stormwater percolation or be designed to direct all stormwater runoff into adjacent vegetated areas or a combination of both.

Timing/Implementation: As a part of Project approval

Monitoring/Enforcement: The City of Davis and the Project construction lead

4.11 Land Use and Planning

4.11.1 Environmental Setting

The Project site consists of a currently undeveloped 0.36 mile long piece of land situated north of an existing roadway and south of an agriculture field. The Proposed Project is identified in the East Covell Corridor Plan as a shared-use path. There is an existing buffered Class I bike lane along both sides of Covell Boulevard. As illustrated in *Figure 1. Regional Location* and *Figure 2. Project Location* maps, the Proposed Project is located directly north of residential neighborhoods and a commercial center, which includes businesses such as a SuperCuts, dry cleaners, credit union, CVS Pharmacy, and Nugget Market. The land to the north of the Project site is comprised of land farmed for agricultural use. The land to the east and the west of the Project site consists of mixed residential and commercial use. See *Figure 3. Surrounding Uses*.

The Project site does not have a General Plan designation, as it is within the street right-of-way. The Project site is included in the *Planned Development (PD)* zoning district of the City. More specifically, from west to east, the area in which the bike path is proposed is zoned PD 1-11, PD 2-87, PD 6-85, and PD 16-75B.

The City of Davis Municipal Code describes the PD zone as meant to “... allow diversification in the relationship of various buildings, structures and open spaces in order to be relieved from the rigid standards of conventional zoning”. The *PD* District must comply with the applicable General Plan designation (if any) for the site and new development should be built on land of any size deemed appropriate for the new development.

The development of a bike and pedestrian pathway in an appropriately sized area located alongside an existing roadway meets the basic requirements of development in the *PD* zone.

4.11.2 Land Use and Planning (XI) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Proposed Project, a bike and pedestrian pathway, is to be located adjacent to an existing 0.36 mile section of East Covell Boulevard. Adjacent uses include farmed agriculture land to the north and a mix of residential and commercial uses to the south. The Project would add connectivity to the area for pedestrians and cyclists and would not impact the path of the existing roadways. Thus, the Project would not divide an established community. As such, the Proposed Project would have no impact in this area.

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Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

As explained above, the Project is compatible with the City’s zoning designation for the site: *PD*. The Proposed Project is within the street right-of-way, and as such has no applicable General Plan designation. Thus, the Proposed Project would not conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Thus, no impact would occur.

4.11.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.12 Mineral Resources

4.12.1 Environmental Setting

The state-mandated Surface Mining and Reclamation Act of 1975 requires the identification and classification of mineral resources in areas within the State subject to urban development or other irreversible land uses that could otherwise prevent the extraction of mineral resources. These designations categorize land as Mineral Resource Zones (*MRZ-1* through *MRZ-4*).

Neither the City, Mineral Resources Data System, nor the California DOC Division of Mine Reclamation (DMR), identify the Project site as a mineral resource zone (DMR 2018, USGS 2011).

4.12.2 Mineral Resources (XII) Environmental Checklist and Discussion

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

As discussed above, neither the County nor DMR identify the Project site as having the mineral resources. Therefore, the Project would have no impact in this area.

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Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Project site is not identified as a mineral resource recovery site by the County or DMR. There would be no impact in this area.

4.12.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.13 Noise

4.13.1 Environmental Setting

The Proposed Project is located in an urbanized area. The environmental setting is characterized by typical urban development on three sides including office, residential and commercial uses. An actively farmed alfalfa field is located directly north and adjacent to the site. The site is directly adjacent to Covell Boulevard, which is a four-lane roadway just south of the proposed bike path. See *Figure 3. Surrounding Uses*.

Fundamentals of Sound

Addition of Decibels

The decibel (dB) scale is logarithmic, not linear, and therefore sound levels cannot be added or subtracted through ordinary arithmetic. Two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted (dBA), an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70-dBA sound is half as loud as an 80-dBA sound and twice as loud as a 60-dBA sound. When two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dB higher than one source under the same conditions (Federal Transit Administration 2018). For example, a 65-dB source of sound, such as a truck, when joined by another 65-dB source results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by 3 dB). Under the dB scale, three sources of equal loudness together would produce an increase of 5 dB.

Sound Propagation and Attenuation

Noise can be generated by a number of sources, including mobile sources such as automobiles, trucks and airplanes, and stationary sources such as construction sites, machinery, and industrial operations. Sound spreads (propagates) uniformly outward in a spherical pattern, and the sound level decreases (attenuates) at a rate of approximately six dB (dBA) for each doubling of distance from a stationary or

point source. Sound from a line source, such as a highway, propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of approximately three dBA for each doubling of distance from a line source, such as a roadway, depending on ground surface characteristics (Federal Highway Administration [FHWA] 2011). No excess attenuation is assumed for hard surfaces like a parking lot or a body of water. Soft surfaces, such as soft dirt or grass, can absorb sound, so an excess ground-attenuation value of 1.5 dBA per doubling of distance is normally assumed.

Noise levels may also be reduced by intervening structures; generally, a single row of detached buildings between the receptor and the noise source reduces the noise level by about 5 dBA (FHWA 2008), while a solid wall or berm generally reduces noise levels by 10 to 20 dBA (FHWA 2011). However, noise barriers or enclosures specifically designed to reduce site-specific construction noise can provide a sound reduction of 35 dBA or greater (Western Electro-Acoustic Laboratory, Inc. 2000). To achieve the most potent noise-reducing effect, a noise enclosure/barrier must physically fit in the available space, must completely break the “line of sight” between the noise source and the receptors, must be free of degrading holes or gaps, and must not be flanked by nearby reflective surfaces. Noise barriers must be sizable enough to cover the entire noise source and extend length-wise and vertically as far as feasibly possible to be most effective. The limiting factor for a noise barrier is not the component of noise transmitted through the material, but rather the amount of noise flanking around and over the barrier. In general, barriers contribute to decreasing noise levels only when the structure breaks the line of sight between the source and the receiver.

The manner in which older homes in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows. The exterior-to-interior reduction of newer residential units is generally 30 dBA or more.

Noise Descriptors

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Several rating scales have been developed to analyze the adverse effect of community noise on people. Because environmental noise fluctuates over time, these scales consider that the effect of noise on people is largely dependent on the total acoustical energy content of the noise, as well as the time of day when the noise occurs. The L_{eq} is a measure of ambient noise, while the L_{dn} and CNEL (Community Noise Equivalent Level) are measures of community noise. Each is applicable to this analysis and defined as follows:

- **Equivalent Noise Level (L_{eq})** is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
- **Day-Night Average (L_{dn})** is a 24-hour average L_{eq} with a 10-dBA “weighting” added to noise during the hours of 10:00 pm to 7:00 am to account for noise sensitivity in the nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.4 dBA L_{dn} .

- **Community Noise Equivalent Level (CNEL)** is a 24-hour average L_{eq} with a 5-dBA weighting during the hours of 7:00 pm to 10:00 pm and a 10-dBA weighting added to noise during the hours of 10:00 pm to 7:00 am to account for noise sensitivity in the evening and nighttime, respectively.

