

Environmental Checklist Form

1. **Project Title:**
Marsh Drive Bridge (28C-0442) over Walnut Creek Replacement Project
2. **Lead Agency Name and Address:**
Contra Costa County Department of Conservation and Development
30 Muir Road, Martinez, CA 94553
3. **Contact Person and Phone Number:**
Laura Cremin, Environmental Analyst, (925) 313-2015
Contra Costa County Public Works Department, Environmental Services Division
4. **Project Location:**
Marsh Drive, approximately 0.2 miles west of Solano Way, Concord and Pacheco, Contra Costa County (Figure 1)
5. **Project Sponsor's Name and Address:**
Contra Costa County Public Works Department
255 Glacier Drive, Martinez CA 94553
6. **General Plan Designation:**
Contra Costa County: CO (Commercial); (Light Industry); PS (Public and Semi-Public); BP (Business Park); MO (Mobile Homes)

City of Concord: Parks, Recreation, and Open Space; Public and Semi-public; Office
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7. **Zoning:**
Contra Costa County: U (Unrestricted), L-I (Light Industry), H-I (Heavy Industry), T-1 (Mobile Home/Manufactured Home Park)
8. **Description of Project:**
Contra Costa County Public Works Department (CCCPWD), in cooperation with the California Department of Transportation (Caltrans), proposes to replace Marsh Drive Bridge (#28C-0442) over the Walnut Creek Channel (Project). The existing bridge is identified as structurally, seismically, and hydraulically deficient. The purpose of the Project is to replace the existing bridge to meet current design standards to provide safe public access. Project construction is expected to begin in fall 2021 or spring 2022 and take approximately 24 – 30 months to complete.

The existing bridge was originally built as a 6-span concrete slab bridge in 1938, and was lengthened in the 1960s to a 10-span bridge. The bridge is currently 325 feet long by 34 feet wide. The new bridge will be designed to correct all of the existing bridge deficiencies and handle the seismic loads as well as the hydraulic flows within the channel. The proposed bridge replacement will be a 5-span bridge, pre-stressed concrete slab structure on concrete piles that is longer and wider than the existing bridge, at approximately 340 feet long and 55 feet wide. The existing bridge will be demolished and the new bridge will be raised approximately seven feet with fewer supports in the channel to meet hydraulic standards.

The proposed bridge will re-align Marsh Drive slightly to the north while utilizing a larger horizontal curve on the east in order to improve safety (Figure 2). To improve the roadway alignment and horizontal curve at the bridge, there will be approximately 350 to 500 linear feet of roadway approach work at each end of the bridge. In its final configuration the proposed bridge will accommodate two lanes of vehicular traffic (one in each direction) with pedestrian/bicycle facilities on each side of the road. The Project will also include a separated path along the south side of the bridge that will tie into the existing Iron Horse Trail at the southeastern side of the bridge.

The Project will use staged construction to avoid bridge closure and traffic detours; the existing bridge will provide traffic and pedestrian/bicycle access while the new bridge is being constructed. Two lanes of vehicular traffic (one in each direction) and a pedestrian/bicycle access route will be maintained during each phase of construction. Standard traffic control will be used during construction. The existing bridge will be demolished after the new bridge is constructed. Work will occur in the creek and dewatering and/or stream diversion is anticipated. Ground disturbance will be necessary; depth will vary between Project elements. The maximum depth of excavation for Project work will be approximately 50 feet for the installation of foundation piles (using drilling), approximately 20 feet for bridge abutments and bents, approximately five feet for general roadway work, and approximately 15 to 20 feet for some utility relocations. Vegetation removal may be necessary throughout the Project area. Disturbed areas will be stabilized following construction. A public outreach presentation was held at the Buchanan Airport in December 2018.

9. **Surrounding Land Uses and Setting:**

Marsh Drive is a two-lane urban minor arterial road that is widely used by commuters bypassing State Route 4. Marsh Drive bridge spans Walnut Creek Channel, which flows north into Pacheco Creek, and eventually into Suisun Bay. The Project vicinity is urban with commercial and light industrial uses surrounding the Project site. Walnut Creek channel, State Highway 4 and industrial uses are located to the north, a vacant lot to the northeast, car dealership (Lithia Dealership) and Iron Horse Regional Trail to the southeast, Walnut Creek channel to the south, Buchanan Field Airport to the southwest, and Valley Relocation and Storage office building to the northwest. There are residential developments to the east off of Solano Way and Olivera Road, and west of the Buchanan Field Airport off of Marsh Drive.

The bridge is jointly owned by Contra Costa County and the City of Concord (City). The dividing line between the County and the City runs approximately north-south along Walnut Creek channel and splits the bridge nearly in half. The east side of the bridge and roadway approach are inside the City's limits while the west side of the bridge and roadway approach are inside the County's limits.

10. **Other public agencies whose approval is required** (e.g. permits, financing, approval, or participation agreement):

- City of Concord
- California Department of Transportation (Caltrans) under the aegis of the Federal Highways Administration
- U.S. Army Corps of Engineers (Clean Water Act, Section 404 – Nationwide Permit; Rivers and Harbors Act, Section 408)

- San Francisco Regional Water Quality Control Board (Clean Water Act, Section 401- Water Quality Certification)
- State Water Resources Control Board (Clean Water Act, Section 402 - National Pollution Discharge Elimination System General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities)
- California Department of Fish and Wildlife (Fish and Game Code, Section 1600 - Lake and Streambed Alteration Agreement)
- East Bay Regional Park District

11. **Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?**

Wilton Rancheria submitted a general request letter to be notified of Projects within Contra Costa County under AB52. CCCPWD initiated contact with Wilton Rancheria on April 25, 2016 (refer to Section XVIII Tribal Cultural Resources for the record of contacts). No request for consultation nor information about potential resources was received from the tribe. However, Wilton Rancheria has requested consultation under Section 106 of the National Historic Preservation Act (refer to Section XVIII Cultural Resources).

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

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

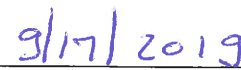
On the basis of this initial evaluation:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required
- ☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigations measures that are imposed upon the proposed project, nothing further is required.



Telma Moreira
Principal Planner

Contra Costa County Department of Conservation and Development



Date

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EVALUATION OF ENVIRONMENTAL IMPACTS:

I. AESTHETICS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Except as provided in Public Resources Code Section 21099, would the project:</i>				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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"/>
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) *Would the project have a substantial adverse effect on a scenic vista?*

According to the Contra Costa County General Plan 2005-2020 (General Plan), the County has two main scenic resources in addition to many localized scenic features: (1) scenic ridges, hillsides, and rock outcroppings; and (2) the San Francisco Bay/Delta estuary system (Contra Costa County 2005c).

The Project will not have a substantial adverse effect on a scenic vista. A scenic ridgeline identified on Figure 9-1 of the General Plan is located to the south of the bridge. A view of Mount Diablo and rolling hills is visible in the distance. Suisun Bay, which is part of the Delta estuary system, is approximately 3.8 miles north of the Project site but views are obscured by two State Highway 4 bridges. The new bridge would be located within the same general footprint as the existing bridge, but would be wider and have a higher elevation. The new bridge, however, will not block or change views in any directions. Therefore, the Project will have **no impact**.

b) *Would the project substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*

The Project is not located within a state scenic highway (Caltrans 2017). Therefore, the Project will have **no impact**.

c) *In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?*

The Project is located in the City of Concord and in the unincorporated area of Pacheco. These are urban areas. The applicable governing document for scenic quality in Concord is the Land Use Element of the Concord 2030 General Plan (Concord 2005). Scenic vistas within the City of Concord are not identified in the Plan, but there are policies related to the preservation of visible hillside and open space areas (General Plan Policy LU-1.1.9) and development and design standards related to viewshed protection in hillside areas, open space preservation, grading impacts, and height and massing of structures (Policy LU-11.1.4). The applicable governing document for Pacheco is the Contra Costa County General Plan described in Section I.a.

The Project will not conflict with either General Plan because it will cause very little visual change to the surrounding area. The Project is limited to a bridge replacement project along an existing roadway, which will not substantially alter its improvement. The replacement bridge design, including architectural treatments on the bridge, retaining wall, and railings would intend to be aesthetically pleasing.

The Project will not introduce buildings, structures or other features that would not be compatible with the architectural and landscape requirements of the area. Some existing vegetation removal may be necessary; however, it will be minimal and would not affect the overall appearance or character of the area. Therefore, Project impacts will be **less than significant**.

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

The Project will not create a new permanent source of light or glare that would adversely affect day or night time views. With the exception of road striping, no reflective surfaces or lights would be installed by the Project. Construction is expected to take place during the daylight hours. If unforeseen circumstances necessitate night work, it would be temporary and require approval by the CCCPWD Resident Engineer who would be available to address any concerns. Therefore, Project impacts will be **less than significant**.

II. AGRICULTURE AND FOREST RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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"/>
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"/>
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"/>
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"/>

- a) *Would the project 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?*

According to the California Department of Conservation (DOC 2016) Farmland Mapping and Monitoring Program, there is no farmland in the Project area; it is designated as Urban and Built Up Land. Therefore, the Project will have **no impact**.

- b) *Would the project conflict with existing zoning for agricultural use, or a Williamson Act Contract?*

There is no farmland in the Project area. Therefore, the Project will have **no impact**.

- c) *Would the project 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))?*

There is no forestland, or land zoned for timberland production in the Project area. Therefore, the Project will have **no impact**.

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

There is no forestland, or land zoned for timberland production in the Project area. Therefore, the Project will have **no impact**.

- e) *Would the project 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?*

There is no farmland in the Project area. Therefore, the Project will have **no impact**.

III. AIR QUALITY

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
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"/>
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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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"/>

a) *Would the project conflict with or obstruct implementation of the applicable air quality plan?*

The Bay Area Air Quality Management District (BAAQMD) is the regional, government agency that regulates sources of air pollution within the nine San Francisco Bay Area Counties. The air quality plan that is applicable to the proposed project is the BAAQMD's 2017 Clean Air Plan (Clean Air Plan), which was adopted April 19, 2017 (BAAQMD 2017b).

The BAAQMD considers a project to be consistent with air quality plans prepared for the region if there is substantial evidence that the project: 1) supports the goals of the Clean Air Plan; 2) includes applicable control measures from the Clean Air Plan; and 3) would not disrupt or hinder implementation of any control measures from the Clean Air Plan. An evaluation of the consistency of the Project with the Clean Air Plan is provided below.

Clean Air Plan Goals. The primary goals of the Clean Air Plan are to attain air quality standards; reduce population exposure to air pollutants and protect public health in the Bay Area; and reduce greenhouse gas emissions and protect the climate. The Project will not cause significant air quality or greenhouse gas emissions impacts and will not increase exposure of the population to air pollutants (see analysis that follows in Sections III.b and VIII.a). The Project will not hinder the region from attainment of the goals outlined in the Clean Air Plan. Therefore, the Project supports the goals of the Clean Air Plan.

Clean Air Plan Control Measures. The control strategies of the Clean Air Plan include measures in the following categories: stationary sources measures, mobile source measures, transportation control measures, land use and local impact measures, and climate measures. The control strategies applicable to the Project are the Transportation and Mobile Source Control Measures.

Transportation and Mobile Source Control Measures. The BAAQMD identifies transportation and mobile source control measures as part of the Clean Air Plan to reduce ozone precursor emissions from stationary, area, mobile, and transportation sources. The transportation control measures are applicable to the Project and are designed to reduce emissions from motor vehicles by reducing vehicle trips and vehicle miles traveled (VMT) in addition to vehicle idling and traffic congestion. The Project will replace an existing bridge and will not add lanes that would increase the capacity of the roadway for motorized vehicles and therefore will not result in a long-term increase in emissions. The creation of a Class IV bicycle lane across the bridge would promote the BAAQMD initiatives to increase the use of alternative means of transportation and support reduction of vehicle trips and vehicle miles traveled. Therefore, the Project will not conflict with the identified transportation and mobile source control measures of the Clean Air Plan.

The plan includes incentives for construction equipment upgrades and other strategies to reduce emissions of construction vehicles on a plan level. On the Project level, Project specifications require compliance with emissions reduction regulations being mandated by the California Air Resources Board.

Clean Air Plan Implementation. As discussed above, implementation of the Project will not disrupt or hinder implementation of applicable measures outlined in the Clean Air Plan, including stationary sources measures, mobile source measures, transportation control measures, land use and local impact measures, and climate measures. Therefore, the Project will not hinder or disrupt implementation of any control measures from the Clean Air Plan.

The Project will not conflict with or obstruct implementation of any control measures from the Clean Air Plan. Therefore, Project impacts will be **less than significant**.

- b) *Would the project 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?*

The Clean Air Act requires the United States Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards for six common air pollutants known as criteria air pollutants: particle pollution (often referred to as particulate matter or PM), ground-level ozone, carbon monoxide, sulfur oxides, nitrogen oxides, and lead. The Bay Area is under nonattainment status for State 1-hour and 8-hour ozone standards (BAAQMD 2018). In addition, the Bay Area was designated as a nonattainment area for the federal 8-hour ozone standard. The Bay Area is also considered a nonattainment area for PM_{2.5} at the state level and an attainment area at the federal level.

The BAAQMD periodically prepares and updates plans to establish rules and regulations for various emissions sources. The purpose of Appendix D of BAAQMD's May 2017 CEQA Air Quality Guidelines is to offer procedures to evaluate potential air quality impacts (BAAQMD 2017a). The significance criteria from the guidelines were applied to evaluate construction-related impacts associated with the Project.

The Project is limited to the replacement of an existing bridge and will not result in long-term operational impacts. However, during construction, short-term degradation of air quality may occur due to the release of particulate emissions generated by construction equipment and bridge demolition. In addition to dust-related PM₁₀ emissions, construction equipment powered by gasoline and diesel

engines would generate CO, SO₂, NO_x, VOCs and some soot particulate (PM_{2.5} and PM₁₀) in exhaust emissions. Construction of the Project will include demolition, grading and excavation, saw cutting, and striping.

LSA Associates prepared a Construction Emissions Analysis memorandum (LSA 2019a). Road Construction Emissions Model version 9.0.0 (RoadMod), which was developed by the Sacramento Metropolitan Air Quality, was used to quantify construction-related and operational pollutant emissions. For the purposes of this analysis, it was assumed that Project construction would occur over 24 months. The results of the emissions analysis were compared with BAAQMD 2017 thresholds of significance. A summary of average daily constructions emissions is shown in Table 1. All construction-related emissions would be below the BAAQMD significance thresholds and therefore its air quality impacts may be considered less than significant.

Table 1: Summary of Average Daily Construction Emissions

	Emissions (lb/day)			
	ROG	NO _x	PM ₁₀ (Exhaust)	PM _{2.5} (Exhaust)
Average Daily Project Construction Emissions	1.0	9.4	0.5	0.4
BAAQMD Threshold of Significance	54	54	82	54
Exceeds Threshold of Significance?	No	No	No	No
Notes: lb/day = pounds/day; NO _x = oxides of nitrogen; PM _{2.5} = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM ₁₀ = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; ROG = reactive organic gases				

Although the Project does not exceed the thresholds of significance, the BAAQMD has established standard measures for reducing fugitive dust emissions (PM₁₀) that are recommended for all projects in Table 8-2 of the CEQA Air Quality Guidelines. Implementation of these measures will further reduce fugitive dust emissions from construction activities.

Consistent with the Measures suggested by the BAAQMD, the Project Contractor will implement the following best management practices (BMPs) for air pollution control:

- 1) All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- 2) All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- 3) All visible mud or dirt tracked-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- 4) All vehicle speeds on unpaved roads shall be limited to 15 mph.
- 5) All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible.
- 6) Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- 7) All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

- 8) A publicly visible sign shall be posted with the telephone number and contact information for the designated on-site construction manager available to receive and respond to dust complaints. This person shall report all complaints to CCCPWD and take immediate corrective action as soon as practical but not more than 48 hours after the complaint is received. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

As described in Section IX, Hazardous Materials, sampling of the existing bridge materials have determined to contain lead-based paint (LBP) and potential asbestos-containing construction materials (ACM). Therefore, **Mitigation Measure HAZ-1** will be implemented.