Human Response to Noise

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day or night or over a 24-hour period. Environmental noise levels are generally considered low when the CNEL is below 60 dBA, moderate in the 60- to 70-dBA range, and high above 70 dBA. Examples of low daytime levels are isolated, natural settings with noise levels as low as 20 dBA and quiet, suburban, residential streets with noise levels around 40 dBA. Noise levels above 45 dBA at night can disrupt sleep. Examples of moderate-level noise environments are urban residential or semi-commercial areas (typically 55 to 60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher levels associated with noisier urban residential or residential-commercial areas (60 to 75 dBA), or dense urban or industrial areas (65 to 80 dBA). Regarding increases in dBA noise levels, the following relationships should be noted in understanding this analysis:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived by humans.
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference.
- A change in level of at least 5 dBA is required before any noticeable change in community response would be expected.
- A 10-dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

Vibration Fundamentals

Ground vibration can be measured several ways to quantify the amplitude of vibration produced. This can be through peak particle velocity or root mean square velocity. These velocity measurements measure maximum particle at one point or the average of the squared amplitude of the signal, respectively. Vibration impacts on people can be described as the level of annoyance and can vary depending on an individual's sensitivity. Generally, low-level vibrations may cause window rattling but do not pose any threats to the integrity of buildings or structures.

Noise-Sensitive Land Uses

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as parks, historic sites, cemeteries, and recreation areas are considered sensitive to increases in exterior noise levels. Schools, churches, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses. The nearest sensitive noise receptors to the Project site are residences located approximately 170 feet south of the Project site across Covell Boulevard.

Existing Noise Environment

The City of Davis is impacted by various noise sources. It is subject to typical urban noise such as noise generated by traffic, heavy machinery, and day-to-day outdoor activities. Mobile sources of noise, especially cars and trucks, are the most common source of noise in the community. Other sources of noise are the various land uses (i.e., residential, commercial, institutional, and recreational and parks activities) throughout Davis that generate stationary source noise. The University of California Davis (UC Davis) Airport is located approximately three miles southwest of the Project site. The Project site is located outside of the boundaries of the UC Davis Airport land use plan and is thereby beyond the noise contours generated by airport operations. Furthermore, the Project site is located more than two miles from any other airport.

Regulatory Framework

City of Davis Municipal Code

The City of Davis Municipal Code Section 24.02.040 restricts the times of day during which construction, alteration, repair, and maintenance activities are permitted. The Municipal Code also requires that certain noise limitations are not exceeded for construction, alteration, repair, or maintenance activities to be permitted.

The City’s Noise Ordinance was established in order to control unnecessary, excessive and annoying noise while protecting the public health, safety and welfare.

4.13.2 Noise (XIII.) Environmental Checklist and Discussion

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Project Construction

Construction noise associated with the Proposed Project would be temporary and would vary depending on the nature of the activities being performed. Noise generated would primarily be associated with the operation of off-road equipment for onsite construction activities as well as construction vehicle traffic on area roadways. Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., grading, paving). Noise generated by construction equipment, including earthmovers, material handlers, and portable generators, can reach high levels. Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. Other primary sources of acoustical disturbance would be random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts). During construction, exterior noise levels could negatively affect sensitive receptors in the vicinity of the construction site.

Nearby noise-sensitive land uses consist of residents located approximately 170 feet from the Project site. As described in Section 24.02.040 of the City's Municipal Code, between the hours of 7:00 a.m. and 7:00 p.m. on Mondays through Fridays, and between the hours of 8:00 a.m. and 8:00 p.m. on Saturdays and Sundays, construction, alteration, repair or maintenance activities which are authorized by valid city permit or business license, or carried out by employees of contractors of the city are allowed if they meet at least *one* of the following noise limitations:

- (1) No individual piece of equipment shall produce a noise level exceeding 83 dBA at a distance of 25 feet. If the device is housed within a structure on the property, the measurement shall be made outside the structure at a distance as close to 20 feet from the equipment as possible.
- (2) The noise level at any point outside of the property plane of the project shall not exceed 86 dBA.
- (3) The provisions of subdivisions (1) and (2) of this subsection shall not be applicable to impact tools and equipment; provided that such impact tools and equipment shall have intake and exhaust mufflers recommended by manufacturers thereof and approved by the director of public works as best accomplishing maximum noise attenuation, and that pavement breakers and jackhammers shall also be equipped with acoustically attenuating shields or shrouds recommended by the manufacturers thereof and approved by the director of public works as best accomplishing maximum noise attenuation. In the absence of manufacturer's recommendations, the director of public works may prescribe such means of accomplishing maximum noise attenuation as he or she may determine to be in the public interest.

To estimate the worst-case construction noise levels that may occur at the nearest noise-sensitive receptors in the Project vicinity, the construction equipment noise levels were calculated using the FHWA's Roadway Noise Construction Model for the demolition, site preparation, grading, and paving. The anticipated short-term construction noise levels generated for the necessary equipment is presented in *Table 4.13-1*.

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Table 4.13-1. Construction Average (dBA) Noise Levels at 25 Feet from Construction Equipment

Equipment	Estimated Exterior Construction Noise Level @ 25' Distance	Construction Noise Standards (dBA Leq)	Exceeds Standard at 25'?
Demolition			
Dozer (1)	83.7	83	Yes
Concrete Saw (1)	88.6	83	Yes
Tractor (1)	86.0	83	Yes
Combined Demolition Equipment	91.3	86	Yes
Site Preparation			
Graders (1)	87.0	83	Yes
Tractor (1)	86.0	83	Yes
Combined Site Preparation Equipment	89.6	86	Yes
Grading			
Concrete Saw (1)	88.6	83	Yes
Dozer (1)	83.7	83	Yes
Tractor (2)	86.0 (each)	83	Yes
Combined Grading Equipment	92.5	86	Yes
Paving			
Pavers (1)	80.2	83	No
Concrete Mixer (1)	80.8	83	No
Rollers (1)	79.0	83	No
Tractor (1)	86.0	83	Yes
Combined Paving Equipment	88.5	86	Yes

Source: Construction noise levels were calculated by ECORP Consulting using the FHWA Roadway Noise Construction Model (FHWA 2008). Refer to Attachment A for Model Data Outputs.

Notes: Construction equipment used during construction derived from CalEEMod 2016.3.2. CalEEMod is designed to calculate air pollutant emissions from construction activity and contains default construction equipment and usage parameters for typical construction projects based on several construction surveys conducted in order to identify such parameters.

L_{eq} = The equivalent energy noise level, is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.

As shown, there are several pieces of individual equipment types that would exceed the individual equipment threshold of 83 dBA at 25 feet. Additionally, the combined noise level associated with the various pieces of equipment projected to operate simultaneously would potentially surpass the combined equipment threshold of 86 dBA during each construction phase. However, the nearest sensitive receptor to the construction site is located approximately 170 feet away across Covell Boulevard. The anticipated short-term construction noise levels generated for the necessary equipment at the nearest sensitive receptor is presented in *Table 4.13-2*.

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Table 4.13-2. Construction Average (dBA) Noise Levels at Nearest Receptor

Equipment	Estimated Exterior Construction Noise Level @ Nearest Residence (170' Distance)	Construction Noise Standards (dBA Leq)	Exceeds Standard at Nearest Residence?
Demolition			
Dozer (1)	67.1	83	No
Concrete Saw (1)	72.0	83	No
Tractor (1)	69.4	83	No
Combined Demolition Equipment	74.7	86	No
Site Preparation			
Graders (1)	70.4	83	No
Tractor (1)	69.4	83	No
Combined Site Preparation Equipment	72.9	86	No
Grading			
Concrete Saw (1)	72.0	83	No
Dozer (1)	67.1	83	No
Tractor (2)	69.4 (each)	83	No
Combined Grading Equipment	75.8	86	No
Paving			
Pavers (1)	63.6	83	No
Concrete Mixer (1)	64.2	83	No
Rollers (1)	62.4	83	No
Tractor (1)	69.4	83	No
Combined Paving Equipment	71.9	86	No

Source: Construction noise levels were calculated by ECORP Consulting using the FHWA Roadway Noise Construction Model (FHWA 2008). Refer to Attachment A for Model Data Outputs.

Notes: Construction equipment used during construction derived from CalEEMod 2016.3.2. CalEEMod is designed to calculate air pollutant emissions from construction activity and contains default construction equipment and usage parameters for typical construction projects based on several construction surveys conducted in order to identify such parameters

L_{eq} = The equivalent energy noise level, is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.

As shown, the individual equipment would not exceed the individual equipment threshold of 83 dBA and the combined noise level associated with the various pieces of equipment would not exceed the combined equipment threshold of 86 dBA during each construction phase at the nearest sensitive receptor.

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In conclusion, although the Project would exceed the individual equipment threshold and combined noise level threshold at 25 feet, the only land uses within 25 feet of the Project include agricultural land and the Covell Boulevard traffic facility. Thus, the Project would not negatively impact any noise sensitive land uses, including the residences located across Covell Boulevard, approximately 170 feet from construction activity at the nearest. As such, noise mitigation is not recommended so long as construction activities are limited to hours of 7:00 a.m. to 7:00 p.m. Monday through Friday, and between the hours of 8:00 a.m. and 8:00 p.m. Saturday and Sunday as specified in the City’s Municipal Code.

It is noted that Yolo County is located directly north of the Project site; however, there are no noise sensitive uses in proximity to the Project site in that direction. As such, an analysis was not performed pertaining to those noise standards.

Project Operations

The Project is proposing the construction of a shared-use pedestrian and bicycle path. It would not be a substantial source of mobile noise sources or a source of stationary noise. Any intermittent noise generated by pedestrian and cyclists would be less than the existing automobile traffic currently traversing Covell Boulevard. The Project would have a less than significant impact due to noise generation.

Would the Project result in	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Project Construction

Construction operations have the potential to result in varying degrees of temporary ground vibration, depending on the specific construction equipment used and operations involved. The ground vibration levels associated with various types of construction equipment are summarized in *Table 4.13-3*. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. The effects of ground vibration may be imperceptible at the lowest levels, low rumbling sounds and detectable vibrations at moderate levels, and slight damage to nearby structures at the highest levels.

Table 4.13-3. Typical Construction Equipment Vibration Levels

Equipment Type	Peak Particle Velocity at 25 Feet (inches per second)
Large Bulldozer	0.089
Caisson Drilling	0.089
Loaded Trucks	0.076
Jackhammer	0.035
Small Bulldozer/Tractor	0.003

Source: FTA 2018; Caltrans 2013

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The City does not regulate vibration associated with construction. However, a discussion of construction vibration is included for full disclosure purposes. For comparison purposes, the Caltrans’s (2013) recommended standard of 0.2 inches per second peak particle velocity with respect to the prevention of structural damage for older residential buildings is used as a threshold. This is also the level at which vibrations may begin to annoy people in buildings.

It is acknowledged that construction activities would occur throughout the Project site and would not be concentrated at the point closest to the nearest structure. The nearest structures of concern to the construction site are commercial buildings located approximately 100 feet away across Covell Boulevard. Based on the vibration levels presented in *Table 4.13-3*, ground vibration generated by heavy-duty equipment would not be anticipated to exceed approximately 0.089 inches per second peak particle velocity at 25 feet. Thus, the structures located at 100 feet distance would not be negatively affected.

Project Operations

Project operations would not include the use of any stationary equipment that would result in excessive groundborne vibration levels.

The Project will have a less than significant impact in this area.

<p>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?</p>	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input type="checkbox"/>	Less than Significant Impact <input type="checkbox"/>	No Impact <input checked="" type="checkbox"/>
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The UC Davis Airport is approximately three miles from the Project site. Per section VII of the City’s General Plan, the airport is used almost extensively for flight training and for infrequent, short duration operations. The Project site is not located in an area identified as exposed to substantial noise levels. Therefore, the Project would not expose people working on or using the path to excessive noise levels. Thus, no impact would occur with implementation of the Proposed Project (ECORP 2020c).

4.13.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.14 Population and Housing

4.14.1 Environmental Setting

The Project site is located in a developed area of the City of Davis. According to the California Department of Finance (DOF), which provides estimated population and housing unit demographics by year throughout the State, the City’s population increased 6.3 percent between 2010 and 2019, from 65,622 to 69,761. DOF estimates that there were 26,932 total housing units in the City, and a 4.1 percent vacancy

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rate as of January 1, 2019. The average household size was estimated to be 2.64 persons per household during the same time period (DOF 2019).

4.14.2 Population and Housing (XIV) Environmental Checklist and Discussion

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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Project does not include the construction of any new homes or businesses. The Project will expand road infrastructure to allow safer travel for pedestrians and cyclists along the north side of East Covell Boulevard. The Project will not induce population growth in any way, but will contribute positively to the City’s transportation network for existing and future residents. Therefore, direct or indirect increases in population growth would not occur as a result of the Proposed Project.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

No persons or residences would be displaced or removed as a result of the Proposed Project, and the Project would have no impact in this area.

4.14.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.15 Public Services

4.15.1 Environmental Setting

Public services include fire protection, police protection, parks and recreation, and schools. Generally, impacts in these areas are related to an increase in population from a residential development. Levels of service are generally based on a service-to-population ratio, except for fire protection, which is usually based on a response time.

Police Services

Police protection services at the project site are provided by the City of Davis Police Department. The police department is comprised of several divisions: including patrol, dispatch, records, investigation, and traffic. The police department is located at 2600 5th St, Davis, CA 95618, approximately 1.7 road miles southeast of the Project site. Additionally, the Shasta County Sheriff Department is located approximately eight miles north of the Project site. This agency may provide additional support to the Police Department in case of an emergency.