CEQA defines a cumulative impact as two or more individual effects, which when considered together, are considerable or which compound or increase other environmental impacts. According to the BAAQMD, air pollution is largely a cumulative impact and no single project is sufficient in size itself to result in nonattainment of ambient air quality standards. In developing the thresholds of significance for air pollutants used in the analysis above, the BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. The BAAQMD CEQA Air Quality Guidelines (2017) indicate that if a project exceeds the identified significance thresholds, it's emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Therefore, if a project's daily average or annual emissions of operational-related criteria air pollutants exceed any applicable threshold established by the BAAQMD, the proposed Project will result in a cumulatively significant impact. As stated previously, the Project will not result in operational impacts. Further, the Project will likely reduce operational emissions with a new bicycle lane. As such, the Project will not exceed established thresholds for regional emissions or make a cumulatively considerable contribution to regional air quality impacts. Therefore, Project impacts will be **less than significant**.

c) Would the project expose sensitive receptors to substantial pollutant concentrations?

Sensitive receptors are defined as residential uses, schools, daycare centers, nursing homes, and medical centers, and other high-risk receptors. Individuals particularly vulnerable to diesel particulate matter (DPM) are children, with lung tissue that is still developing, and the elderly, who may have serious health problems that can be aggravated by exposure to DPM. The closest receptors in the Project vicinity would be the residents located along Marsh Drive, approximately 2,000 feet southwest of the Project site. There will be no operational impacts resulting from the Project. However, sensitive receptors could be temporarily exposed to diesel engine exhaust during the construction period due to the operation of construction equipment.

Health risks from toxic air contaminants (TACs) such as construction diesel emissions are a function of both concentration and duration of exposure. Construction diesel emissions are temporary, affecting an area for a period of days or perhaps weeks throughout the construction period. Additionally, construction-related sources are mobile and transient in nature and the emissions occur with the Project site with concentration dispersing rapidly with distance. Implementation of the BMPs for air pollution control listed above would help to reduce construction pollutant concentrations.

The BAAQMD CEQA significance threshold for potential effects of DPM applies to the hypothetical exposure of a person continuously for 70 years. The duration of the construction period is expected to be a total of 24 to 30 months, which is relatively short when compared to the 70-year risk exposure period. Additionally, the Project emission concentrations at any one receptor location would have a

much shorter duration. Due to the short duration of the construction period and the dispersion of Project construction emissions, and implementation of the air pollution control BMPs listed in Section III.b, which is consistent with BAAQMD guidelines, health risks from DPM construction emissions would be further reduced. Therefore, Project impacts will be **less than significant**.

- d) *Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?*

The operational aspects of the Project will not generate any objectionable odors. Construction equipment exhaust and asphalt paving operations may create objectionable odors in the vicinity of residents and businesses. However, these will be limited and temporary in nature and further reduced with implementation of the BMPs listed in Section III.b. Therefore, Project impacts will be **less than significant**.

IV. BIOLOGICAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a) *Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*

The Walnut Creek channel bisects the Project site; it flows north underneath the Marsh Drive bridge, merges with Grayson Creek 0.4 miles downstream to form Pacheco Creek, and then empties into Suisun Bay in the Carquinez Strait. Walnut Creek and Grayson Creek are low-flow channels contained within earthen, trapezoidal flood-control channels.

A biological resource assessment of the Project footprint and surrounding area (Biological Study Area [BSA]) was conducted in July and August 2018 (LSA 2019b). The assessment included background review of literature and databases, reconnaissance-level field surveys for special-status wildlife and plant species, and a wetland delineation. The BSA consists of three geographically separate locations: 1) a segment of Marsh Drive starting from approximately 370 feet west of the Marsh Drive bridge and extending to approximately 530 feet east of the bridge (Figure 3A); 2) a 3.5-acre potential staging area at the northeastern corner of Buchanan Field Airport (Potential Staging Area 1) (Figure 3B); and 3) a 3.5-acre potential staging area west of Buchanan Field Airport at the southeastern corner of the intersection of Marsh Drive and Sally Ride Drive (Potential Staging Area 2) (Figure 3C). The BSA largely coincides with the boundaries of the maximum Project footprint in all three locations. At the bridge location on Marsh Drive, the BSA includes areas east and west of the bridge where roadway approach work is needed. The BSA also extends upstream for approximately 30 linear feet and downstream for approximately 150 linear feet to account for temporary impacts within the Walnut Creek channel. The BSA includes all trees adjacent to the road and bridge that may be affected by the Project. Land cover types within the BSA are described below and impacts to each of the land cover types are identified in Table 2 and shown on Figures 3A-3C. :

- 1) **Developed.** Developed areas are those where vegetation has been cleared and altered for commercial development, parking, and roads. These areas are largely covered by cement or pavement and do not contain natural habitats. The developed land cover type also includes gravel/dirt roads along the tops of the levees.
- 2) **Landscaping.** Landscaped areas occur adjacent to Marsh Drive and the maintenance access roads along the tops of the levees. This land cover type includes native and non-native species purposely planted as landscaping. This land cover type is common within urban settings and complements buildings, roads, parking lots, and buffer areas around these features. Although some native trees occur along the levees, they do not represent a distinct natural vegetation community.
- 3) **Ruderal Grassland.** Ruderal grassland consists of grasslands in upland areas along Lower Walnut Creek above the ordinary high water mark, in both staging areas, and in a vacant lot northeast of the Project site. These areas are dominated by wild oat (*Avena sp.*). Common forbs in this community are wild radish (*Raphanus sativus*), alkali-mallow (*Malvella leprosa*), field bindweed (*Convolvulus arvensis*), and bristly ox-tongue (*Helminthotheca echinoides*). There is significant human disturbance from homeless encampments under Marsh Drive Bridge and the Highway 4 Bridge just north of the Project site. Potential Staging Area 1 contains patches of creeping wild rye (*Elymus triticoides*) and salt grass (*Distichlis spicata*). Potential Staging Area 2 contains patches of creeping wild rye. Potential Staging Area 1 is mowed regularly due to its proximity to Buchanan Field Airport runways. Potential Staging Area 2 is mowed less frequently and has one wetland ditch present along the western boundary.
- 4) **Freshwater Marsh.** Freshwater marsh habitat occurs on the eastern side of the low-flow channel in Walnut Creek. Common species in this habitat type include bulrush (*Schoenoplectus sp.*), horsetail (*Equisetum arvense*), cattail (*Typha sp.*), bentgrass (*Agrostis sp.*), and Bermuda grass (*Cynodon dactylon*).
- 5) **Seasonal Wetland.** Seasonal wetland habitat occurs on the flood terrace on the western side of the low-flow channel in Walnut Creek and in the ditch running parallel to the western

boundary of Potential Staging Area 2. Common vegetation on the flood terrace includes alkali weed (*Cressa truxillensis*), spearscale (*Atriplex prostrata*), bentgrass, sharp dock (*Rumex conglomeratus*), rabbit's-foot grass (*Polypogon monspeliensis*), pepperweed (*Lepidium latifolium*), Italian wild rye (*Festuca perennis*), Bermuda grass, and Harding grass (*Phalaris aquatica*). Some freshwater marsh species are present in the area mapped as seasonal wetland north of the bridge; however, freshwater marsh is not dominant west of the creek. Seasonal wetland cover in the ditch includes bentgrass, hyssop loosestrife (*Lythrum hyssopifolia*), Bermuda grass, hare barley (*Hordeum murinum ssp. leporinum*), and pepperweed. The wettest portion of the ditch contains spearscale, rabbit's-foot grass, cattail, nutsedge (*Cyperus sp.*), cocklebur (*Xanthium strumarium*), and curly dock (*Rumex crispus*).

- 6) **Unvegetated Flood Terrace.** A small (0.07 acre) unvegetated area occurs in the floodplain on the western side of the low-flow channel in Walnut Creek. Unvegetated flood terrace is limited to areas under Marsh Drive Bridge that are below the ordinary high water mark of Walnut Creek. Due to shading from the bridge, there is less than 5 percent vegetated cover, consisting of bentgrass and ruderal grasses and forbs.
- 7) **Vegetated Berm.** Two natural levees/berms occur on either side of the low-flow channel. These areas are at or slightly below the OHWM but contain upland plant species similar to those found in ruderal grassland (wild oat, wild radish, alkali-mallow, field bindweed, and bristly ox-tongue). In addition to these species, other common grasses and forbs are present along the low-flow channel, including Italian wild rye, soft brome (*Bromus hordeaceus*), rip-gut brome (*Bromus diandrus*), Harding grass, and horseweed (*Erigeron canadensis*).
- 8) **Stream Channel.** The lower reach of Walnut Creek channel is a maintained, earthen, trapezoidal flood control channel with an unvegetated, perennial low-flow channel. The low-flow channel, which formed naturally, ranges in width from approximately 28 feet to 35 feet. The low-flow channel is unvegetated due to persistent, deep flow.

Table 2: Potential Temporary and Permanent Impacts By Land Cover Type

Land Cover Type	Total within Biological Study Area (acre)	Permanent Impacts (acre)	Temporary Impacts (acre)
Developed	3.557	1.27	2.287
Landscaping	0.593	0.112	0.481
Ruderal grassland	6.894	0.197	6.697
Freshwater marsh	0.342	0.057	0.285
Seasonal wetland	0.473	0.081	0.392
Unvegetated flood terrace	0.119	0.048	0.071
Vegetated berm	0.184	0.041	0.143
Stream channel	0.187	0.034	0.153
Total	12.349	1.84	10.509

The ruderal grassland, freshwater marsh, seasonal wetland, unvegetated flood terrace, vegetated berm, and stream channel are considered environmental sensitive areas (ESA) and provide suitable

habitats for special-status wildlife species that have the potential to occur in the BSA as listed in Table 3. No special-status plant species have the potential to occur.

Table 3: Special-Status Species Potentially Occurring in the BSA

Common Name (Species Name)	Listing Status
Central California Coast steelhead (<i>Oncorhynchus mykiss</i>)	Federally Threatened
Fall/Late-fall Run Chinook Salmon (<i>Oncorhynchus tshawytscha</i>)	California Species of Special Concern
Western Pond Turtle (<i>Actinemys marmorata</i>)	California Species of Special Concern
Western Burrowing Owl (<i>Athene cunicularia</i>)	California Species of Special Concern

IMPACT BIO-1:

Suitable habitat for special-status wildlife species is present within the BSA. Mitigation Measure BIO-1 below includes best management practices to avoid and minimize for general impacts, however, specific species measures are discussed further below in Mitigation Measure BIO-2 through BIO-6.

MITIGATION MEASURE BIO-1:

The following best management practices/avoidance and minimization measures would be used for protection of the biological resources within the BSA.

- 1) Prior to start of construction, temporary high visibility ESA silt fence will be placed at the upstream and downstream ends of the Project site from the top of one levee to the top of the opposite levee to preclude impacts beyond the project footprint and to deter species from entering the work area. The limits will be staked by a qualified biologist. Fencing will be removed at the end of the first year of construction and reinstalled at the beginning of the second year.
- 2) Prior to the start of construction in each year, construction personnel will be trained by a qualified biologist on all required avoidance and minimization measures as well as permit requirements.
- 3) Flowing water will be protected from demolition and construction activities by diverting the stream into pipes/culverts through the active construction zone. Downstream flow will be maintained at all times.
- 4) Temporary coffer dams used to redirect flow will consist of sheet piles, gravel bags, water-filled bladder dams, or another agency-approved material. Any water pumped from the work area will be allowed to settle to reduce turbidity prior to being released back into the creek. Temporary coffer dams and diversion pipes will be removed from the creek prior to the winter rainy season in each year. The contractor will be required to prepare and submit a water diversion plan for review and approval by CCCPWD as well as other regulatory agencies as required by the environmental permits.
- 5) During removal of the existing bridge, a tarp or other approved method will be used below the bridge to prevent debris from falling into Walnut Creek. The tarp will be left in place until the bridge is removed. The contractor will be required to prepare and submit a demolition plan for review and approval by CCCPWD as well as other regulatory agencies as required by the environmental permits. As described in Section III.b, best management practices will be implemented to control dust which will minimize impacts to biological resources.
- 6) During excavation for the demolition and replacement work, the contractor will be required to separately excavate and stockpile wetland topsoils from soil layers beneath. These soil layers

will be backfilled in the same order as excavated. Stockpiled soils will be windrowed no higher than 6 feet and shall be covered with a filter fabric or burlap; not plastic.

- 7) Within 1 month of completion of temporary excavation and re-grading work, the surfaces will be smoothed to pre-project grades and will be re-seeded using a wetland erosion control seed mix containing native wetland plant species currently found on the project site.
- 8) CCCPWD will require the construction contractor to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) in accordance with the National Pollution Discharge Elimination System (NPDES), Construction General Permit as required under Section 402 of the Clean Water Act. The SWPPP will identify water pollution control and construction-waste containment measures to be implemented during and after Project construction, including but not limited to:
 - Trash generated by the Project will be promptly and properly removed from the site daily.
 - All refueling of construction and maintenance vehicles will occur in paved areas away from the top of bank of the Walnut Creek channel. Runoff from these paved areas will not be allowed to flow into the creek.
 - Hazardous material absorbent pads and similar materials will be available on site in the event of a spill that could potentially impact jurisdictional waters.
 - Appropriate erosion control measures (e.g., fiber rolls, filter fences) will be used on site to reduce siltation and runoff of contaminants into the stream. Filter fences and mesh will be of material that will not entrap reptiles and amphibians. Fiber rolls will not contain plastics of any kind. Erosion control blankets will be used as a last resort because of their tendency to biodegrade slowly and to trap reptiles and amphibians.
 - No erodible materials will be deposited into watercourses. Brush, loose soils, or other debris material will not be stockpiled within stream channels or on adjacent banks.
 - Active construction areas will be watered regularly.
- 9) Temporarily affected areas will be restored to pre-Project conditions. Before October 31 and/or immediately after construction is complete, all exposed soils will be stabilized to reduce the effects of erosion.

IMPACT BIO-2:

The Project could accidentally introduce new invasive species to the Project site.

MITIGATION MEASURE BIO-2:

To prevent the accidental introduction of new invasive species into the Project site during construction, CCCPWD will require that the Project construction contractor implement the following control measures:

- 1) Only certified noxious weed-free erosion control materials will be used. All straw and seed material will be certified as weed-free prior to being used at the Project site.
- 2) Contractor will wash all construction equipment prior to bringing it onto the job site. Inspection will ensure that equipment arrives on site free of mud and seed-bearing material.
- 3) Any reseeded of disturbed soil areas and newly constructed slopes will use an appropriate native seed mix as specified in the plans and specifications.

Special-Status Plant Species

A special-status plant habitat assessment and late summer/fall protocol-level botanical survey of the BSA was conducted on August 28, 2018. One special-status plant species, Congdon's tarplant (*Centromadia parryi* subsp. *congdonii*) was considered to have potential to occur in the BSA. However, the results of a protocol-level plant survey conducted during the flowering period for this species confirmed that Congdon's tarplant does not occur on the Project site. Therefore, the project will have **no impact** on this species.

Special-Status Wildlife Species

A special-status wildlife survey of the BSA was conducted July 25, 2018. As listed in Table 3 above, one federally-listed species, the Central California Coast steelhead (*Oncorhynchus mykiss*), has the potential to occur in the Project area. However, the potential for occurrence is low, and there are no self-sustaining anadromous populations remaining in Walnut Creek or its tributaries. No state-listed species have the potential to occur. Other special-status species that may occur in the project vicinity are fall/late-fall run Chinook salmon (*Oncorhynchus tshawytscha*), western pond turtle (*Actinemys marmorata*), and western burrowing owl (*Athene cunicularia*) as described below. The Project site provides marginally suitable habitat for fall/late-fall run Chinook salmon and suitable habitat for western pond turtle and western burrowing owl, although none of these species were observed during the surveys.

Species observed during the survey were western mosquitofish (*Gambusia affinis*), western fence lizard (*Sceloporus occidentalis*), great egret (*Ardea alba*), black phoebe, European starling, red-winged blackbird (*Agelaius phoeniceus*) (flocks of young birds), house finch, house sparrow, and California ground squirrel (*Otospermophilus beecheyi*). There was also evidence of use by barn owl (*Tyto alba*) (dead bird), Canada goose (*Branta canadensis*) (scat), coyote (*Canis latrans*) (scat), river otter (scat), and raccoon (*Procyon lotor*) (tracks). Old cliff swallow and house finch nests were observed on the bridge structure. Gopher holes and Canada goose scat were observed at Potential Staging Area 1. A turkey vulture (*Cathartes aura*) and California ground squirrel burrows were observed at Potential Staging Area 2.