Fire Services

Fire protection services for the Project site are provided by the City of Davis Fire Department. The fire station is located at 530 5th Street, Davis, CA 95616, approximately 1.4 road miles west of the Project site.

Schools

The area is served by the Davis Joint Unified School District, which includes twenty one elementary, junior high, high schools, and adult schools. The nearest schools to the site are Oliver Wendell Holmes Junior High, 0.23 miles south of the Project site, and Birch Lane Elementary School, 0.20 miles southeast of the Project site. The Project, a bike and pedestrian trail, will not increase school capacity.

Parks

Recreational opportunities for both youth and adults are varied and plentiful in the Project Area. The Sacramento River, American River, Feather River, and Consumes River provide opportunities for water recreation, including boating, swimming, fishing, and other outdoor activities. In addition, the City of Davis owns and maintains 485 acres of parks, managed by the City's Parks Division. The 37 neighborhood and community parks and many acres of greenbelts offer play areas, picnic areas, tennis courts, and other recreational opportunities, such as disk golf and basketball (Davis 2020c).

Other Public Facilities

Other public facilities found in the Project vicinity include several libraries and public lands owned and administered by the Bureau of Land Management and the U.S. Forest Service.

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4.15.2 Public Services (XV) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Fire Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other Public Facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Fire Services

The Project site is located approximately 1.4 miles from the City of Davis Fire Department. The Proposed Project would not result in an increase in population and thereby not require additional fire facilities to serve this population. The Proposed Project would not require any additional Fire District facilities, equipment, and/or staff and is not anticipated to create an additional burden on existing fire facilities. The Project would be subject to the fire protection regulations defined in PRC 4290. PRC 4290 provides requirements for road and street networks, driveways designs, road signage, water requirement standards and fuel modification/removal areas.

Construction would minimally interfere with use of the roadway for fire emergency response. Construction will require shoulder closures, and temporary lane closures may be required depending on the final pathway design chosen. However, construction is anticipated to last only approximately sixty working days, which equates to an approximately three-month total duration. If lane closures are required, emergency responders would be made aware of the Project, including construction location and effects on the adjacent roadway. Alternate routes would be available for use by emergency responders and for use in the event of an emergency evacuation. According to the City of Davis General Plan, the City's Multi-Hazard Functional Planning Guide, which plans for emergency management and evacuation in the event of disasters, all major roads are available for evacuation, depending on the location and type of emergency that arises. Major roads identified for evacuation in the Guide are Russell Boulevard, Highway 113, Interstate 80, Richards Boulevard, Road 102/Pole Line Road, Mace Boulevard southbound, Road 32A,

Covell Boulevard/Road 31, "F" Street and North Sycamore Frontage Road (Davis 2007). Therefore, the Project would have a less than significant impact in this area.

Police Services

The Proposed Project is located approximately 1.7 miles City of Davis Police Department. The Proposed Project would not result in a significant increase in demand for police protection resulting in new or expanded police facilities. Police facilities and the need for expanded facilities are based on the staffing levels these facilities must accommodate. Police staffing levels are generally based on the population/police officer ratio, and an increase in population is usually the result of an increase in housing or employment. Because the Proposed Project would not increase the population in the area, the Project would not result in the need for increase in police protection or police facilities. As explained under the fire services heading above, Project construction will not significantly impact emergency response. Therefore, the Proposed Project would have a less than significant impact in this area.

Schools

The purpose of the Proposed Project is to add 0.36 mile of pedestrian and bicycle pathway to the City of Davis transportation network. This development will not result in an increase of student population. Further, the Proposed Project does not result in an increase in housing or population in the area, and as such would not require additional educational facilities. Therefore, the Proposed Project would have no impact in this area.

Parks

As stated previously, the need for additional parkland is primarily based on an increase in population to an area. Given that the Proposed Project would not increase the City's population, the Project would not burden any parks in the surrounding area beyond capacity by generating additional recreational users. Therefore, the Proposed Project would not require the construction or expansion of park and recreational facilities and would also not result in an increase in demand for parks and recreation facilities in the surrounding area. There would be no impact to parks as a result of construction of the Proposed Project.

Other Public Facilities

The Proposed Project does not result in an increase in housing or population in the City, which would result in an increase in library or other public facilities use. Therefore, the Project would have a less than significant impacts on other public facilities.

4.15.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.16 Recreation

4.16.1 Environmental Setting

Recreational opportunities for both youth and adults are varied and plentiful in the Project Area. As stated previously, the Sacramento River, American River, Feather River, and Consumes River provide

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opportunities for water recreation, including boating, swimming, fishing, and other outdoor activities. In addition, the City of Davis owns and maintains 485 acres of parks, managed by the City’s Parks Division. The 37 neighborhood and community parks and many acres of greenbelts off play areas, picnic areas, tennis courts, and other recreational opportunities, such as disk golf and basketball (Davis 2020c). Hiking and backpacking opportunities are also plentiful in the general region.

4.16.2 Recreation (XVI) Materials Checklist

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The need for additional parkland is primarily based on an increase in population to an area. Given that the Proposed Project would not increase population, the Project would not burden any parks in the surrounding area beyond capacity by generating additional recreational users. Therefore, the Proposed Project would not increase the use of park and recreational facilities resulting in substantial physical deterioration of the facility. There would be no impact to recreational facilities as a result of construction of the Proposed Project.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The Proposed Project includes the construction of a pedestrian and bicycle pathway. The pathway falls under the recreational facilities category. However, the proposed recreational facilities will not have an adverse physical effect on the environment. For one, the pathway would increase recreational opportunities for existing and future residents, but will not result in an increase in population as previously discussed in Section 4.14. In addition, BMPs will be utilized during the grading and construction process to minimize runoff into the nearby stream and drainage systems. As explained under each environmental issue area in this IS/MND, the Project will generally be beneficial by improving alternatives to driving in a personal vehicle, and the Project will comply with all applicable laws and regulations. All potentially significant environmental impacts, including to cultural resources, tribal cultural resources, biological resources, and geology and soils will be mitigated to a less than significant level through the implementation of mitigation measures outlined in each corresponding section. As such, the Proposed Project will have a less than significant impact due to construction and expansion of recreational facilities.

4.16.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.17 Transportation

4.17.1 Environmental Setting

Regional access to the Project site is provided by I-80, which links the site to Sacramento to the east and to Vacaville to the southwest. Internally, the City maintains a street network of over 130 miles of arterial, collector, and local streets. Arterial, or primary, streets make up 21 percent of the road network. The City of Davis General Plan contains the following goals and policies related to transportation which directly relate to the Proposed Project- a bicycle and pedestrian pathway:

GOAL UD 1. Encourage community design throughout the City that helps to build community, encourage human interaction and support non-automobile transportation.

Policy UD 1.1 Promote urban/community design which is human-scaled, comfortable, safe and conducive to pedestrian use.

Standards

- a) New development shall incorporate a balanced circulation network that provides multi-route access for vehicles, bicycles and pedestrians to neighborhood centers, greenbelts, other parts of the neighborhood and adjacent districts and circulation routes.
- b) Pedestrian-oriented design is encouraged in the allocation of space, building size and placement, site enhancement, open space design, connection to pedestrian/bikeways and site amenities.

Actions

- a) Develop flexible street design standards that provide adequate bicycle and pedestrian safety, emergency vehicle access, and strong aesthetic qualities in rights-of-way that are as narrow as possible.

Goal #1: Davis will provide a comprehensive, integrated, connected transportation system that provides choices between different modes of transportation.

Performance Objective #1.1: Achieve at least the following mode share distribution for all trips by 2035:

- 10% of trips by walking
- 10% of trips by public transportation
- 30% of trips by bicycle

Performance Objective #1.2: Increase use of walking, bicycling, and public transportation to and from the following places:

- Work
- Schools (Elementary, Junior High, and Senior High)
- UC Davis

- Downtown

Goal #2: The Davis transportation system will evolve to improve air quality, reduce carbon emissions, and improve public health by encouraging usage of clean, energy-efficient, active (i.e. human powered), and economically sustainable means of travel.

- **Performance Objective #2.1:** Reduce carbon emissions from the transportation sector 61% by 2035.
- **Performance Objective #2.2:** Reduce vehicle miles traveled (VMT) 39% by 2035.
- **Performance Objective #2.3:** Annually increase funding for maintenance and operation needs of the transportation system, until fully funded.

Goal #3: Davis will provide a safe and convenient Complete Street network that meets the needs of all users, including children, families, older adults, and people with disabilities.

- **Performance Objective #3.1:** Improve quality of service for all users of the transportation system.
- **Performance Objective #3.2:** Reduce the total number of collisions between motor vehicles and bicyclists or pedestrians by 50% by 2035.

Policy TRANS 4.2 (Goals: 1,2,3,4). Develop a continuous trails and bikeway network for both recreation and transportation that serves the Core, neighborhoods, neighborhood shopping centers, employment centers, schools and other institutions; minimize conflicts between pedestrians, bicyclists, equestrians, and automobiles; and minimize impacts on wildlife. Greenbelts and separated bike paths on arterials should serve as the backbone of much of this network.

Actions

- a) Enhance the safety, accessibility and coverage of the existing bicycle network, especially in the vicinity of UC Davis, schools and recreation areas.

Policy TRANS 4.6 (Goals: 1,2,3,4). Provide safe and convenient pedestrian access to all areas of the City. (Davis 2007).

Transit Service

Public transportation in the City of Davis and Yolo County is provided by several entities. Unitrans provides bus service within the City, Yolobus connects Davis to other cities in Yolo County, and Davis Community Transit (DCT) provides door-to-door demand response service to the disabled within the City.

Unitrans services the area with 15 to 30 minute headways during the primary UC Davis sessions and has one hour headways during summer and school breaks. In fiscal year (FY) 2010-2011, Unitrans provided 3.5 million one-way passenger trips, an increase of 58,000 one-way trips over the previous fiscal year. Yolobus provides transit service within Yolo County as well as to Solano and Sacramento Counties. Headways are typically 30 minutes to an hour with commuter express buses to Sacramento and UC Davis offering service more frequently during peak commute hours. DCT requires advance reservation and provides para-transit services only. DCT served over 16,600 riders in FY 2011-2012.

Pedestrian and Bicycle Facilities

The City of Davis makes providing an extensive, quality bicycle network a top priority. The City received platinum and gold certification for bicycle friendliness from the League of American Bicyclists. In 2010, the City had 25 grade-separated bicycle crossings of major streets. Major bicycle routes consisted of approximately 55 miles of bike lanes, which are along streets, and 60 miles of shared bike and pedestrian pathways, which are either separated from streets or within neighborhood greenbelts. The 12-mile Davis greenbelt system consists of interconnected off-street bicycle paths for recreational and functional cycling (Davis 2007). The Beyond Platinum Bicycle Action Plan (2014) contains strategies to further improve the bicycle network. Bike trips accounted for roughly 20-25% of all trips in Davis in 2014 and the City aimed to achieve a 30% bicycle mode share by 2020. The City aims to receive diamond certification for bicycle friendliness from the League of American Bicyclists (Davis 2014)

The City supports both recreational and destination-oriented pedestrian pathways. These pathways are both solely for pedestrian use and combined with bicycle facilities. Sidewalks currently exist on almost every street, midblock pedestrian passageways, and pedestrian plazas in the core area, and as off-street paths shared with bicyclists, neighborhood greenbelt paths, bridges, and other path systems (Davis 2007).

4.17.2 Transportation (XVII) Environmental Checklist and Discussion

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, roadways, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The City of Davis General Plan Transportation Element (2013) and the Beyond Platinum Bicycle Action Plan (2014) provide guidance in the City and region for existing and future transportation facilities. The Project includes the construction of a pedestrian and bicycle pathway that is 0.36 miles in length. The Project would help the City achieve all of its goals related to decreasing reliance on vehicles, increasing connectivity in the City, improving the connectivity of the bicycle network, improving safety, and improving the overall quality of the network. The Project would not increase vehicle traffic or vehicle miles traveled. As such, the Proposed Project would not conflict with any program, plan, ordinance, or policy addressing the circulation system in any of these documents. The Project would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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CEQA Guidelines Section 15064.3, subdivision (b) provides criteria for analyzing transportation impacts based on a vehicle miles traveled (VMT) methodology instead of the now superseded (as of January 1, 2019) LOS methodology. Pertinent to the Proposed Project are those criteria identified in § 15064.3(b)(1) Land Use Projects. According to this section:

“Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor⁷ should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.”

Because the Project is a pedestrian and bicycle pathway, the Project will help achieve the State’s goal of reducing VMT. The Project will increase the safety and connectivity of bicycle and pedestrian pathways in the City. In addition, the Project will improve connectivity between nearby residential areas and between residential and commercial areas (i.e. the nearby CVS and Nugget Market). The Project will not negatively impact the existing vehicle roadway network and the Project will not increase use of personal vehicles. Thus, the Project will have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Project would construct a pedestrian and bicycle pathway along 0.36 miles of East Covell Road. The pathway will not include hazardous geometric design features or incompatible uses. However, there is an existing little used driveway that crosses the proposed Project site. It is expected that this driveway would not substantially increase the hazards to future users of the pathway. However, this driveway will have to be considered during final project design and incorporation of safety features may be required. Regardless of the final design alternative chosen for the Project, the design of the pathway will improve safety by providing designated bicycle and pedestrian pathways separate from the vehicle lanes. Therefore, the Project will have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

⁷ “High-quality transit corridor” means an existing corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours. For the purposes of this Appendix, an “existing stop along a high-quality transit corridor” may include a planned and funded stop that is included in an adopted regional transportation improvement program.

The Project design would not interfere with use of the adjacent roadways (East Covell Boulevard located parallel on the south side, Pole Line Road located to the east, and J Street located to the west) during operation. During construction, the Project has potential to have a minor impact on use of the roadways temporarily. However, if use of the roadway is to be interrupted, City police and fire departments would be made aware of the interruption. Therefore, the Project would have a less than significant impact regarding emergency access.