Central California Coast steelhead

The Central California Coast Steelhead is listed as a federally threatened species. This fish is known to occur in the creek, and occasional attempted spawning events have been reported upstream of the Project site, below a drop structure. There have been occasional observations of redds (depressions made to deposit eggs) above the drop structure, however, the habitat below the drop structure is unsuitable spawning habitat for salmonids, and they are unlikely to be present except for an occasional fish. The National Marine Fisheries Service (NMFS) concurred (in an email dated April 24, 2019) agreed with the conclusion that steelhead are unlikely to occur in Walnut Creek any time of year and that self-sustaining populations have been extirpated. There are numerous passage impediments throughout the Walnut Creek Watershed, and drainages associated with Lower Lanust Creek no longer provide conditions for self-sustaining populations of steelheads.

The Project would involve work within the low-flow channel of Walnut Creek, including dewatering and removal of the existing bridge columns. This work in the channel would occur between May 1 and October 31, outside of spawning season, and would therefore not present a barrier to fish passage. The Project will have **no impact** on this species.

Fall/Late-fall Run Chinook Salmon

The Fall/Late-fall Run Chinook Salmon are considered California Species of Special Concern. They are not federally or State-listed and have no designated critical habitat. No Chinook salmon were observed during the general survey on July 25, 2018, however, adult Chinook salmon carcasses and redds were found in Walnut Creek between Highway 4 (downstream of the Project site) and the first drop structure upstream of the Project site. NMFS (in an email dated April 11, 2006) concluded that Chinook salmon observed in the lower reach of Walnut Creek are hatchery strays that have never successfully reproduced in the creek, and that existing habitat within the reaches of Walnut and Grayson creeks which includes the reach containing the BSA) does not allow for successful spawning.

As described above, Project work in the channel includes the installation of a dewatering system. There are potential indirect impacts to salmon due to temporary loss of habitat while the flow diversion is in place, and other indirect impacts related to construction activity (such as runoff or sedimentation). **Mitigation Measure BIO-1** and **Mitigation Measure BIO-3** will be implemented to reduce potentially significant impacts to Chinook salmon to a **less-than-significant** level.

IMPACT BIO-3:

The Project could impact Fall/Late-fall Run Chinook Salmon, a California species of Special Concern.

MITIGATION MEASURE BIO-3:

- 1) The Project will limit construction within the channel to the period between May 1 and October 31 to largely avoid the spawning season.
- 2) Prior to installation of the flow diversion, a qualified fisheries biologist will install a fish barrier (e.g., ¼-inch galvanized hardware cloth) upstream and downstream of the work area, including the area needed for coffer dam installation and flow diversion pipes. A qualified biologist will then use a seine and/or a dip net to capture fish within the work area and relocate them to a suitable area downstream of the fish barrier prior to the installation of the coffer dams. The qualified biologist will be present during coffer dam installation and dewatering of the work area. During dewatering, the biologist will visually survey the work area and will use a seine and/or a dip net to capture and relocate any remaining fish. Electrofishing may be implemented to ensure that all of the fish are removed from the work area.

Western Pond Turtle

Western pond turtles occupy permanent and intermittent ponds and creeks. They prefer deep (greater than 2 feet), quiet pools along streams. Important habitat features include basking sites and suitable aquatic hiding areas such as undercut banks, logs, rocks, aquatic vegetation, and/or mud and leaf-litter. Nesting areas include grassy, sunny slopes adjacent to aquatic habitat. This species is known to occur in the Project vicinity. The nearest California Natural Diversity Database (CNDDB) occurrence is 0.19 miles away. No western pond turtles were observed during the general survey on July 25, 2018, however the BSA provides potential movement and breeding habitat.

There will be approximately 1.044 acres of temporary impacts and 0.261 acres of permanent impacts to western pond turtle aquatic habitat. Once constructed, the new bridge structure will have fewer support piles and overall increase habitat available to western pond turtles.

Implementation of Mitigation Measure **BIO-4** would reduce potentially significant impacts to western pond turtle to a **less-than-significant** level.

IMPACT BIO-4:

The Project could impact western pond turtle, if present in the BSA during construction.

MITIGATION MEASURE BIO-4:

A qualified biologist will conduct a preconstruction survey for western pond turtles on the first day of work immediately prior to the start of work to ensure that no individuals are present. Once a temporary high visibility fence is installed at the upstream and downstream ends of the Project site and all vegetation has been cleared, a designated construction monitor (trained by the qualified biologist), will inspect the work area for western pond turtles anytime work activity ceases for two days or more. If a western pond turtle is observed by the construction monitor in the immediate work area, no work will commence in the area of the sighting until the turtle has moved out of harm's way or the qualified biologist has arrived at the site and relocated the turtle.

Western Burrowing Owl

Western burrowing owl occur in open, well-drained grasslands with abundant small mammal burrows, particularly those of California ground squirrels. The nearest CNDDDB Occurrence is 0.92 mile from the bridge replacement site and 0.05 mile from Potential Staging Area 2. The ruderal grassland habitat at Potential Staging Area 2 provides potential breeding, wintering, and/or foraging habitat, based on proximity to a known occurrence and appropriate habitat, including the presence of ground squirrel burrows. No burrowing owls or evidence of occupied burrows was observed during the general wildlife survey conducted within the BSA. The suitability of Potential Staging Area 1 and the bridge replacement site is limited. Potential Staging Area 1 lacks ground squirrel burrows, and the bridge replacement site has few ground squirrel burrows, tall vegetation, and substantial human disturbance that likely preclude occupation by burrowing owls.

The Project would result in minor indirect impacts to western burrowing owls – the temporary loss of 2.068 acres of marginally suitable breeding and wintering habitat within Potential Staging Area 2. The Project site and Potential Staging Area 1 do not provide suitable habitat for burrowing owls. Implementation **Mitigation Measure BIO-5** would reduce potentially significant impacts to western burrowing owls to a less-than-significant level.

IMPACT BIO-5:

The Project could impact western burrowing owl, if present in the BSA during construction.

MITIGATION MEASURE BIO-5:

A qualified biologist will conduct a preconstruction survey within Potential Staging Area 2 to identify potential burrows and owls no more than 30 days prior to construction. The survey will be conducted in accordance with CDFW survey guidelines. During the breeding season (February 1-August 31), surveys will document whether burrowing owls are nesting in or directly adjacent to disturbance areas. During the non-breeding season (September 1-January 31), surveys will document whether burrowing owls are using habitat in or directly adjacent to any disturbance area. Survey results will be valid only for the season (breeding or non-breeding) during which the survey is conducted. All burrows or burrowing owls will be identified and mapped.

If burrowing owls are found during the breeding season (February 1–August 31), the Project will avoid all nest sites that could be disturbed by Project construction during the remainder of the breeding season or while the nest is occupied by adults or young. Avoidance will include establishment of a non-disturbance buffer zone. Construction may occur during the breeding season if a qualified biologist monitors the nest and determines that the birds have not begun egg-laying and incubation or that the juveniles from the occupied burrows have fledged. During the non-breeding season (September 1-January 31), the Project should avoid the owls and the burrows they are using, if possible. Avoidance will include the establishment of a buffer zone.

If occupied burrows for burrowing owls are not avoided, passive relocation will be implemented. Owls should be excluded from burrows in the immediate impact zone or within a 160-foot buffer zone by installing one-way doors in burrow entrances. The doors should be in place for 48 hours prior to excavation, and the Project site should be monitored daily for 1 week to confirm that the owl has abandoned the burrow. Whenever possible, burrows should be excavated using hand tools and refilled to prevent reoccupation in accordance with CDFW guidelines. Plastic tubing or a similar structure should be inserted in the tunnels during excavation to maintain an escape route for any owls inside the burrow. The applicant may conduct burrow management (i.e., regular surveys to find and proactively collapse unoccupied yet suitable burrows) in advance of and during construction to lower the likelihood of owls occupying burrows within the Project area.

Nesting Birds and Raptors

Bird and raptor species that are not special-status species are protected by the federal Migratory Bird Treaty Act (MBTA) and California Fish and Game Code Sections 3503 and 3503.5. Most existing vegetation within the BSA has at least some potential to support birds and their nests. In addition, the bridge itself provides nesting habitat for black phoebes, cliff swallows, and house finches. As noted above, old cliff swallow and house finch nests were observed on the bridge structure. The birds likely return to the bridge to nest each year and are likely to be present at the time of construction. Other bird species observed during the wildlife survey included great egret, European starling, red-winged blackbird, and house sparrow. There was also evidence of use by barn owl, and Canada goose.

Project construction could have direct impact on nesting birds, and increased noise and human presence from Project construction could result in indirect impacts on nesting birds in the BSA through modifications to behavior resulting in lower breeding success. Implementation of **Mitigation Measure BIO-6** would ensure direct and indirect impacts on nesting birds are reduced to **less-than-significant** levels.

IMPACT BIO-6:

The Project could impact nesting birds and raptors, if present in the BSA during construction.

MITIGATION MEASURE BIO-6:

The following will be completed to avoid potential impacts to nesting birds:

- 1) To reduce the likelihood of birds establishing nests in the construction zone, vegetation in the project vicinity may be removed prior to the start of the nesting season (February 15). Similarly, potential nest trees that will be eliminated as part of the project and old, inactive swallow and finch nests on the bridge may be removed prior to the start of the nesting season. Swallows and finches may also be prevented from nesting on the bridge through the

installation of netting or other exclusionary measures if they are installed prior to the start of nesting.

- 2) A preconstruction nesting bird survey will be conducted by a qualified biologist prior to construction activities that take place during the nesting season (February 15-August 31), including any removal of vegetation at the project site. The survey will be conducted no more than 7 days prior to the start of construction. Buffers will be placed around any nests that are found during the survey. No work will be conducted within the buffers until the qualified biologist has determined that the nesting attempt is complete. Buffers for songbird nests are generally on the order of 50 to 100 feet, with the precise distance determined by the qualified biologist conducting the preconstruction survey based on species, nest site characteristics, and the acclimation of the nesting birds to disturbance. Repeated bird nesting surveys of the existing bridge and removal of nest starts may be needed to prevent swallow and house finch nesting throughout the construction season. The project is not expected to result in direct impacts to nesting birds with implementation of these measures.

The Project is not anticipated to substantially impact any special-status species with implementation of the **Mitigation Measures BIO-1 to BIO-6**. Therefore, Project impacts will **be less than significant with mitigation incorporated**.

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

As described in Section IV.a, the Project would result in permanent and temporary impacts to riparian habitat and other natural communities, which are regulated by California Department of Fish and Wildlife (CDFW) under Section 1600 of the California Fish and Game Code and Regional Water Quality Control Board (RWQCB) under Section 401 of the Clean Water Act. Permanent impacts include installation of bridge piles and abutments and additional fill. Temporary impacts include a stream diversion system, site mobilization, excavation, and grading within the creek channel and banks. The stream diversion system and associated materials will be removed prior to the winter rainy season after the first year of construction, and then reinstalled at the beginning of the second construction season. Disturbed wetland vegetation would be restored within one growing season upon completion of the Project. There are no riparian trees in the BSA.

Permits will be obtained from CDFW (Streambed Alteration Agreement) and RWQCB (Water Quality Certification). Permit requirements will be followed to minimize impacts to water quality and riparian habitats.

Temporary impacts to the riparian habitat will be minimized through implementation of **Mitigation Measures BIO-1 and BIO-2**. Therefore, Project impacts will **be less than significant with mitigation incorporated**.

- c) *Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

An aquatic wetland delineation was conducted on July 10, 2018 by LSA (LSA 2018). In addition to the creek, there are three types of seasonal wetlands in the BSA – freshwater marsh, vegetated flood

terrace, and a vegetated ditch (see Table 2 above and Figure 3). The Project would result in 0.261 acres of direct and indirect permanent impacts to jurisdictional waters associated with the addition of fill, removal of old piles, and installation of new bridge supports within the Walnut Creek channel. The vegetated ditch in Potential Staging area 2 would not be modified.

A permit will be obtained from the U. S. Army Corps of Engineer (USACE) which has policies to mitigate for any loss of wetlands, streams, or other waters of the U. S. No compensatory mitigation is anticipated because the Project will result in fewer bridge supports than the current bridge and will not result in any net loss of wetland or other aquatic habitat (there will actually be a net increase of 0.001 acre of aquatic habitat). Temporary impacts to waters and wetlands will be minimized through implementation of **Mitigation Measure BIO-1** and are expected to fully recover within one year of disturbance. Therefore, Project impacts will be **less than significant with mitigation incorporated**.

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

The BSA and Project vicinity are in an area mapped as essential fish habitat (EFH) for Chinook salmon. However, as described in Section IV.a, the lower reach of Walnut Creek does not provide suitable spawning habitat for salmonids. Suitable habitat may occur upstream of the Project site, in tributaries to Walnut Creek, but salmon are precluded from moving into those areas by two drop structures upstream of the Project site. The NMFS list for the Vine Hill USGS 7.5-minute quadrangle includes EFH for groundfish, coastal pelagics, and highly migratory species because of its inclusion of Suisun Bay. EFH for these species does not occur at the Project site.

There are no wildlife nurseries within the Project site. Walnut Creek provides a movement corridor for wildlife species, including river otters and western pond turtles, and adjacent habitats provide a movement corridor for migratory birds and small mammals.

The Project would not result in permanent disruption to movement of fish and wildlife species in the area, as the Project involves the replacement of an existing bridge and no new permanent features would pose a barrier to movement. The Project will reduce the number of bridge support piles in the channel, which will reduce obstruction to wildlife movement once the Project is constructed. Temporary construction-related activities such as noise and dewatering activities may temporarily inhibit dispersal, migration, and daily movement of wildlife however impacts will be minimized in accordance with **Mitigation Measures BIO-1** and **BIO-3** through **BIO-6**. Therefore, Project impacts will be **less than significant with mitigation incorporated**.

- e) *Would the project conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance?*

The Project will not conflict with any local policies or ordinances protecting biological resources. Tree removal is not anticipated. However, if necessary, the trees that would be removed occur within the County right-of-way which is not subject to the County Tree Ordinance (Contra Costa County Code [CCCC] Title 8, Chapter 816-6.10(6)). Therefore, the Project will have **a less than significant impact**.

- f) *Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan*

The Project is not located within an adopted Habitat Conservation Plan or other approved local, regional, or state habitat conservation plan. Therefore, the Project will have **no impact**.

V. CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<hr/> Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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"/>
c) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- a) *Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?*

To determine if the Project site contains potential significant historic resources and to evaluate the Project's potential to impact those resources, a records search within a 0.5 mile radius of the Project's area of potential effect (APE), which includes all areas that have potential to be directly (archaeology) and indirectly (architectural history) affected by the Project. The records search was conducted at the Northwest Information Center (NWIC) located at Sonoma State University, Rohnert Park on September 1, 2018 which included a review of the of the California Resource Information System, National Historic Register of Historic Places, California Register of Historic Resources, National Historic Landmark, and California Points of Historical Interest. No resources within or adjacent to the Project APE were identified. The results are reported in the Historic Property Survey Report/Archaeological Survey Report prepared for Caltrans (LSA 2019c). In addition, LSA contacted the Contra Costa County Historical Society which had no records within or adjacent to the Project APE. The Caltrans Bridge Inventory identifies Marsh Drive Bridge (28C-0442) as a category 5 for historic significance (not eligible for listing on the NRHP).

The APE also includes vertical impacts which represents the maximum subsurface vertical extent of Project-related activities which could yield unanticipated ahistorical archaeological resource if present in the Project APE. The depth varies throughout the Project site depending on Project activities, which includes: 20 feet below ground surface (bgs) for abutment demolition and excavation, drain pipe excavation, and utility excavation; 15 feet bgs for bent demolition and excavation; and 5 feet bgs for approach grading. Pile drilling will extend to approximately 100 feet bgs.

The potential for unanticipated subsurface historical resources cannot be completely ruled out therefore, the **Mitigation Measure CUL-1** will be followed in the event that subsurface resources are discovered during Project construction. In addition, Project contract specifications will stipulate that construction shall stop in the area if historical resources (i.e. structure/building remains, bottle glass, ceramics, etc.) are encountered until a qualified archaeologist evaluates the findings.

IMPACT CUL-1:

Project construction could impact previously unidentified historical resources during ground-disturbing activities.

MITIGATION MEASURE CUL-1:

The following will be implemented during Project construction if unanticipated potential historic or pre-historic archaeological resources are encountered.

- 1) Contractor will be notified of the possibility of encountering historic or pre-historic archaeological materials during ground-disturbing activities and will be educated on the types of historic and pre-historic archaeological materials that may be encountered.
- 2) If an inadvertent discovery is made, the Contractor will cease all ground-disturbing activities in the area of discovery.
- 3) The Contractor will immediately notify the CCCPWD Resident Engineer who will then request a qualified archaeologist to evaluate the finding(s).
- 4) If the finding(s) is determined to be potentially significant, the archaeologist will develop a research design and treatment plan outlining management of the resource, analysis, and reporting of the find.