4.17.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.18 Tribal Cultural Resources

4.18.1 Environmental Setting

The following information was provided by the ECORP Consulting (2020b) as a part of the Cultural Resources Inventory and Evaluation Report for the Proposed Project.

Ethnographically, the Project Area is in the south-central portion of the territory occupied by the Penutian-speaking Hill Patwin. The Patwin territory included both the River and Hill Patwin and extended from the southern portion of the Sacramento River Valley to the west of the river, from the town of Princeton south to San Pablo and Suisun bays. As a language, Patwin (meaning “people”) for part of the Wintu linguistic family which has three main groups: Southern or Patwin; Central, of Glenn and Tehama counties; and the Northern, of the upper Sacramento, lower Pit, and the upper Trinity drainages. The Hill Patwin territory includes the lower hills of the eastern Coast Range mountain slope (Long, Indian, Bear, Capay, Cortina, and Napa Valley). Between there and the foothills, the grassy plains were largely unsettled, used mainly as a foraging ground by both valley and hill groups. A population size of 12,500 has been estimated for the Wintu, Nomlaki, and Patwin groups. These numbers reflect groups prior to the 1833 malaria epidemic.

Individual and extended families “owned” hunting and gathering grounds, and trespassing was discouraged. Residence and marriage were generally matrilineal, but unrestricted. Politically, the Patwin were divided into “tribelets,” made up of a primary village and a series of outlying hamlets, presided over by a more-or-less hereditary chief. Villages typically included family dwellings, acorn granaries, a sweathouse, and a dance house, owned by the chief. The chief had unrestricted power and presided over economic and ceremonial decisions.

Subsistence activities centered around hunting and fishing of deer, tule elk, antelope, bear, ducks, geese, quail, turtles, fish, and other small animals. Hunting of deer often took the form of communal drives, with the actual killing of the deer performed by individuals or groups. Decoys were used for attracting such game as deer and ducks. Nets and holding pens were used for fishing, which was also an important part of normal subsistence activities. Types of fish included sturgeon, salmon, perch, chub, sucker, hardhead, pike, trout, steelhead and mussels. Although acorns were the staple of the Patwin diet, they also harvested sunflower, alfalfa, clover, bunchgrass, wild oak, and yellow flower, which was parched or dried, then pounded into a meal. Buckeye, pine nuts, juniper berries, manzanita berries, blackberries, wild grapes,

brodiaea bulbs, and tule roots were also collected. Each village had its own locations for these food sources, and the village chief was in charge of assigning particular families to each collecting area. Game was prepared by roasting, baking, or drying of the meat. Tobacco was collected along the river and inhaled, but not cultivated.

Patwin houses were built in the form of a dome, using tree branches as for the framing, then covered with thatch and earth. House floors were typically dug out and the walls were built up as a mound, with the entrance to the building made through the roof. The closest village location was *Moso*, located on the north bank of Cache Creek around the town of Capay.

One of the most distinctive aspects of the Patwin culture was the cult system, found throughout northern central California. The main feature of the cult was the occurrence of one or more secret societies whose membership was by strict initiation, each with its own series of dances and rituals. Patwin culture is most distinctive in that it possessed three secret societies: the ghost, *Hesi*, and *Kuksu*. These involved elaborate ceremonial activities consisting of singing and dancing. Membership included mostly males, beginning around the ages of eight to 16, but on limited occasions, included high status women. Everyday Patwin life centered on the rituals performed within the secret societies. Details involving the ceremonies varied, but most had sacred dances requiring careful preparation, costume and music. These dances could last several days.

The earliest historical accounts of the Project Area begin with Spanish mission registers of baptisms, marriages, and deaths of Indians. By 1800, Native Americans were taken from the Patwin settlement of *Agustos* in the south-central area, and from other villages, by emissaries of Mission Dolores. In addition, missions San Jose and Sonoma actively proselytized the southern Patwin. Between the 1830s and 1840s, both Mexicans and Americans rapidly overtook the Patwin territory under the authority of the Mexican government.

The Spanish arrived on the central California coast in 1769, and by 1776 had been explored by José Canizares. In 1808, Gabriel Moraga crossed into the territory, and in 1813 a major battle was fought between the Miwok and the Spaniards near the mouth of the Cosumnes River. In 1833, an epidemic, most likely to be malaria, raged through the Sacramento Valley, killing an estimated 75 percent of the native population. The discovery of gold in 1848 at Sutter's Mill, near the Nisenan village of *Colluma* (now Coloma) on the South Fork of the American River, drew thousands of miners into the area, and led to widespread killing and the virtual destruction of traditional Native American cultures.

4.18.2 Tribal Consultation

As a part of the Cultural Survey, ECORP Consulting, Inc. contacted the California Native American Heritage Commission (NAHC) on February 13, 2020 to request a search of the Sacred Lands File for the APE. This search was requested to determine whether there are sensitive or sacred Native American resources in the vicinity of the Project Area that could be affected by the Proposed Project. A search of the Sacred Lands File by the NAHC failed to indicate the presence of Native American cultural resources in the Project Area.

ECORP Consulting, Inc. mailed a letter to the Yolo County Historical Society on February 13, 2020, to solicit comments or obtain historical information that the repository might have regarding events, people,

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or resources of historical significance in the area No responses to the letters sent to the Yolo County Society were received as of the preparation of this document (ECORP 2020b).

AB 52 requires that prior to the release of a CEQA document for a project, an agency begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the Proposed Project if: (1) the California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe and (2) the California Native American tribe responds, in writing, within 30 days of receipt of the formal notification, and requests the consultation. The City received a letter from the Yocha Dehe Wintun Nation about the Project. The Yocha Dehe determined that while the Project site is not within an area of known cultural resources, however it is within the aboriginal territory of the tribe.

4.18.3 Tribal Cultural Resources (XVIII) Environmental Checklist and Discussion

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 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, and that is:				
i) 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	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

No known cultural resources or significant archaeological resources have been identified within the Project Area. The site has not been identified as either a site, feature, place, cultural landscape, sacred place, or object with cultural value to a California Native American tribe. The Yocha Dehe determined is

within the aboriginal territory of the tribe. They recommended that cultural sensitivity training mitigation be included in the IS. Additionally, unanticipated, and accidental discovery of California Native American tribal cultural resources are possible during project implementation, especially during excavation, and have the potential to impact unique cultural resources. As such, mitigation measures **CUL-1** and **TRI-1** have been included to reduce the potential for impacts to tribal cultural resources to a less than significant level.

4.18.4 Mitigation Measures

TRI-1: Tribal Cultural Resources Sensitivity Training

Prior to any construction or ground disturbing activities, the Project proponent shall provide tribal cultural resources sensitivity training to all construction personnel. As the Project site is located in the aboriginal territory of the Yocha Dehe Wintun Nation, the Project proponent shall request that a member of the Yocha Dehe Wintun Nation provide this training. To schedule cultural sensitivity training, prior to the start of the project, the Project proponent shall contact:

CRD Administrative Staff
Yocha Dehe Wintun Nation
Office: (530) 796-3400
Email: THPO@yochadehe-nsn.gov

Refer to identification number YD – 09022021-01 in correspondence concerning this project.

Timing/Implementation: *Prior to any construction or ground disturbing activities*
Monitoring/Enforcement: *The City of Davis and Project construction lead*

4.19 Utilities and Service Systems

4.19.1 Environmental Setting

The City of Davis Public Works Department is responsible for water, wastewater, and storm drainage for the City. The City contracts with Recology Davis to provide solid waste collection services in the City.

Water Service

The Project site is served by the City of Davis's municipal water supply. The City's water supply is sourced from both surface water and groundwater. Groundwater is supplied by the City's wells, include five deep aquifer wells and four intermediate wells. The deep aquifer wells are used for almost all of the groundwater supply needs in the City and the intermediate wells are for water quality testing (Davis 2019). The wells and associated storage tanks are all located within the City of Davis, which is contained in the Sacramento Valley- Yolo (Yolo) Subbasin, (basin number 5-021.67) of the Sacramento Valley Hydrologic Region (DWR 2015).

The surface water is sourced from the Sacrament River and comprises 80 percent of the City's water supply on average. The surface water is treated at the Woodland-Davis Regional Water Treatment Facility. The facility is capable of treating water for both Davis and Woodland, which totals to 30 million gallons

per day. Davis's allotment is 10.2 million gallons (Davis 2019). The treatment facility meets the water quality regulatory standards and utilizes aquifer storage and recovery (ASR) integration into the project as an innovative water storage solution (West Yost, N.D).

As such, during an average year, the City will use 10.2 million gallons of surface water and 2.55 million gallons of groundwater per day for a total of 12.75 million gallons. 12.75 million gallons per day equates to 4,653,750,000 gallons, or approximately 4.65 billion gallons, per year. The Water Resources Association of Yolo County formed the Yolo Subbasin Groundwater Sustainability Agency (GSA) to manage the Yolo Subbasin in June 2017. The GSA is currently forming a Groundwater Sustainability Plan (GSP) to sustainably manage groundwater use in accordance with the requirements of the Sustainable Groundwater Sustainability Act (SGMA). The GSP has a completion deadline of January 31, 2022.

The DWR Groundwater Information Center Interactive Map Application (GICIMA) provides groundwater levels through the state. Among other things, this interactive on-line tool can illustrate the change in groundwater depth of a certain time period for a particular location, such as the City of Redding. According to the GICIMA information, the distance from groundwater to ground surface in the Project Area increased from 38.5 to 52.6 groundwater depth below ground surface (GDBGS) between October 2017 and October 2018 (DWR 2018). However, the depth to groundwater varies by location and rainfall.

Wastewater

All sewage is collected and processed by the City's Wastewater Treatment Plant, also known as the Water Pollution Control Plant. The facility is permitted to treat up to 7.5 million gallons per day (mgd) of wastewater, but has a capacity of approximately 6 mgd during dry weather flow. The plant has two discharge points: Willow Slough Bypass and the Conaway Ranch Toe Drain. The wastewater is treated at the plant using a multi-step process.

Preliminary treatment consists of screening and aerated grit removal to remove large debris from the water. Primary treatment allows sedimentation to occur naturally to remove the heavier sediment from the water. Secondary treatment utilized "activated sludge", or bacteria, to consume the organic waste in the water. Tertiary treatment is the filtering of water to remove remaining particles, and the final stage is disinfection of the water with a chlorine solution. Following treatment, the wastewater is currently discharged into local wetlands. Alternative uses for the treated water may be developed in the future (Davis 2020d).

Storm Drainage

The City of Davis stormwater drainage system consists primarily of on-street storm drain inlets, underground stormwater pipes, stormwater detention ponds, drainage channels, and stormwater lift stations. These facilities convey water to detention ponds or wetlands. The detention ponds, wetlands, and drainage channels allow some of the stormwater to infiltrate into the soil naturally. Some of the stormwater flows to the Sacramento river and eventually to the San Francisco Bay.

Stormwater is not treated prior to release into waterways. As such, the City offers educational handouts and workshops related to reducing water pollution (Davis 2020e).

Solid Waste

The City contracts with Recology Davis to provide solid waste collection services in the City. The waste is brought to the Yolo County Central Landfill where it is processed. The solid waste unit of the facility has a maximum permitted throughput of 1,800 tons per day and a remaining capacity of 35,171,142 cubic yards. The solid waste unit of the landfill still has a remaining capacity of approximately 71.7 percent, and has an anticipated cease operation date of January 1, 2081 (CalRecycle 2019b). Davis generated 28,323 tons of solid waste in 2018 (CalRecycle 2019a).

Electricity/Natural Gas Services

Refer to *Section 4.6.1.2 in Section 4.6. Energy*, above.

4.19.2 Utilities and Service Systems (XIX) Environmental Checklist and Discussion

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, or wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Water

Development of the Project would increase the demand for water in the City due to irrigation required for landscaping. The Proposed Project’s annual water demand for landscape irrigation would be required to comply with the Performance Compliance Approach of the Model Water Efficient Landscape Ordinance (MWELO). The City has a daily water supply of 12.75 million gallons per day, which equates to approximately 4.65 billion gallons per year. Compliance with MWELO would minimize use of water by the Project and ensure the most efficient use of water for landscape irrigation. Further, the Project is located in a developed area, and as such City water connections are readily available. The Project would not require the construction of new or expanded water facilities. Therefore, the Proposed Project would have a less than significant impact to the City’s water treatment or conveyance facilities.

Wastewater

The City’s Wastewater Treatment Plant is permitted to treat up to 7.5 million gallons per day (mgd) of wastewater, but has a capacity of approximately six mgd during dry weather flow. The Proposed Project is a bike and pedestrian pathway, and as such no wastewater would be produced from the Project. Thus, the Proposed Project would not result in the need for new or expanded facilities. This impact would be considered less than significant.

Storm Drainage

The nearest existing stormwater drainage facilities are located along East Covell Boulevard, directly to the south of the Project site. The Project entails the addition of an asphalt area along the existing roadway with a 3 to 6-foot-wide landscape area to travel the entire length of the 0.36-mile strip of roadway to be incorporated into the Project design. As such, the Project will increase the amount of impervious surface area in the amount of up to 36,680 square feet, and as such will increase stormwater runoff. The landscaping area, however, will allow infiltration of water naturally.

The Proposed Project includes an increase in impervious surface area for the which the Project will be required to include the conveyance of water to curbs, gutters, and drainages to meet stormwater and runoff control requirements promulgated by the City, National Pollutant Discharge Elimination System (NPDES) Stormwater Program of the EPA, and the Central Valley Regional Water Quality Control Board (RWQCB). As such, the Proposed Project would not result in the need for new or expanded stormwater facilities beyond typical drainages as required by law. Thus, this impact would be considered less than significant.