With implementation of **Mitigation Measure CUL-1** Project impacts on historical resources would be **less than significant with mitigation incorporated**.

- b) *Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?*

The records search at the NWIC did not identify any recorded archaeological resources within or adjacent to the Project APE. Three archaeological sites were identified in the general area outside of the APE: one site approximately 400 feet outside of the APE, one site approximately 2,000 feet outside the APE, and one site approximately 2 miles north of the APE.

In addition, LSA contacted the Native American Heritage Commission (NAHC) on July 13, 2018 for a Sacred Lands File search to determine if any recorded Native American sites occur within the Project APE. The NAHC replied, via an email dated August 15, 2018, that no records were found. The NAHC provided a list of Native American tribal representatives and organizations that may have knowledge of unrecorded sites within the vicinity of the Project. LSA sent emails dated August 20, 2018 to the Native American contacts on the list requesting any information or concerns they may have regarding the APE. The following responses were received:

- One Native American representative of the Ohlone Indian Tribe responded via email on August 24, 2018 that there is a site in the vicinity of the Project where he previously served as a monitor, and recommended that if that site were to be disturbed, there should be an archaeological and a Native American monitor. LSA conducted supplemental research about the site and concluded that the site could be anywhere in the vicinity of Concord, and corresponded further with the representative about the location of the site. LSA contacted the representative on February 13 and 21, 2019 asking if he had any further information, and no response has been received to date.

- One Native American representative from the Indian Canyon Mutsun Band of Castanoan Indians stated that the tribe recommend that a Native American representative and archaeologist be present during ground-disturbing activities.
- One Native American representative from the Amah Mutsun Tribal Band of Mission San Juan Bautista requested that construction crews receive cultural resources sensitivity training prior to ground disturbance taking place.
- A representative from Wilton Rancheria (who was also contacted about AB 52 consultation, see Section XVIII) left a voicemail requesting a meeting to discuss the tribe's concerns about the APE's proximity to the archaeological site that is approximately 400 feet outside of the APE. In subsequent emails, LSA provided Wilton Rancheria with a geographic file of the APE in advance preparation of a meeting to be held at the tribal headquarters. The meeting has not been held to date; however, coordination with the tribe is pending.

Considering no recorded archaeological or Native American sites were identified within or adjacent to the Project APE and that there has been extensive previous disturbance of the Project site due to the channelization of Walnut Creek and fill for the adjacent levees and airport, no monitoring during Project construction is warranted. However, the potential for subsurface resources cannot be completely ruled out. The cultural resource assessment reports prepared for Caltrans (LSA 2019c) was provided to the Native American tribal representatives that responded.

The deepest Project impacts would be for installing the foundation piling approximately 50 feet bgs and for bridge abutments and bents approximately 20 feet bgs. Utility relocation would occur approximately 15 feet bgs and roadway work would occur approximately 5 feet bgs. Despite the investigations previously described, Project construction may unearth unanticipated historical, pre-historic archaeological, or Native American resources; however with implementation of Mitigation Measures **CUL-1** provided in V.(a), and **CUL-2** provided in V.(c) below, Project impacts on potential significant subsurface resources would **be less than significant with mitigation incorporated**.

c) *Would the project disturb any human remains, including those interred outside of formal cemeteries?*

No formal cemeteries are present within or adjacent to the Project site. As part of the cultural review conducted for the Project, the NAHC did not identify any recorded sites within or adjacent to the Project APE and contacts with the Native American tribal representative did not reveal any unrecorded Native American burial sites. Despite the investigations previously described, Project construction may unearth unanticipated historical or pre-historic archaeological resources; however with implementation of **Mitigation Measures CUL-1** provided in V.(a), and **CUL-2** provided below, Project impacts on archaeological resources, including Native American resources, would **be less than significant with mitigation incorporated**.

IMPACT CUL-2:

The Project could impact previously undiscovered human remains.

MITIGATION MEASURE CUL-2:

If human remains are encountered, work within 25 feet of the discovery shall be redirected and the Contra Costa County Coroner notified immediately. At the same time, an archaeologist shall be contacted to assess the situation. If the human remains are of Native American origin, the Coroner must notify the NAHC within 24 hours of this identification. The NAHC will identify a Most Likely

Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods. Upon completion of the assessment, the archaeologist shall prepare a report documenting the methods and results, and provide recommendations for the treatment of the human remains and any associated cultural materials, as appropriate and in coordination with the recommendations of the MLD. The report shall be submitted to CCCPWD and the Northwest Information Center.

VI. ENERGY

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

- a) *Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*

The Project is limited to the replacement of an existing bridge and will not require energy use once constructed. Project construction will result in an incremental increase in energy usage associated with construction equipment (i.e. fuel in vehicles and power generators). However, energy usage during construction would be minimal and would not require excessive amounts of wasteful usage of energy. Therefore, Project impacts will be **less than significant**.

- b) *Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

Although the Project will result in a temporary increase in energy usage during construction, the operation of the Project would not require change from the existing condition. As such, the Project does not have potential to conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, Project impacts will be **less than significant**.

VII. GEOLOGY AND SOILS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. Strong seismic ground shaking?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste 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"/>
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"/>

- a) *Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42; ii) Strong seismic groundshaking; iii) Seismic-related ground failure, including liquefaction; iv) Landslides?*

Fault Rupture. The Project site is within an Alquist-Priolo Fault Zone (SCDC 2017). The main trace of the Concord Fault line runs directly through the Project site along the Walnut Creek Channel. The Concord Fault line is capable of producing earthquakes and may cause strong ground shaking at the Project site. A Geotechnical Memorandum (Parikh, 2018) was prepared to evaluate the site and provide preliminary foundation design recommendations for the Project. The report found that a large earthquake on the Concord fault could cause a surface rupture resulting in 0.38 to 1.87 feet of horizontal displacement and 0.07 to 0.19 feet of vertical displacement according to deterministic and probabilistic modeling.

Ground Shaking. Contra Costa County is located within a region of high seismicity. The possibility of ground shaking from fault rupture at the Project site is considered high based on available geological and seismic data. The duration and intensity of shaking will depend upon both the magnitude of the earthquake, distance from the epicenter, and ground conditions.

Seismic-Ground Failure, Including Liquefaction. According to Figure 10-5 of the General Plan, the general Project area has generally high potential for liquefaction. The preliminary Geotechnical Memorandum, however, reported that no potentially liquefiable soil was encountered in previous geotechnical borings that were conducted approximately 300 feet north of Project site for the State Route 4 widening. The generalized soil profile consists of loose to medium dense sand and soft clay, underlain by very stiff to hard lean clay and dense to very dense sand. An additional geotechnical study is being conducted to confirm these findings.

IMPACT GEO-1:

There is a potential for impacts from fault rupture, ground shaking, and liquefaction, and locating the Project on a geologic unit or soil that is unstable.

MITIGATION MEASURE GEO-1a:

The Project design and construction will take the existing seismic and soil conditions into account. The Project will be designed in accordance with the Caltrans Seismic Design Criteria and the regulations detailed in the Alquist-Priolo Earthquake Fault Zoning Act.

MITIGATION MEASURE GEO-1b:

Potential surface deformation resulting from aseismic creep (measurable surface displacement along a fault in the absence of notable earthquakes) can be mitigated by a regular maintenance program to repair the road surface, curbs, and other engineered facilities. Annual inspection should be carried out to assess ongoing creep damage.

MITIGATION MEASURE GEO-1c:

A geotechnical and foundation study will be completed to inform the final design, and the recommendations would be incorporated into the Project plans. The study will include site-specific exploratory borings and laboratory testing to delineate potentially liquefiable materials. Potentially liquefiable deposits will either have to be removed or the foundation designed to extend beyond potentially liquefiable deposits.

Project structures would be designed for seismic loading identified in the geotechnical studies. Incorporating recommendations from geologic and geotechnical investigations performed during the final design. Therefore, Project impacts will be **less than significant with mitigation incorporated**.

Landslides. According to Figure 10-6 of the General Plan, the Project site is not located within a potential landslide area. The topography of the Project site is generally flat. Therefore, the Project will have **no impact**.

b) *Would the project result in substantial soil erosion or the loss of topsoil?*

Modified grades associated with the completed Project would result in negligible changes in topography. Construction of the Project would temporarily increase the exposure of soils to wind

erosion from grading and excavation activities. However, standard erosion control best management practices will be implemented during construction to minimize potential impacts. Therefore, Project impacts will be **less than significant**.

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

According to Figure 10-5 of the General Plan, the Project site has generally high liquefaction potential (Contra Costa County 2005d). The Project design and construction will take the existing soil conditions into consideration and the Project will be designed in accordance with local design practice. Moreover, the Project is limited to replacement of an existing bridge, which will not introduce new land uses that could be impacted by unstable soil. Therefore, Project impacts will be **less than significant**.

- d) *Would the project 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?*

The Project site is located on interbedded layers silt and clay type soils. Clay tends to be an expansive soil. The Project will be engineered according to standard industry practice, which includes design considerations for soil type. Moreover, the Project is limited to replacement of an existing bridge, which will not create substantial risk to life or property from expansive soils. Therefore, Project impacts will be **less than significant**.

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

Septic tanks and alternative wastewater disposal systems are not part of the Project. Therefore, the Project will have **no impact**.

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

Based on the Geologic Map of the Walnut Creek Quadrangle, the Project is located on surficial sediments characterized as “alluvial gravel, sand, and clay of valley areas.” Holocene alluvial deposits and fill are generally considered too recent to contain significant paleontological resources and therefore have low paleontological sensitivity. However, Project contract specifications would stipulate that construction shall stop in the area if such potential resources are discovered. In addition, **Mitigation Measure CUL-1** will be followed in the event subsurface resources are discovered during Project construction. Therefore, Project impacts on paleontological resources would be **less than significant with mitigation incorporated**.

VIII. GREENHOUSE GAS EMISSIONS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
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"/>
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"/>

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

Construction activities, such as site preparation, site grading, on-site heavy-duty construction vehicles, equipment hauling materials to and from the site, and motor vehicles transporting the construction crew would produce combustion emissions from various sources. During construction of the Project, GHGs would be emitted through the operation of construction equipment and from worker and builder supply vendor vehicles, each of which typically uses fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as CO₂, CH₄, and N₂O. Furthermore, CH₄ is emitted during the fueling of heavy equipment. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change.

The operational aspect of the Project will not result in an increase of GHG emissions; however, construction activities will generate GHGs through vehicle exhaust. The BAAQMD does not have an adopted Threshold of Significance for construction-related GHG emissions but states that lead agencies should quantify and disclose GHG emissions that would occur during construction, and make a determination on the significance of these construction-generated impacts. Using the Road Construction Emissions Model version 9.0.0 (RoadMod) it is estimated that the Project will generate approximately 751.8 metric tons of CO₂e during construction of the Project. The Project's emissions will be short term and the Project will implement BMPs stated in Section III.b which include measures to reduce emissions from construction vehicles such as minimizing idling times and requiring properly maintained and tuned equipment which will further reduce GHG emissions. Therefore, Project impacts will be **less than significant**

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

Assembly Bill 32 (AB 32), the California Global Warming Solutions Act of 2006, recognized that California is a source of substantial amounts of GHG emissions which poses a serious threat to the economic well-being, public health, natural resources, and the environment of California (OPR 2008). This bill directed the California Air Resources Board (CARB) to develop discrete early actions to reduce GHGs to reach the GHG reduction goals by 2020.

In December 2008, CARB adopted its Climate Change Scoping Plan, which contains the main strategies California will implement to achieve reduction of approximately 21.7 percent from the State's projected

2020 CO₂e emission level under a business-as-usual scenario (CARB 2008). In May 2014, CARB adopted the First Update to the Climate Change Scoping Plan to identify the next steps in reaching AB 32 goals, evaluate the progress that has been made between 2000 and 2012, and report the trends in GHG emissions from various emission sectors (e.g., transportation, building energy, agriculture) (CARB 2014). In November 2017, CARB adopted the 2017 Climate Change Scoping Plan Update (2017 Scoping Plan Update), which lays out the framework for achieving the 2030 reductions as established in more recent legislation (CARB 2017). The 2017 Scoping Plan Update identifies the GHG reductions needed by each emissions sector to achieve a statewide emissions level that is 40 percent below 1990 levels before 2030.

The Project would not conflict with GHG reduction goals set forth in Assembly Bill 32, including the Recommended Actions identified by the 2017 CARB Climate Change Scoping Plan.

The Contra Costa Climate Action Plan (CAP) was adopted in December 2015. The CAP identifies how the County will achieve the AB 32 GHG emissions reduction target of 15 percent below baseline levels by the year 2020. Most of the measures identified in the Climate Action Plan consist of programs and incentives to be implemented by the County and are not applicable to the Project (CCCD CD 2015).

Based on Section III.b, the Project will not generate emissions that would exceed the project-level significance criteria established by the BAAQMD and, therefore, the Project will not conflict with plans adopted for the purpose of reducing GHG emissions. Therefore, Project impacts will be **less than significant**.

IX. HAZARDS AND HAZARDOUS MATERIALS

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

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

During construction, construction vehicles will travel to and from the Project site. Examples of construction vehicles include diesel-powered trucks, backhoes, graders, dump trucks, excavators, water trucks, compactors, skid steers, pick-up trucks, pavers, and hoppers. This equipment may require the use of fuels and other common liquids that have hazardous properties (e.g., fuels, oils, fluids that are flammable) but they would be handled in small quantities that would not create a substantial hazard for construction workers and/or the public. Compliance with federal, State, and local hazardous materials regulations would minimize the risk to the public presented by these potential hazards during construction of the Project. Completion of the bridge replacement would not involve routine transport, use, or disposal of hazardous materials or involve potential releases of hazardous materials into the environment beyond than what exists currently from the traveling public. Therefore, Project impacts will be **less than significant**.

- b) *Would the project 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?*

The Project does not propose land uses that are associated with hazardous substances therefore long-term operational impacts will not occur. However, during construction there is potential for accidental release of hazardous substances through disturbance from bridge demolition and potentially contaminated soils or waters, or accidental spills.

An Initial Site Assessment (ISA) (Phase I Environmental Site Assessment) and Preliminary Site Investigation (PSI) were conducted for the Project area (WRECO, 2018). As part of the ISA, a site reconnaissance, governmental records search, and environmental database records review were conducted. The report identified several current and potential Recognized Environmental Conditions (RECs). Soils adjacent to the roadway could be contaminated with aerially deposited lead (ADL) from historic use of leaded gasoline and by fuels (volatile organic compounds) and total petroleum hydrocarbons from historic fuel cleanups. Lead may be present in roadway striping. Surfaces of the bridge were suspected to contain lead based paint (LBP) and potential asbestos-containing construction materials (ACM).

As part of the ISA, shallow creek bed soil sampling, shallow groundwater sampling, an ADL study, a LBP survey and a pre-demolition survey were conducted to verify the presence of the RECs. The soil and water samples were analyzed for heavy metals identified in California Code of Regulations (CCR) Title 22 and for diesel motor oil and semi-volatile organic compounds (SVOC). The studies revealed the presence of arsenic in shallow creek bed soils, metals and petroleum byproducts in shallow groundwater, ADL along roadway approach shoulders. On surfaces of the bridge, the studies confirmed the presence of LBP in bridge rail wall paint and ACM in expansion joint insulation. These materials will be removed and disposed of in accordance with professionally prepared construction specifications and in accordance with federal, state, and local regulations as part of the planned bridge demolition activities.

Project construction could also cause accidental release of hazardous materials such as a hazardous materials spill or equipment leakage. In addition, the Project will remove existing striping that could contain traces of lead. However, the Project contract specifications will require the Contractor to implement BMPs such as hazardous materials spill management and regular maintenance of vehicles to minimize potential impacts from accidental spills associated with Project construction or construction equipment. The Contractor will also be required to submit a lead compliance plan for approval by CCCPWD for potential lead in striping.

Demolition of the existing bridge will be performed in accordance with the Caltrans specifications supplemented by CCCPWD standards modified to meet environmental permit requirements. All concrete and other debris resulting from the demolition of the existing bridge and roadway will be removed from the Project site and properly disposed of by the contractor. Prior to demolition, the contractor will be required to prepare and submit a bridge demolition plan including creek diversion and bypass details for review by CCCPWD as well as other agencies as required by the environmental permits.

While the Project will not have long-term operational impacts, temporary impacts could occur during construction due to disturbance of potentially contaminated soils. The disturbance will be limited in

nature and potential for accidental release will be minimized with implementation of **Mitigation Measure HAZ -1**.

IMPACT HAZ-1:

Soil movement and bridge demolition activities could mobilize contaminants exposing construction workers, the general public, and the environment.

MITIGATION MEASURE HAZ-1:

CCCCPD will follow the following recommendations provided in the PSI to minimize potential for accidental release of contaminants. Recommendations include:

- The Bay Area Air Quality Management District will be notified through their Asbestos Notification System prior to bridge demolition in compliance with the National Emissions Standards for Hazards Air Pollutants (NESHAP).
- Waste management guidance for the proper disposal of excavated shallow soil, lead-based paint, and bridge expansion joint insulation (which must be removed prior to demolition).
- Worker safety recommendations for employees working at the site follow state and federal hazardous material handling regulations during construction activities.
- Untreated groundwater should not be discharged into natural channels or storm drains. Groundwater and any water comingled with groundwater should be treated under the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) VOC and Fuel General Permit (Order No. R2-2017-0048) prior to discharge or be discharged to the nearest sanitary sewer under pretreatment permit from either the Central Contra Costa Sanitary District or City of Concord.

With implementation of **Mitigation Measure HAZ-1**, Project impacts will be **less than significant with mitigation incorporated**.

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

There are no schools within one-quarter mile of the Project site. The closest schools are Concord Christian School (0.75 miles away), Glenbrook Middle School (1.2 miles away), Sun Terrace Elementary (1.4 miles away), and Mt. Diablo High School (1.5 miles away). Therefore, the Project will have **no impact**.

- d) *Would the project 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?*

The Department of Toxic Substances Control's (DTSC) EnviroStor database is an online search and Geographic Information System (GIS) tool for identifying sites that have known contamination or sites for which there may be reasons to investigate further. It also identifies facilities that are authorized to treat, store, dispose or transfer (TSDTF) hazardous waste. The EnviroStor database includes the following site types: Federal Superfund sites (National Priority List [NPL]); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. The EnviroStor and GeoTracker databases were searched to identify sites of concern within 1 mile of the Project site (SWRCB 2018, DTSC 2018).

The EnviroStor database did not identify any contamination sites within the footprint of Project site. One voluntary cleanup site, one military evaluation site, five tiered permit sites, and one non-operating permitted site were identified within 1 mile of the Project location. The GeoTracker database identified 10 closed leaking underground storage tank (LUST) cleanup sites, one land disposal site, one active cleanup program, and one military cleanup site within 1 mile of the Project.

To evaluate if contamination sites represent potential environmental and/or health hazards (RECs) with respect to the Project area, the proximity of the site (within 1/8 mile), occurrence of a hazardous substance release, and flow of groundwater is considered. Though groundwater generally flows to the northwest in the Project vicinity, flow directions and depths can fluctuate due to seasonal and other environmental factors. There are several sites that contribute to the potential for the Project to encounter groundwater contamination during proposed dewatering activities. Two results from the EnviroStor database is a potential concern – the military evaluation site and one of the tiered permit sites. The Concord Army Air Field military evaluation site is located 0.7 miles upstream of the Project site at the current Buchanan Field Airport. Historical records indicated that soil testing was not performed following removal and disposal of fuel tanks and an onsite waste dump. The Micropump Corps tiered permit site is located 0.5 miles upstream of the Project site. The site is currently under evaluation, and is a concern because the risk is unknown. Two results from the GeoTracker database are potential concerns – including the active cleanup program and the military cleanup site. The active cleanup site is the Kinder Morgan Concord Station, which is located 0.3 miles northeast of the Project and has a current status of “Open – Remediation as of 8/16/2008.” Potential contaminants of concern at this site include benzene, diesel, gasoline, toluene, and xylene. Although the site is located downstream of the Project, it has the potential to affect groundwater quality at the Project due to its close proximity. The military cleanup site is the Point Ozol, Fuel Terminal DFSP – Concord Pump Station, which is located 0.3 miles northeast of the Project and has a current status of “Open – Assessment & Remedial Action as of 10/24/2018.” Potential contaminants of concern for this site include aviation, fuel benzene, and TPH.

Petroleum pipelines were also identified within the Project footprint that may have historically leaked petroleum hydrocarbons to soil or groundwater.

As described in Section IX.b, soil and water sampling was conducted to verify the presence of the RECs. Due to the historic and ongoing cleanup sites surrounding the Project site, there is potential for contaminated groundwater at the Project location that would require appropriate dewatering measures to be implemented during construction. The results of the sampling analysis and the recommendation for dewatering informed Mitigation Measure **HAZ-1**.

Implementation of Mitigation Measure **HAZ-1** would reduce construction impacts from potential contamination from hazardous material sites a less-than-significant level. Therefore, Project impacts will be **less than significant with mitigation incorporated**.

- 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.*

The nearest airport to the Project is Buchanan Field Airport, located approximately 0.1 mile southwest of the Project site, and both of the potential staging areas are located within the airport property. As described in **Mitigation Measure HAZ-1**, worker safety recommendations for employees working at the site follow state and federal hazardous material handling regulations during construction activities. As discussed in

Section XIII.a, the Project will not generate excessive noise levels. Therefore, Project impacts will be **less than significant**.

- f) *Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

The Project will not change the nature of the Project site. Emergency vehicles will have access at all times during construction. Therefore, Project impacts will be **less than significant**.

- g) *Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.*

The Project site is in an area identified as at risk for wildland fires (ABAG 2016). However, no residences, gathering places, or structures are proposed by the Project and the Project does not propose uses that would put residences in danger or increase the risk of wildland fire hazards beyond what currently exists for the traveling public. Therefore, Project impacts will be **less than significant**.

X. HYDROLOGY AND WATER QUALITY

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
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"/>
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 type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would:				
i. Result in substantial erosion or siltation on- or off-site?	<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 off-site?	<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 checked="" type="checkbox"/>	<input type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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"/>

- a) *Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?*

The Project is located within the Walnut Creek Watershed. This watershed drains the east side of the Berkeley hills and the west side of Mount Diablo. The upper watershed is formed of steeply sloped canyons, and the lower watershed is formed of gently sloping alluvial floodplains with residential and urban development. The portion of the watershed that drains the Project site is 117 square miles. The Walnut Creek channel flows north under the existing bridge and merges with Grayson Creek to form Pacheco Creek, which then empties into Carquinez Strait 3.8 miles north of the Project site. Walnut Creek is designated as an impaired waterbody under the Federal Clean Water Act due to the presence of diazinon, which is a pesticide.

The drainage area in the Project site is expected to be subject to regulation by the United States Army Corps of Engineers (USACE), the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB), the State Water Resources Control Board (SWRCB) and the California Department of

Fish and Wildlife (CDFW). Impacts to the drainage area would require authorization from a Section 404 and 408 Nationwide Permits from the USACE, a Section 401 Water Quality Certification from the SFBRWQB, and a 1602 Lake and Streambed Alteration Agreement from CDFW. The Project would disturb more than 1 acre of soil and must comply with the SWRCB (National Pollution Discharge Elimination System (NPDES) Construction General Permit, which states Best Management Practices for erosion and sediment control.

There is groundwater contamination present at the Project site. Groundwater and non-stormwater discharges collected during Project construction would require authorization from a SFBRWQCB VOC and Fuel General Permit (ORDER No. R2-2017-0048) prior to discharge or be discharged to the nearest sanitary sewer under pretreatment permit from either the Central Contra Costa Sanitary District or City of Concord.

Permanent impacts to water quality result from the addition of impervious area; this additional impervious area prevents runoff from naturally dispersing and infiltrating into the ground, resulting in increased concentrated flow. The Project is anticipated to create 0.53 acres of new impervious surface because of the widening of the bridge, sidewalk, and roadways. Table 4, below, displays the disturbed soil area (DSA), existing, newly created, and replaced impervious area for the Project sites. The added impervious surface from the Project would not substantially increase the impervious surface area within Walnut Creek Watershed, which is approximately 117 square miles.

Table 4. Project Impervious Area

Impervious Areas	Area	
	(sq ft)	(ac)
Existing Impervious Area	61,201	1.40
Removed Impervious Area	5,516	0.13
Replaced Impervious Area	55,686	1.28
Added Impervious Area	23,241	0.53

Source: LSA 2018

Provision C.3 of the County Municipal Permit addresses source control, site designs, and stormwater treatment measures for new development and redevelopment projects. Upon review by the staff at the Contra Costa County Watershed Program, it was determined that the Project does not trigger C.3 requirements because it is a roadway project that does not propose additional traffic lanes.

As noted above, the Project will result in additional impervious area, which increases the amount of runoff not infiltrating into the ground. This non-infiltrated and concentrated runoff can result in the direct discharge of sediment-laden flow from the roadway to receiving water bodies if not properly stabilized. During construction, Temporary impacts to surface water quality could occur from sediment-laden discharge from disturbed soil areas, pollution laden discharge from storage or work areas, and discharge of contaminated groundwater during excavation or concrete slurries during pile installation. The Project would comply with the provisions of the NPDES Construction General Permit, which would include the preparation and implementation will require a Stormwater Pollution Prevention Plan (SWPPP) be developed for the Project that will identify potential for construction related erosion and associated sedimentation as well as accidental spill and other potential construction related water quality impacts. The SWPPP will identify BMPs to avoid and minimize this potential and will be approved by CCCPWD prior to construction. Temporary impacts are anticipated to be minimal with implementation of the SWPPP measures and BMPs.

The Project would not add additional lanes or otherwise trigger County C.3 requirements for stormwater runoff treatment, and will not directly create wastewater discharge or degrade surface or ground water quality. Accidental releases could occur during construction. However, as stated above and in **Mitigation Measure BIO-1**, a SWPPP will be prepared for the Project and standard BMPs will be implemented during construction activities to minimize sediment or pollutants from construction activities from accidentally entering the creek. Therefore, Project impacts will be **less than significant**.

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

The Project will not require any withdrawals from an aquifer or groundwater table and will have a negligible effect on groundwater recharge as the Project will not change the nature of the Project site. Therefore, the Project will have **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, in a manner which would:*

- i. *Result in substantial erosion or siltation on- or off-site?*

As discussed in Section X.a, above, although the Project would have an incremental increase in impervious surface by widening the bridge and its roadway approaches, this would not substantially increase the impervious surface area within the Walnut Creek watershed. The increase in impervious area can result in the modification of existing receiving water body hydrographs by increasing the flow volumes and rates and peak durations from the loss of unpaved overland flow and native infiltration (hydromodification). However, the Project will not result in substantial changes to the Walnut Creek hydrograph, and therefore associated impacts will not occur. The impacts of erosion on receiving waters are anticipated to be minimal. Further, although the new bridge will have higher elevation profile, a wider span, and a reduced number of supports in the channel to improve hydraulics, the existing drainage patterns would be maintained in its current condition. BMPs for erosion and sediment control as identified in **Mitigation Measure BIO-1** will be implemented during construction of the Project. Therefore, Project impacts will be **less than significant**.

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

As discussed in (i), above, the Project would introduce wider lanes and shoulders which would result in a minimal increase in impervious surface as compared to existing conditions. Surface runoff would not substantially increase. Following construction, use of the bridge and roadway would result in pollutant discharges from existing and new impervious surfaces similar to those under current conditions. Therefore, Project impacts will be **less than significant**.

- 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?*

The Project will not create or contribute runoff water that would exceed the capacity of the existing stormwater drainage system in the area. The runoff from the bridge over Walnut Creek is transported via storm drain systems and ditches to a local stormwater drain system at Marsh Drive, approximately 1,500 feet west of the centerline of the creek. The design criteria of the Project will maintain the

existing drainage patterns. The Project will not add additional travel lanes and therefore does not trigger C.3 stormwater treatment requirements.

As previously discussed, the wider lanes and shoulders would result in a minimal increase in impervious surface as compared to existing conditions. Following construction, use of the Project site (as a bridge and roadway) would result in pollutant discharges from existing and new impervious surfaces similar to those under current conditions. Improved facilities for bicyclists may encourage alternative modes of transportation, which could reduce potential for polluted runoff from vehicles. Appropriate authorizations related to water quality would be obtained from regulatory agencies prior to construction, as described in Section X.a. The bridge would be constructed to current design standards and project construction would implement BMPs during construction to avoid adverse impacts to the drainage area. Therefore, Project impacts will be **less than significant**.

iv. Impede or redirect flood flows?

The existing bridge structure obstructs the flow of Walnut Creek, resulting in debris and flood water backing up during heavy rain events. The new bridge structure would be constructed with a higher elevation profile, a wider span, and a reduced number of supports in the channel. This would improve hydraulics and reduce backwater from storm events. The new bridge would provide adequate freeboard between the bottom of the bridge and flood waters. In addition, the Project does not substantially increase the amount of impervious surface; thus, the existing drainage patterns would be maintained in its current condition and would not impede or redirect flood flows. Therefore, Project impacts will be **less than significant**.

d) In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

The Walnut Creek channel is within the Project area, which merges into Pacheco Creek and then travels 3.8 miles north to empty into the Carquinez Strait. The Carquinez Strait feeds into the San Francisco Bay and the open ocean. Waterfront areas along the Carquinez Strait could have possible risk of inundation from seiches or tsunamis. The Project, however, is limited to replacement of a bridge on an existing road and will not introduce new land uses that could be subject to inundation.

The Federal Emergency Management Agency (FEMA) produced Flood Insurance Rate Maps (FIRMs) which show Special Flood Hazard Area (SFHA). According to the associated FIRM, the Project site is located within a Zone A, which represent areas within the 100-year base floodplain where the base flood elevation has not been determined (FEMA 2009). The FEMA FIRM also shows levees along both sides of Walnut Creek in the Project vicinity. Outside of the levees, the existing commercial area east of Marsh Drive is within SFHA Zone AH, which represents areas subject to shallow flooding by the 100-year flood event (usually areas of ponding) where average depths are between one and three feet. Buchanan Airport southwest of Marsh Drive is within SFHA Zone X, which represents areas subject to the 500-year flood event.

Although the Project site is located within flood hazard areas, the Project would have no adverse impacts to flood conditions, as described in Section X.c.ii. The Project would reduce flood conditions upstream because the new bridge structure would be raised in profile elevation and have less flow obstruction (WRECO, 2019a & 2019b). As described in Section X.c., the pollutant load would not be significantly different from the existing conditions because the amount of additional impervious surface that the

Project would construct is minimal. Therefore, the Project would not risk release of pollutants due to inundation and Project impacts will be **less than significant**.

- e) *Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?*

This Project is located in both the City of Concord and in the unincorporated area of Pacheco. This area of Contra Costa County is within the limits of the San Francisco RWQCB, which established the Water Quality Control Plan (Basin Plan) for the California Regional Water Quality Control Board San Francisco Bay Region (SFRWQCB 2018).

The Basin Plan identifies general water quality objectives for inland surface waters. Generally, roadway runoff can contain the following pollutants: total suspended solids, nitrate nitrogen, total Kjeldahl nitrogen, phosphorus, ortho-phosphate, copper, lead, and zinc. The primary pollutants associated with transportation corridors are heavy metals associated with vehicle tire and brake wear, oil and grease, and exhaust emissions. These sources of pollutants are anticipated to be negligible because the Project will not increase capacity of the road. Further, the Project construction would implement source controls to prevent stormwater runoff pollutants from discharging into Walnut Creek.

The Basin Plan lists the following beneficial uses for Walnut Creek: cold freshwater habitat, fish migration, preservation of rare and endangered species, fish spawning, warm freshwater habitat, wildlife habitat, contact water recreation, and non-contact water recreation. Increased stormwater runoff from the new impervious area could degrade the beneficial use for freshwater habitat, fish migration, and fish spawning at Walnut Creek. This impact would be minimal due to the small amount of impervious area. As such, the Project would not conflict or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Therefore, Project impacts will be **less than significant**.

XI. LAND USE AND PLANNING

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a significant environmental impact due to 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 checked="" type="checkbox"/>	<input type="checkbox"/>

a) Would the project physically divide an established community?

The Project would not physically divide an established community; rather, it would likely improve commuter accessibility to areas on either side of the bridge. Therefore, the Project will have **no impact**.

b) Would the project cause a significant environmental impact due to conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

General planning policies and provisions are contained in the General Plan and the Contra Costa County Zoning Ordinance. The Contra Costa County Transit Authority is a public agency that manages the County's transportation sales tax program and is responsible for countywide transportation planning. The East Bay Regional Park District manages open space and trails within Pacheco and the City of Concord.