Electric Power

Valley Clean Energy (VCE) is the locally governed electricity provider for the City of Davis. VCE aims to purchase a higher proportion of electricity from renewable resources than is typical so as to reduce greenhouse gas (GHG) emissions. If customers so choose, they may opt-out of VCE electricity and instead be supplied electricity by Pacific Gas and Electric (PG&E).

The electricity provider's ability to provide its services concurrently for each project is evaluated during the development review process. The utility company is bound by contract to update its systems to meet any additional demand. During operation, the bike and pedestrian pathway will require no electricity. As such, no new electric facilities will be required to provide electricity to the Project. Therefore, the Project would have a less than significant impact in this area.

Natural Gas

Natural gas is provided by PG&E. PG&E provides natural gas and electricity to most of the northern 2/3 of California, from Bakersfield and Barstow to near the Oregon, Nevada and Arizona State Lines. It provides 5.2 million people with electricity and/or natural gas across 70,000 square miles.

The Project would not require any natural gas for operation, so no new PG&E natural gas facilities would be required to be constructed to serve the site. As such, the Project would have a less than significant impact to natural gas facilities.

Telecommunications

Existing phone lines are located adjacent to the Project site. Telecommunication will be through existing company and personal cell phones. No new telecommunication facilities will be required to serve the Project.

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Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Refer to Item a) above. The Project will have a less than significant impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Refer to Item a) above. The Project will have a less than significant impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The Project would not generate solid waste during operation, as the Project is a pedestrian and bike pathway. However, the Project construction phase will result in the generation of some solid waste. The Project construction phase is anticipated to last 60 working days beginning in summer 2020. Between six and ten workers are anticipated to be working at the Project construction site daily. According to CalRecycle (2019c), the estimated solid waste generation rates for employees is 15.4 pounds per employee per day. As such, the maximum estimated solid waste generated during the period (calculated using ten employees per day) would amount to 4.62 tons per year.⁸

The solid waste is processed at the Yolo County Central Landfill, which has a remaining capacity of 35,171,142 cubic yards (approximately 71.7 percent). The maximum throughput for the landfill is 1,800 tons per day (CalRecycle 2019b). As such, the construction phase during summer 2020 will represent

⁸ 154 lbs/day X 60 days / 2,000 lbs/ ton = 4.62 tons per year

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0.0043 percent of the landfill’s maximum daily throughput⁹. Thus, the Project would have a less than significant impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) Comply with federal, state, and local statutes and management and reduction regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The Proposed Project is required to comply with all state and federal statutes regarding solid waste. This impact is considered less than significant.

4.19.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.20 Wildfire

4.20.1 Environmental Setting

The risk of wildfire is related to a variety of parameters, including fuel loading (vegetation), fire weather (winds, temperatures, humidity levels and fuel moisture contents), and topography (degree of slope). Steep slopes contribute to fire hazard by intensifying the effects of wind and making fire suppression difficult. Fuels such as grass are highly flammable because they have a high surface-area-to-mass ratio and require less heat to reach the ignition point, while fuels such as trees have a lower surface-area-to-mass ratio and require more heat to reach the ignition point.

The Project Area is relatively flat and dominated by residential, commercial, and agricultural development. The area is not designated as having high wildland fire potential (CAL FIRE 2008).

4.20.2 Wildfire (XX) Environmental Checklist and Discussion

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Project site is not in an area designated by California Department of Forestry and Fire Protection (CAL FIRE) as a Fire Hazard Severity Zone. Furthermore, no Very High Fire Hazard Severity Zones are located nearby. Also, the Project site is not located in a state responsibility area (CAL FIRE 2008). The Project would have no impact in this area.

⁹ (154 lb)/(1,800 tons * 2,000 lbs/ton)= 0.0043 percent

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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
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Project site is not in an area designated by California Department of Forestry and Fire Protection (CAL FIRE) as a Fire Hazard Severity Zone. Furthermore, no Very High Fire Hazard Severity Zones are located nearby. Also, the Project site is not located in a state responsibility area (CAL FIRE 2008). The Project would have no impact in this area.

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
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Project site is not in an area designated by California Department of Forestry and Fire Protection (CAL FIRE) as a Fire Hazard Severity Zone. Furthermore, no Very High Fire Hazard Severity Zones are located nearby. Also, the Project site is not located in a state responsibility area (CAL FIRE 2008). The Project would have no impact in this area.

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
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Project site is not in an area designated by California Department of Forestry and Fire Protection (CAL FIRE) as a Fire Hazard Severity Zone. Furthermore, no Very High Fire Hazard Severity Zones are located nearby. Also, the Project site is not located in a state responsibility area (CAL FIRE 2008). The Project would have no impact in this area.

4.20.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.21 Mandatory Findings of Significance

4.21.1 Mandatory Findings of Significance (XXI) Environmental Checklist and Discussion

Does the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

As discussed in *Section 4.5 Cultural Resources* and *Section 4.18 Tribal Cultural Resources*, the Proposed Project would have potential impact cultural resources and tribal cultural resources. However, with implementation of mitigation measures **CUL-1** and **TRI-1**, this potential impact would be reduced to a level that is considered less than significant. In addition, as described in *Section 4.4 Biological Resources*, the Proposed Project has the potential to impact special-status plant species, special-status invertebrates, special-status and Migratory Bird Treaty Act protected birds, and special- status mammals. However, with the implementation of mitigation measures **BIO-1** through **BIO-4**, these potential impacts to biological resources will be reduced to a less than significant level.

Does the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) 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)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Implementation of the Proposed Project, in conjunction with other approved or pending projects in the region, has the potential to result in cumulatively considerable impacts to the physical environment. However, with implementation of Project-specific mitigation measures for biological and cultural resources, these potential impacts would be reduced to a level that is considered less than significant and therefore, would not result cumulatively considerable impacts.

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Does the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Direct and indirect impacts to human beings would be less than significant with the implementation of mitigation measures listed in this IS/MND. As explained under item a) above, the Project has the potential to have a substantial adverse impact on biological and cultural resources. However, with implementation of the required mitigation measures, these impacts will be reduced to a less than significant level. Further, the Project has potential to impact paleontological or other geologically sensitive resources, but with implementation of mitigation measures **GEO-1**, this impact will be less than significant. The Project has no other potentially significant impacts. As such, the Project has a less than significant impact in this area.

SECTION 5.0 LIST OF PREPARERS

The City of Davis

Lead Agency

Rhys Rowland, Environmental Program Specialist
Public Works Utilities and Operations Department

ECORP Consulting, Inc.

CEQA Documentation/Air Quality/Biological Resources/Cultural Resources/Greenhouse Gas/Noise

Scott Friend, AICP, CEQA Project Director

Mike Martin, CEQA Project Manager

Seth Myers, Air Quality/GHG & Noise Director

Claire Lester, Assistant Environmental Planner

Rosemary Worden, Assistant Environmental Planner

Laura Hesse, Technical Editor

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