The proposed Project does not conflict with any applicable land use plan, policy or regulation. The Project is consistent with the Transportation and Circulation Element goals and policies of the County General Plan including (Contra Costa County 2005a):

- Roadway and Transit Goal #5-A: To provide a safe, efficient and integrated multimodal transportation system.
- Roadway and Transit Goal #5-D: To maintain and improve air quality above air quality standards.
- Roadway and Transit Goal #5-J: To reduce single-occupant auto commuting and encourage walking and bicycling.
- Roadway and Transit Goal #5-K: To provide basic accessibility to all residents, which includes access to emergency services, public services and utilities, health care, food and clothing, education and employment, mail and package distribution, freight delivery, and a certain amount of social and recreational activities.
- Roadway and Transit Goal #5-L: To reduce greenhouse gas emissions from transportation sources through provision of transit, bicycle, and pedestrian facilities.
- Roadway and Transit Policy #5-9: Existing circulation facilities shall be improved and maintained by eliminating structural and geometric design deficiencies.

- Roadway and Transit Policy #5-13: The use of pedestrian and bicycle facilities shall be encouraged. Proper facilities shall be designed to accommodate bikes, pedestrians, and transit.
- Roadway and Transit Policy #5-14: Physical conflicts between pedestrians, bicyclists, and vehicular traffic, bicyclists, and pedestrians shall be minimized.
- Roadway and Transit Policy #5-23: All efforts to develop alternative transportation systems to reduce peak period traffic congestion shall be encouraged.
- Roadway and Transit Policy #5-24: Use of alternative forms of transportation, such as transit, bike and pedestrian modes, shall be encouraged in order to provide basic accessibility to those without access to a personal automobile and to help minimize automobile congestion and air pollution.

The Contra Costa County Countywide Bicycle and Pedestrian Plan (Plan) (Contra Costa Transportation Authority 2018), formerly designated a Class I bicycle lane proposed for Marsh Drive, which provides for a completely separated right-of-way designated for the exclusive use of bicycles and pedestrians with crossflows by motorists minimized. Such paths are often located along creeks, canals, and rail lines. However, the current Plan has re-designated it as low stress bikeway. Considering the East Bay Regional Park District (EBPRD) Iron Horse Trail (Trail) terminates at the southeastern side of the bridge, the EBPRD and CCCPWD have been working closely to determine a safe Trail extension and crossing of Marsh Drive. This Project is the opportunity for EBPRD to close this gap. Connecting to the west side of Walnut Creek is the first crucial step to connecting the Trail westward to Martinez and the San Francisco Bay Trail across Benicia Bridge. EBPRD has identified the preferred alignment of this trail to the north of Marsh Drive. The EBPRD has identified the safest connection to be a Class IV bikeway with a concrete barrier separated bike/pedestrian pathway or bikeway. While the Plan formally designated a Class I bicycle facility along Marsh Drive bridge, the bridge can accommodate a Class IV facility. Therefore, the Project is consistent with this Plan.

CCCPWD has an adopted Habitat Conservation Plan/Natural Community Conservation Plan; however the Project is not within the plan's inventory area.

Based on the analysis above, the Project is consistent with environmental land use policies or plans. Therefore, Project impacts will be **less than significant**.

XII. MINERAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss or 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"/>

- a) *Would the project 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?*

Mineral resources such as crushed rock, sand, and other resources, are important minerals in the region as they provide the necessary components for construction materials including asphalt and concrete for current and future development in the region. According to the Conservation Element chapter in the County General Plan (Contra Costa County 2005b), there are no mapped mineral resource areas near the Project. Therefore, the Project will have **no impact**.

- b) *Would the project 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?*

There are no mapped mineral resource areas near the Project. Therefore, the Project will have **no impact**.

XIII. NOISE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Generate excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- a) *Would the project generate 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?*

The general land use in the bridge vicinity is urban with commercial properties surrounding the bridge and Marsh Drive. Buchanan Field Airport is located on the southwestern side of the bridge. The closest noise receivers are various residents located along Marsh Drive, approximately 2,000 feet southwest of the Project site. In addition, residences are located within 50 feet of the temporary construction staging area location near Marsh Drive and Sahara Drive/Sally Ride Drive.

Contra Costa County does not have a noise ordinance for construction noise, however, the Contra Costa County General Plan Noise Element of the General Plan specifies that construction activities shall be concentrated during the hours of the day that are not noise-sensitive for adjacent land uses and should be commissioned to occur during normal work hours of the day to provide relative quiet during the more sensitive evening and early morning periods (Contra Costa County 2005e). Implementation of Mitigation Measures NOISE-1a, as described below, complies with the Noise Element.

The City of Concord noise ordinance states that the Concord Municipal Code section 62-32(1)cc restricts the hours that construction work can take place, unless otherwise allowed by prior authorization of the City of Concord. The allowed construction times are Monday – Friday 7:30 a.m. to 6:00 p.m. and if necessary, weekends 8:00 a.m. to 5:00 p.m. unless prior approval from the CCCPWD Resident Engineer, and City is obtained to work beyond these hours.

Long-term operation of the Project would not contribute to noise levels in excess of standards. The Project will not increase capacity of the road and no significant changes to topography would occur. The bridge replacement will not change the distance of the travel way from nearby receptors and related changes in roadway noise will be negligible.

The Project will have construction impacts caused by an increase in ambient noise associated with Project construction. These impacts, however, would be short-term and temporary in nature. In general, construction equipment generates noise levels ranging from approximately 74 to 90 dBA at 50 feet from the noise source, with higher levels up to 101 dBA for less typical equipment such as pile drivers and rock drills (USDOT 2006). Construction activities for this Project will fall within a typical range between 55 to 85 dBA at 50 feet. Implementation of **Mitigation Measures NOISE-1a** and **NOISE-1b** would reduce this short-term construction period noise impact to a **less-than-significant** level.

IMPACT NOISE-1:

Project construction will result in a temporary increase in ambient noise levels.

MITIGATION MEASURE NOISE-1a:

Construction activities shall be limited to non-sensitive hours for adjacent land uses (generally between 7:30 a.m. to 6:00 p.m.) consistent with the Contra Costa County General Plan Noise Element and the City of Concord Noise Ordinance. If work is necessary outside of these hours, the City and CCCPWD shall both approve the extended work hours and the Project construction contractor/Resident Engineer will be available to address any noise concerns during construction.

MITIGATION MEASURE NOISE-1b:

The Project Contractor shall employ the following noise-reducing practices during Project construction:

- 1) Equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers' standards.
- 2) Locate equipment staging in areas that would create the greatest possible distance between construction-related noise sources and noise-sensitive receptors nearest the active Project site during all Project construction.
- 3) Designate a “disturbance coordinator” who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaint (e.g., starting too early, bad muffler) and would determine and implement reasonable measures warranted to correct the problem.

Therefore, Project impacts will be **less than significant with mitigation incorporated**.

b) Would the project generate of excessive groundborne vibration or groundborne noise levels?

Excessive ground-borne vibration from construction activities resulting from equipment such as pile drivers will not be used to construct the Project. As an alternative to reduce noise and vibrations compared to driven piles, cast-in-drilled hole shafts would be used for the abutment and bent piles. Some ground-borne vibration may result from construction but will not be excessive based on the types of construction equipment that will be used and will be short term in nature. Therefore, Project impacts will be **less than significant**.

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

The Project is adjacent to the Buchanan Field Airport. As described above in Section XIII.a, the Project will not generate excessive noise levels beyond existing conditions. While Project construction will result in an increase in ambient noise, it will be temporary and **Mitigation Measures Noise 1a** and **1b** will be implemented. Therefore, Project impacts will be **less than significant with mitigation incorporated**.

XIV. POPULATION AND HOUSING

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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"/>

- a) *Would the project 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)?*

The Project does not include new homes or businesses that could directly induce population growth. The Project will not increase the vehicle capacity of the roadway. No other infrastructure is proposed that could indirectly induce population growth. Therefore, the Project will have **no impact**.

- b) *Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?*

The Project will not displace any existing housing or any people; as such, no replacement housing is necessary. Therefore, the Project will have **no impact**.

XV. PUBLIC SERVICES

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

- a) *Would the project 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?*

The Project will not result in new development that could increase demand on public services and therefore will not necessitate the construction of new facilities or the alteration of facilities that could result in environmental impacts. Because the Project will not result in population growth, nor does it propose land uses that increase demand on police and fire services, the Project will not impact service ratios, response times or other performance objectives for fire protection, police protection, schools, parks, or other public facilities. Therefore, the Project will have **no impact**.

XVI. RECREATION

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- a) *Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*

One recreation facility is located in the Project area. The Iron Horse Regional Trail is a multi-use hiking and bicycle trail that is managed and maintained by the East Bay Regional Park District (EBRPD). The trail currently terminates at Marsh Drive on the southeast corner of the existing bridge. The EBRPD has a master plan for the Iron Horse Trail to cross the Walnut Creek channel along the Marsh Drive bridge and then continue north along the west side of the channel (EBRPD 2013). Upon learning of this Project, EBRPD requested for CCCPWD to include their planned trail on the new bridge and provided planning documents. The Project will include a separated path on the south side of the new bridge that will tie into the existing Iron Horse Trail, which would support the EBRPD master plan.

The Project will increase bicycle and pedestrian access to Iron Horse Regional Trail, and therefore may increase trail usage. Any additional usage would not reasonably contribute to substantial deterioration of facilities, as the trail was designed for public usage and is consistent with long term plans. Further, the Project will have a beneficial impact as it will provide a safe connection over the new bridge for a future trail extension along the west side of Walnut Creek planned by EBRPD. Therefore, Project impacts will be **less than significant**.

- b) *Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?*

As described in Section XVI.a., the Project will construct a separated bike path on the new bridge. Project-related activities include minor improvements necessary to connect to the existing Iron Horse Regional Trail, and will not affect the main elements of the existing trail. Any potential physical adverse effect on the environment would be addressed by the mitigation measures discussed in Section IV. Biological Resources, Section V. Cultural Resources, and Section XII. Noise. Therefore, Project impacts will be **less than significant**.

XVII. TRANSPORTATION

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3 subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- a) *Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?*

The Contra Costa Transportation Authority (CCTA) functions as the County's principal transportation planning agency and Congestion Management Agency. The applicable plans adopted by CCTA are the *2017 Update of the Contra Costa Congestion Management Program* (CCTA 2017) and the *2018 Countywide Bike and Pedestrian Plan* (CCTA 2018). In addition, the Transportation and Circulation Element of the County General Plan includes transportation goals and policies (Contra Costa County 2005a).

The Project does not include elements that could increase traffic on local roadways (for example residential or commercial land uses). Changes to the roadway are limited to the replacement of an existing bridge, the addition of a multi-use trail, and roadway realignment adjacent to the bridge to bring the bridge up to current design standards. This would not substantially change the configuration of the road or increase capacity. As such, the Project will not conflict with plans, ordinances or policies that establish measures of effectiveness for roadway performance.

According to the Countywide Bicycle and Pedestrian Plan, a Class I bicycle lane has been proposed for the Project segment along Marsh Drive to connect the Iron Horse Regional Trail, which currently terminates at the southeast corner of the bridge. A Class I bicycle lane is defined as a completely separated pathway that is designated for the use of pedestrians and bicycles. Through Project implementation, a separated path will be constructed that meets the Caltrans definition of a Class IV Protected Bikeway – which is consistent with the Countywide Bicycle and Pedestrian Plan. This is also consistent with General Plan Policy 5-L, which encourages increased opportunity for bicycle use for recreation as well as transportation.

According to the East Bay Regional Park District 2013 Master Plan Map, the Iron Horse Regional Trail (which connects to the Anza National Historic Trail) is the only Trail or Parkland along the Project length (EBRPD 2013). It is planned for the Iron Horse Regional Trail to continue north of the bridge, which would be facilitated by this Project.

County Connection provides public transit for central Contra Costa County, including the City of Concord. There is a bus stop on each side of the road on the west side of the bridge, however, they are no longer serviced because County Connection restructured its routes in 2019.

The existing bridge will be demolished while the new bridge is being constructed which will provide for traffic to move through the Project area, however there will be some temporary construction impacts to vehicle traffic on Marsh Drive. Minor delays will occur, and up to 30-minute delays during bridge girder installation, however, no full vehicle detours are anticipated and traffic lanes will be maintained using staged construction. In order to ensure traffic impacts to the Iron Horse Regional Trail in the Project area are minimized during construction activities, the Project contract specifications will require the construction contractor to implement the following avoidance measures:

IMPACT TRA-1:

The Project will result in temporary disruption to traffic on Marsh Drive and access to Iron Horse Regional Trail.

MITIGATION MEASURE TRA-1:

- 1) Publish press release in local newspapers seven days before construction start date.
- 2) Letter notification to local residents seven calendar days in advance of construction.
- 3) Advance letter notification to local emergency response services to allow them to plan for alternate routes.
- 4) Placement of portable changeable message signs at various locations in Project vicinity with construction start and road closure dates and period at least seven calendar days in advance of start dates.
- 5) Provide accessibility to driveways to properties outside the Project area throughout the project.
- 6) No full lane closures allowed during commute hours; at off-peak hours one lane of Marsh Drive may be temporarily closed during active construction; reopening of lanes at the end of each working day.
- 7) Temporary lane closures may be scheduled at times of minimal traffic volumes such as nights, weekends, and off-commute hours where low traffic volumes are expected.
- 8) Traffic control including flaggers will be used as warranted to adjust flow as vehicle volume increases in either direction.
- 9) Placement of construction zone speed limits.
- 10) Emergency vehicle access at all times.

While the traveling public and trail users may be temporarily impacted by Project construction, **Mitigation Measure TRA-1** will minimize potential impacts. For the reasons stated, the Project does not conflict with applicable plans. Therefore, Project impacts will be **less than significant with mitigation incorporated**.

- b) *Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?*

According to Section 15064.3 (b) (2), transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. The Project will not impact vehicles miles traveled because it will not increase capacity. Further, the Project will provide

a bicycle facility which provides an alternative mode of transportation that would reduce number of VMT. Therefore, Project impacts will be **less than significant**.

- c) *Would the project substantially increase hazards due to a geometric design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?*

The Project will not increase hazards due to a design feature. The purpose of the Project is to bring Marsh Drive road up to current design standards, including to realign the roadway approaches at the bridge to increase the curve radiuses for driver safety. During construction, the Project contract specifications will require the Contractor to implement measures to minimize potential construction impacts. Therefore, Project impacts will be **less than significant**.

- d) *Would the project result in inadequate emergency access?*

Emergency vehicles will have access through the Project site at all times. Contract specifications will require the Contractor to notify local authorities of the Contractor's intent to begin work at least 5 days before work is scheduled to begin. The Contractor will be required to cooperate with local authorities relative to handling traffic through the Project area and will make arrangements relative to keeping the work area clear of parked vehicles. Therefore, Project impacts will be **less than significant**.

XVIII. TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
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 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, 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"/>

a) *Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:*

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)*

As discussed in Section IV, no listed or eligible resources are present in the Area of Potential Effect (APE). Marsh Drive bridge was determined not eligible for listing according to the Caltrans Bridge Inventory.

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, the lead agency shall consider the significance of the resource to a California Native American tribe.*

The Wilton Rancheria Tribe has submitted a general request letter to be notified of Projects within Contra Costa County under AB52. On April 25, 2016 an offer to consult was sent to the AB52 contact designated in the Wilton Rancheria general request letter. No responses were received from Wilton Rancheria in regards to AB52 consultation. See Section V. Cultural Resources for a discussion regarding consultation efforts under Section 106 of the National Historic Preservation Act.

Mitigation Measures CUL-1 and CUL-2 will be implemented to minimize unanticipated impacts to previously undiscovered resources. Therefore, Project impacts will be **less than significant with mitigation incorporated**.

XVIV. UTILITIES AND SERVICE SYSTEMS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater, 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"/>
b) Have sufficient water supplies available to serve the project and reasonable foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 type="checkbox"/>	<input checked="" type="checkbox"/>
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"/>
e) Comply with federal, state and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- a) *Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater, drainage, electric power, natural gas, or telecommunications facilities the construction of which could cause significant environmental effects?*

The Project does not include nor will it require construction of new water or wastewater treatment facilities or expansion of existing facilities. There are no existing overhead utilities at the project site; however, there are existing electrical and communication utility lines located along the south side of the bridge deck. These utility lines will need to be relocated onto the northern portion of the new bridge after the first stage of construction is complete. Accommodations will be made to provide utility openings within the new bridge structure for these utilities as well as space for potential future underground utilities. There is also an existing 21-inch-diameter Central Contra Costa Sanitary District line running north-south along the eastern levee, and there are utilities that have been bored under the creek on both the northern and southern sides of the bridge. Utilities that are bored under the creek on the southern side of the existing bridge include high-risk, 8-inch-diameter Kinder-Morgan and 16-inch-diameter Phillips 76 petroleum pipelines, as well as a 30-inch-diameter Contra Costa Water District water line. There is another abandoned 16-inch-diameter Phillips 76 petroleum pipeline bored under the creek on the northern side of the existing bridge. At this time, there are no anticipated relocations of any lines bored

under the creek for the Project (LSA 2019b). CCWD owned hydrant and valving on 8" waterline will require relocation west of the bridge to accommodate the project.

The impacts associated with minor drainage modifications are analyzed in Section X and were found to be less than significant. No other stormwater drainage facilities are proposed or will be necessary for implementation of the Project. Utility and drainage relocations would be done in compliance with all applicable regulations and would not cause a significant environmental impact. Therefore, Project impacts will be **less than significant**.

- b) *Have sufficient water supplies available to serve the project and reasonable foreseeable future development during normal, dry and multiple dry years?*

The Project will not require water service, and any water needed during construction would be provided by water trucks from off-site water sources. Therefore, the Project will have **no impact**.

- c) *Would the project 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?*

The Project does not require wastewater treatment services. Therefore, the Project will have **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?*

The Project will not generate operational waste. However, a small amount of construction waste including vegetative matter, asphalt, and concrete will be generated. The County has active solid waste facilities with capacity to accommodate any construction waste that may be generated (CalRecycle 2018). In addition, Project contract specifications will require that the Contractor dispose of solid waste, including demolition material, in accordance with all federal, state and local regulations. Therefore, Project impacts will be **less than significant**.

- e) *Would the project comply with federal, state and local management and reduction statutes and regulations related to solid waste?*

As stated above, Project contract specifications will require that the Contractor dispose of solid waste in accordance with all federal, state and local regulations. Therefore, Project impacts will be **less than significant**.

XX. WILDFIRE

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

- a) *Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?*

The Project will not change the nature of the Project site. Emergency vehicles will have access at all times during construction. Therefore, the Project will have **no impact**.

- b) *Would the project, 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?*

The Project will not change the nature of the Project site. No improvements are proposed that would exacerbate a wildfire risk. Construction activities may result in unanticipated fires however the Project construction contractor will have a fire safety plan and will be equipped appropriately. Therefore, Project impacts will be **less than significant**.

- c) *Would the project 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?*

The Project will not change the nature of the Project site. Construction activities, including utility relocations, may result in unanticipated fires however the Project construction contractor will have a fire safety plan and will be equipped appropriately. Therefore, Project impacts will be **less than significant**.

- d)

Would the project 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?

The Project will not change the nature of the Project site. Therefore, the Project will have **no impact**.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish and 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"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project 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"/>

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2005c: Chapter 9: Open Space Element:
2005d: Chapter 10. Safety Element
2005e: Chapter 11. Noise Element

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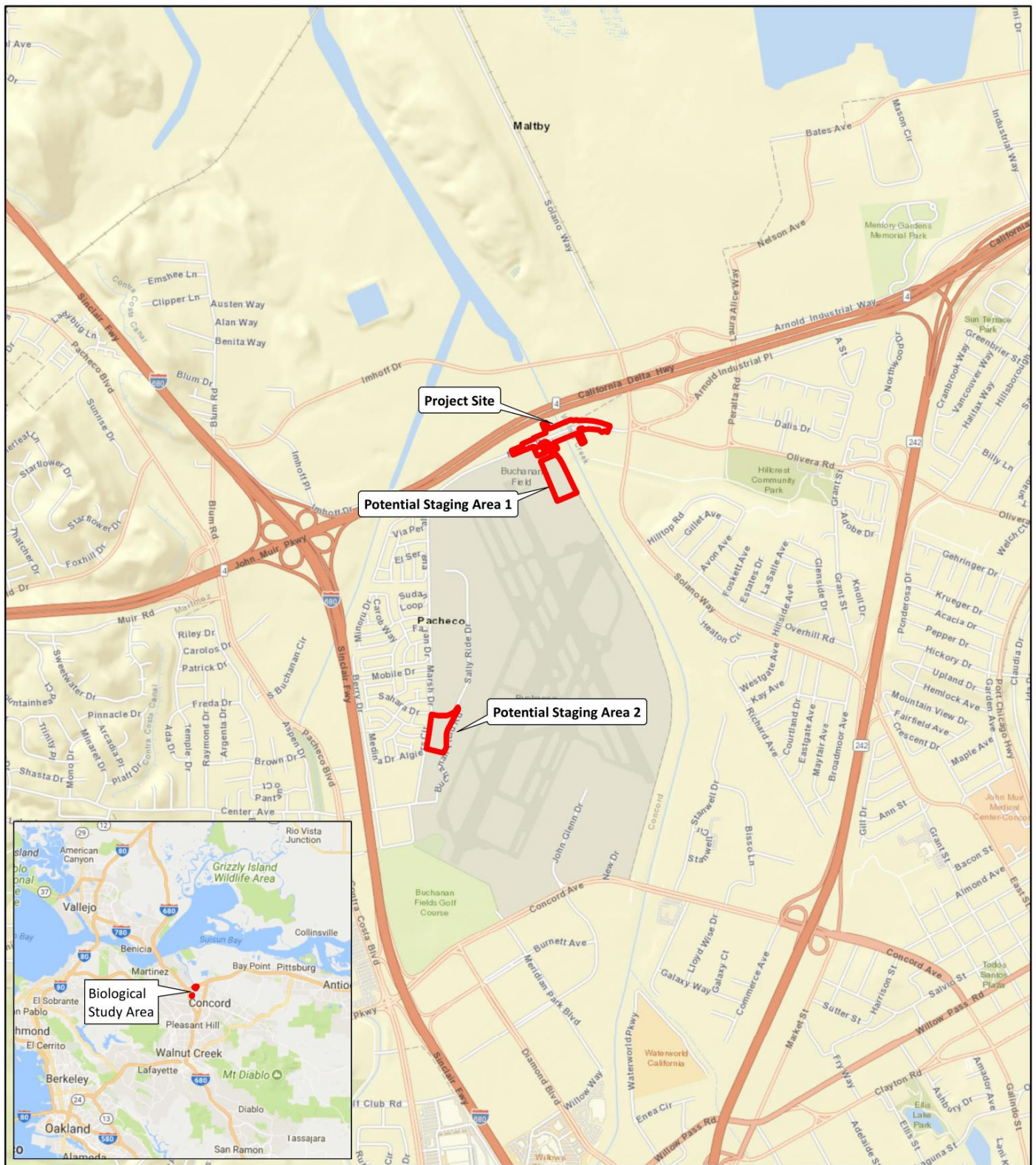
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FIGURES



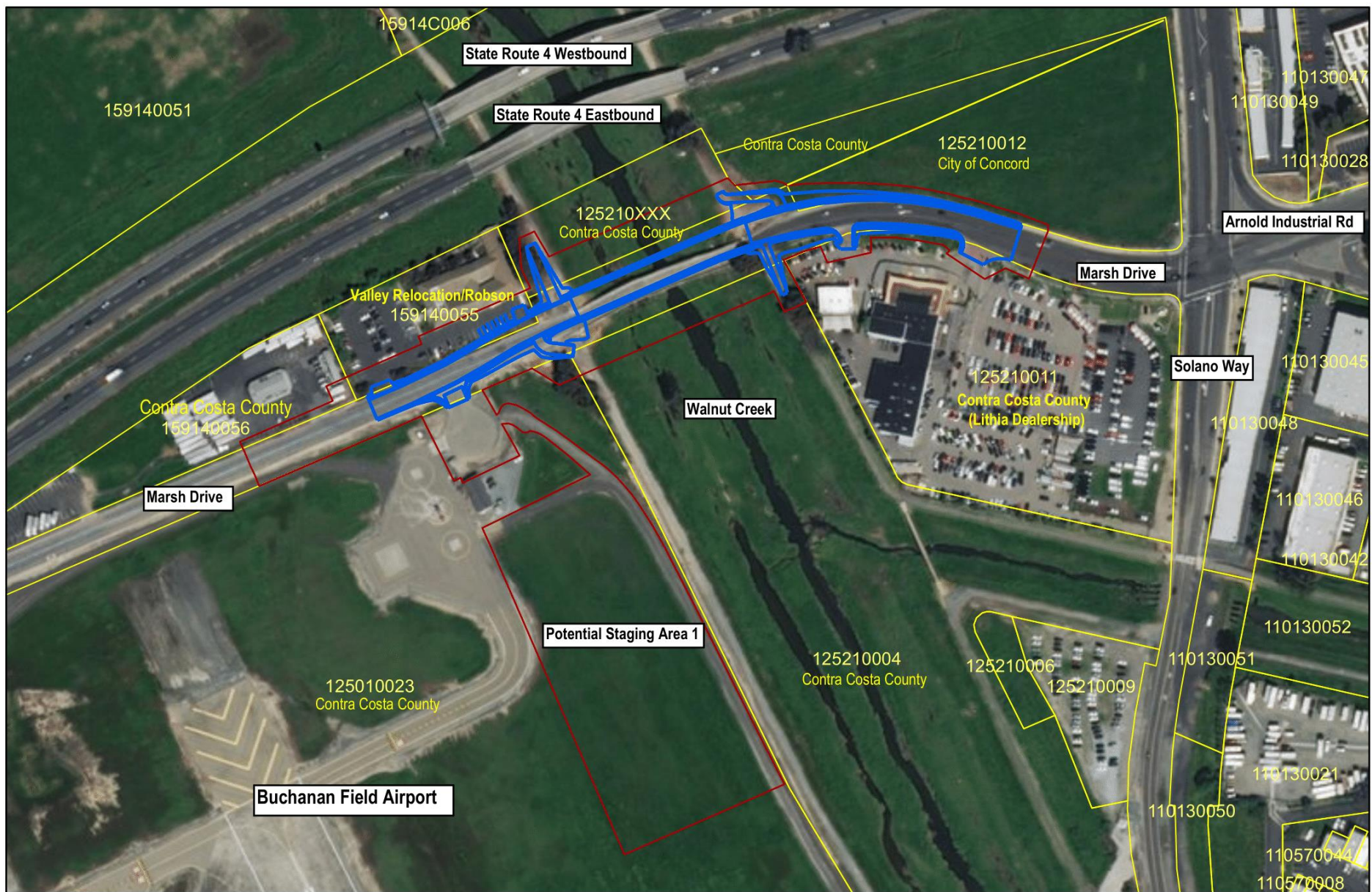
LEGEND

Biological Study Area

FIGURE 1

Contra Costa County Public Works Department
Marsh Drive Bridge (28C-0442) Replacement
Concord, Contra Costa County, California

FIGURE 1: Project Location



Legend



- Proposed Roadway Alignment
- Project Area Boundary

Contra Costa County Public Works Department
Marsh Drive Bridge (28C-0442) Replacement
Concord, California
CP# 16-35

FIGURE 2: Project Area Overview

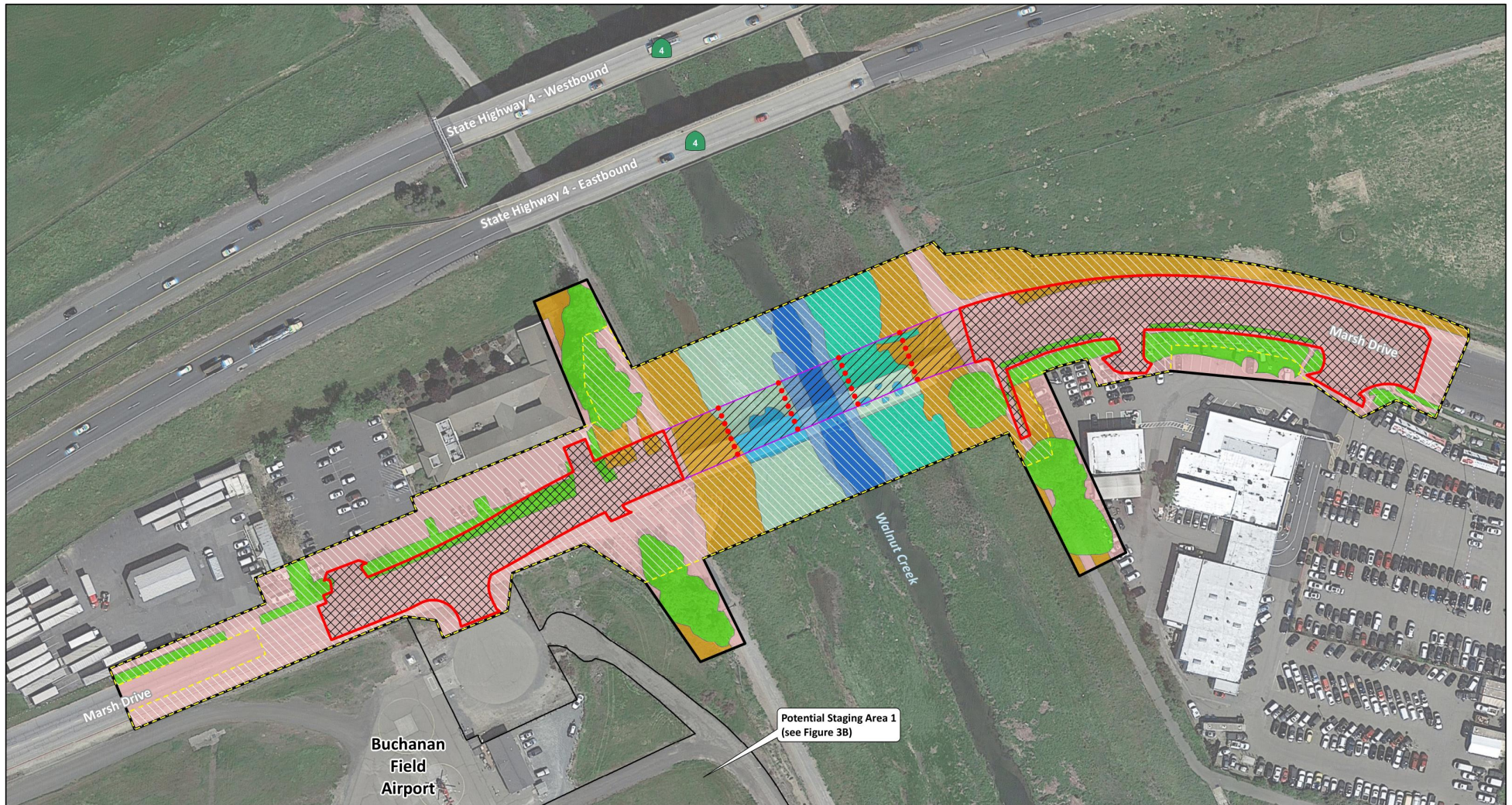


FIGURE 3a: Biological Study Area

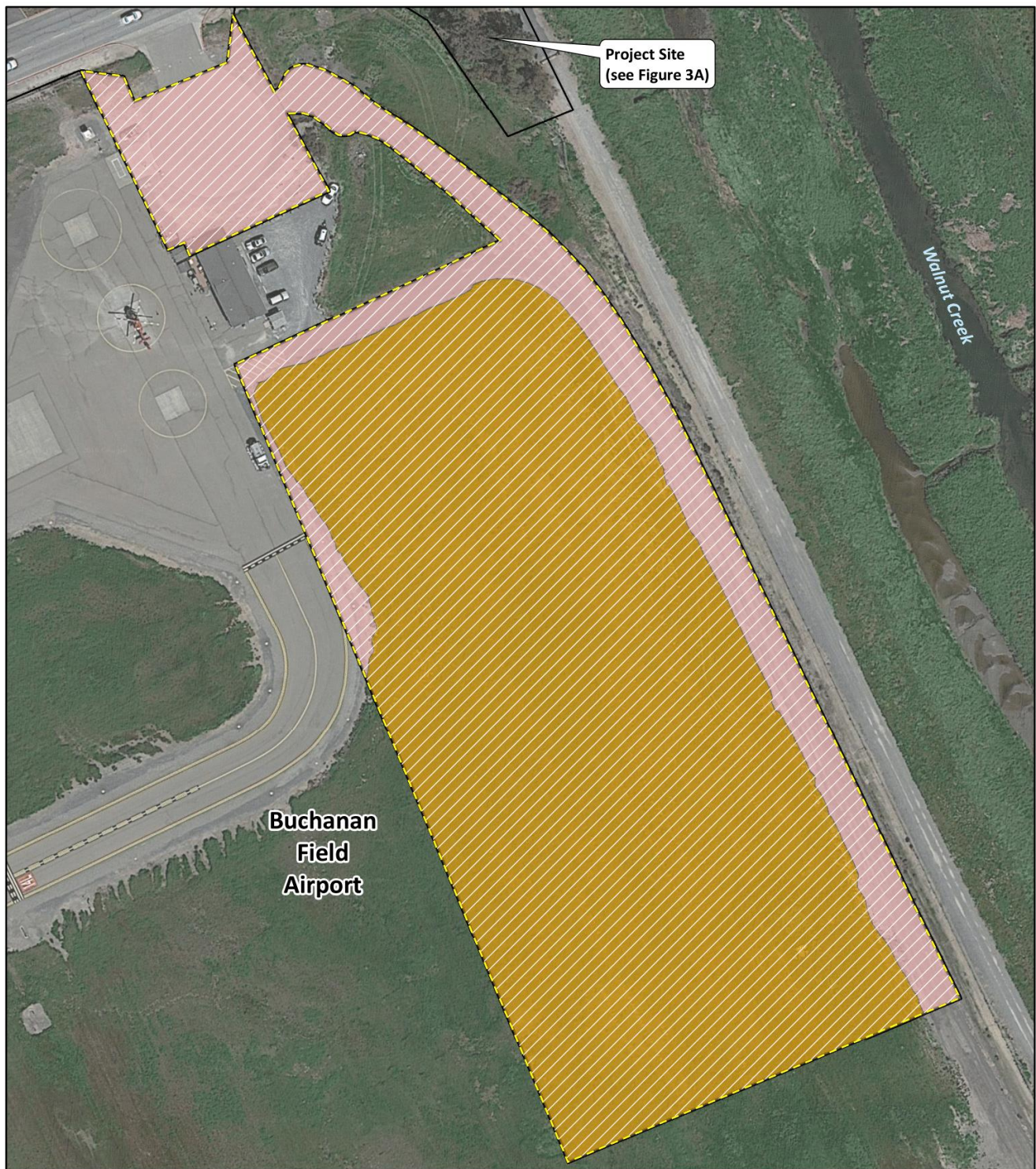
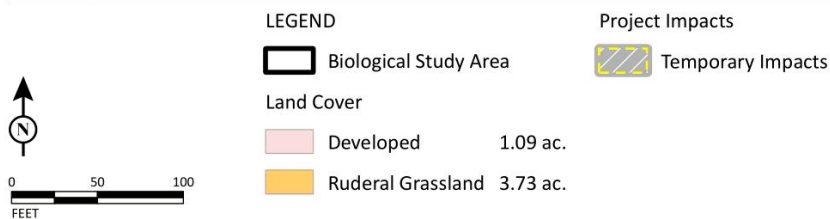


FIGURE 3B



Contra Costa County Public Works Department
Marsh Drive Bridge (28C-0442) Replacement
Concord, Contra Costa County, California

Land Cover Types and Impacts –
Potential Staging Area 1

SOURCE: Google (c)2018.

I:\CCC1803\GIS\Maps\NES\Figure 3B_Land Cover Types and Impacts - Potential Staging Area 1.mxd (10/10/2018)

FIGURE 3b: Biological Study Area



FIGURE 3C

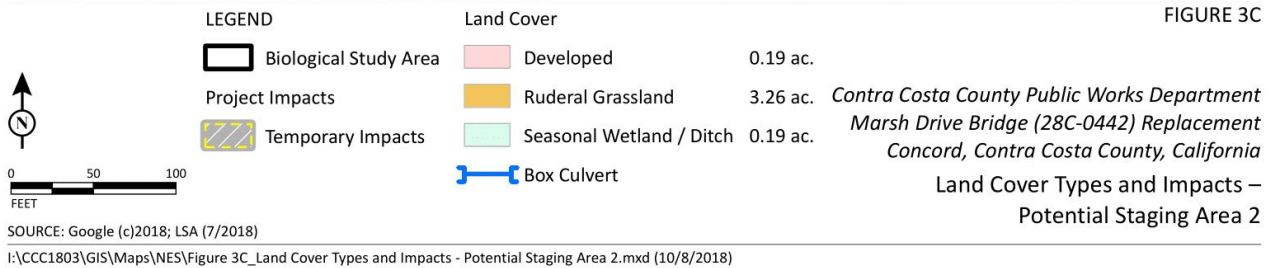


FIGURE 3c: Biological Study Area

APPENDIX A

MITIGATION MONITORING REPORTING PLAN

Mitigation Monitoring and Reporting Plan

The following Mitigation Monitoring and Reporting Program (MMRP) identifies the Mitigation Measures that will be implemented as part of the Marsh Drive Bridge (28C-0442) Over Walnut Creek Replacement Project. The Contra Costa County Public Works Department (CCCPWD) or its Contractors under the supervision of CCCPWD will be responsible for implementing the following measures. CCCPWD will be responsible for monitoring to ensure the following measures are implemented.

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
IV. BIOLOGICAL RESOURCES					
BIO-1: Disturbance special-status species and their habitats	MITIGATION MEASURE BIO-1: Biological Resources Protective Measures				
	1) Prior to start of construction, temporary high visibility ESA silt fence will be placed at the upstream and downstream ends of the Project site from the top of one levee to the top of the opposite levee to preclude impacts beyond the project footprint and to deter species from entering the work area. The limits will be staked by a qualified biologist. Fencing will be removed at the end of the first year of construction and reinstalled at the beginning of the second year.	Prior to and during construction	CCCPWD; Construction Contractor; Qualified Biologist	CCCPWD	
	2) Prior to the start of construction in each year, construction personnel will be trained by a qualified biologist on all required avoidance and minimization measures as well as permit requirements.				
	3) Flowing water will be protected from demolition and construction activities by diverting the stream into pipes/culverts through the active construction zone. Downstream flow will be maintained at all times.				
	4) Temporary coffer dams used to redirect flow will consist of sheet piles, gravel bags, water-filled bladder dams, or another agency-approved material. Any water pumped from the work area will be allowed to settle to reduce turbidity prior to being released back into the creek. Temporary coffer dams and diversion pipes will be removed from the creek prior to the winter rainy season in each year. The contractor will be required to prepare and submit a water diversion plan for review and approval by CCCPWD as well as other regulatory agencies as required by the environmental permits.				
	5) During removal of the existing bridge, a tarp or other approved method will be used below the bridge to prevent debris from falling into Walnut Creek. The tarp will be left in				

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
BIO-1: Disturbance special-status species and their habitats	<p>place until the bridge is removed. The contractor will be required to prepare and submit a demolition plan for review and approval by CCCPWD as well as other regulatory agencies as required by the environmental permits. As described in Section III.b, best management practices will be implemented to control dust which will minimize impacts to biological resources.</p> <p>6) During excavation for the demolition and replacement work, the contractor will be required to separately excavate and stockpile wetland topsoils from soil layers beneath. These soil layers will be backfilled in the same order as excavated. Stockpiled soils will be windrowed no higher than 6 feet and shall be covered with a filter fabric or burlap; not plastic.</p> <p>7) Within 1 month of completion of temporary excavation and re-grading work, the surfaces shall be smoothed to pre-project grades and shall be re-seeded using a wetland erosion control seed mix containing native wetland plant species currently found on the project site.</p> <p>8) CCCPWD will require the construction contractor to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) in accordance with the National Pollution Discharge Elimination System (NPDES), Construction General Permit as required under Section 402 of the Clean Water Act. The SWPPP will identify water pollution control and construction-waste containment measures to be implemented during and after Project construction, including but not limited to:</p> <ul style="list-style-type: none"> • Trash generated by the Project will be promptly and properly removed from the site daily. • All refueling of construction and maintenance vehicles will occur in paved areas away from the top of bank of the Walnut Creek channel. Runoff from these paved areas will not be allowed to flow into the creek. • Hazardous material absorbent pads and similar 	<p>Prior to and during construction</p>	<p>CCCPWD; Construction Contractor; Qualified Biologist</p>	<p>CCCPWD</p>	

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
BIO-1: Disturbance special-status species and their habitats	<p>materials will be available on site in the event of a spill that could potentially impact jurisdictional waters.</p> <ul style="list-style-type: none"> • Appropriate erosion control measures (e.g., fiber rolls, filter fences) will be used on site to reduce siltation and runoff of contaminants into the stream. Filter fences and mesh will be of material that will not entrap reptiles and amphibians. Fiber rolls will not contain plastics of any kind. Erosion control blankets will be used as a last resort because of their tendency to biodegrade slowly and to trap reptiles and amphibians. • No erodible materials will be deposited into watercourses. Brush, loose soils, or other debris material will not be stockpiled within stream channels or on adjacent banks. • Active construction areas will be watered regularly. <p>9) Temporarily affected areas will be restored to pre-Project conditions. Before October 31 and/or immediately after construction is complete, all exposed soils will be stabilized to reduce the effects of erosion.</p>	Prior to and during construction	CCCPWD; Construction Contractor; Qualified Biologist	CCCPWD	
BIO-2: Accidental Introduction of New Invasive Species	<p>MITIGATION MEASURE BIO-2: Invasive Species Protective Measures</p> <p>To prevent the accidental introduction of new invasive species into the Project Site during construction, the County will require that the Project contractor implement the following control measures:</p> <ol style="list-style-type: none"> 1) Only certified noxious weed-free erosion control materials will be used. All straw and seed material will be certified as weed-free prior to being used at the Project site. 2) Contractor will wash all construction equipment prior to bringing it onto the job site. Inspection will ensure that equipment arrives on site free of mud and seed-bearing material. 3) Any reseeded of disturbed soil areas and newly constructed slopes will use an appropriate native seed mix as specified in the plans and specifications. 	Prior to and during construction	CCCPWD; Construction Contractor	CCCPWD	

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
BIO-3: Disturbance to Fall/Late-fall Run Chinook Salmon	MITIGATION MEASURE BIO-3: Fall/Late-fall Run Chinook Salmon Protective Measures				
	1) The Project will limit construction within the channel to the period between May 1 and October 31 to largely avoid the spawning season. 2) Prior to installation of the flow diversion, a qualified fisheries biologist will install a fish barrier (e.g., ¼-inch galvanized hardware cloth) upstream and downstream of the work area, including the area needed for coffer dam installation and flow diversion pipes. A qualified biologist will then use a seine and/or a dip net to capture fish within the work area and relocate them to a suitable area downstream of the fish barrier prior to the installation of the coffer dams. The qualified biologist will be present during coffer dam installation and dewatering of the work area. During dewatering, the biologist will visually survey the work area and will use a seine and/or a dip net to capture and relocate any remaining fish. Electrofishing may be implemented to ensure that all of the fish are removed from the work area.	Prior to and during construction	CCCPWD; Construction Contractor; Qualified Biologist	CCCPWD	
BIO-4: Disturbance to Western Pond Turtle	MITIGATION MEASURE BIO-4: Western Pond Turtle Protective Measures				
	A qualified biologist will conduct a preconstruction survey for western pond turtles on the 1st day of work immediately prior to the start of work to ensure no individuals present. Once a temporary high visibility ESA silt fence is installed at the upstream and downstream ends of Project site and all vegetation has been cleared, a designated construction monitor (trained by the qualified biologist), will inspect the work area for western pond turtles anytime work activity ceases for 2 days or more. If a western pond turtle is observed by the construction monitor in the immediate work area, no work will commence in the area of the sighting until the turtle has moved out of harm's way or the qualified biologist has arrived at the site and relocated the turtle.	Prior to and during construction	CCCPWD; Construction Contractor; Qualified Biologist	CCCPWD	
BIO-5: Disturbance to Western Burrowing Owl	MITIGATION MEASURE BIO-5: Western Burrowing Owl Protective Measures				
	A qualified biologist will conduct a preconstruction survey within Potential Staging Area 2 to identify potential burrows and owls no more than 30 days prior to construction. The survey will be conducted in accordance with CDFW survey guidelines. During the breeding season (February 1-August 31), surveys will	Prior to and during construction	CCCPWD; Construction Contractor; Qualified Biologist	CCCPWD	

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
BIO-5: Disturbance to Western Burrowing Owl	<p>document whether burrowing owls are nesting in or directly adjacent to disturbance areas. During the non-breeding season (September 1-January 31), surveys will document whether burrowing owls are using habitat in or directly adjacent to any disturbance area. Survey results will be valid only for the season (breeding or non-breeding) during which the survey is conducted. All burrows or burrowing owls will be identified and mapped.</p> <p>If burrowing owls are found during the breeding season (February 1–August 31), the Project will avoid all nest sites that could be disturbed by Project construction during the remainder of the breeding season or while the nest is occupied by adults or young. Avoidance will include establishment of a non-disturbance buffer zone. Construction may occur during the breeding season if a qualified biologist monitors the nest and determines that the birds have not begun egg-laying and incubation or that the juveniles from the occupied burrows have fledged. During the non-breeding season (September 1-January 31), the Project should avoid the owls and the burrows they are using, if possible. Avoidance will include the establishment of a buffer zone.</p> <p>If occupied burrows for burrowing owls are not avoided, passive relocation will be implemented. Owls should be excluded from burrows in the immediate impact zone or within a 160-foot buffer zone by installing one-way doors in burrow entrances. The doors should be in place for 48 hours prior to excavation, and the Project site should be monitored daily for 1 week to confirm that the owl has abandoned the burrow. Whenever possible, burrows should be excavated using hand tools and refilled to prevent reoccupation in accordance with CDFW guidelines. Plastic tubing or a similar structure should be inserted in the tunnels during excavation to maintain an escape route for any owls inside the burrow. The applicant may conduct burrow management (i.e., regular surveys to find and proactively collapse unoccupied yet suitable burrows) in advance of and during construction to lower the likelihood of owls occupying burrows within the Project area.</p>	<p>Prior to and during construction</p>	<p>CCCPWD; Construction Contractor; Qualified Biologist</p>	<p>CCCPWD</p>	

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
BIO-6: Disturbance to Nesting Birds	MITIGATION MEASURE BIO-6: Nesting Bird Protective Measures				
	<p>The following will be completed to avoid potential impacts to nesting birds:</p> <ol style="list-style-type: none"> 1) To reduce the likelihood of birds establishing nests in the construction zone, vegetation in the project vicinity may be removed prior to the start of the nesting season (February 15). Similarly, potential nest trees that will be eliminated as part of the project and old, inactive swallow and finch nests on the bridge may be removed prior to the start of the nesting season. Swallows and finches may also be prevented from nesting on the bridge through the installation of netting or other exclusionary measures if they are installed prior to the start of nesting. 2) A preconstruction nesting bird survey will be conducted by a qualified biologist prior to construction activities that take place during the nesting season (February 15-August 31), including any removal of vegetation at the project site. The survey will be conducted no more than 7 days prior to the start of construction. Buffers will be placed around any nests that are found during the survey. No work will be conducted within the buffers until the qualified biologist has determined that the nesting attempt is complete. Buffers for songbird nests are generally on the order of 50 to 100 feet, with the precise distance determined by the qualified biologist conducting the preconstruction survey based on species, nest site characteristics, and the acclimation of the nesting birds to disturbance. Repeated bird nesting surveys of the existing bridge and removal of nest starts may be needed to prevent swallow and house finch nesting throughout the construction season. The project is not expected to result in direct impacts to nesting birds with implementation of these measures. 	Prior to and during construction	CCCPWD; Construction Contractor; Qualified Biologist	CCCPWD	

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
V. CULTURAL RESOURCES					
CUL-1: Disturbance to unidentified historical resources	Mitigation Measure CUL-1: BMPs				
	<p>The following Best Management Practices will be implemented during Project construction if unanticipated potential historic or pre-historic archaeological resources are encountered.</p> <ol style="list-style-type: none"> 1) Contractor will be notified of the possibility of encountering historic or pre-historic archaeological materials during ground-disturbing activities and will be educated on the types of historic and pre-historic archaeological materials that may be encountered. 2) If an inadvertent discovery is made, the Contractor will cease all ground-disturbing activities in the area of discovery. 3) The Contractor will immediately notify the County Public Works Department Resident Engineer who will then request a qualified archaeologist to evaluate the finding(s). 4) If the finding(s) is determined to be potentially significant, the archaeologist will develop a research design and treatment plan outlining management of the resource, analysis, and reporting of the find. 	During construction	CCCPWD; Construction Contractor	CCCPWD	
CUL-2: Impact to previously undiscovered human remains	Mitigation Measure CUL-2: Stop Work and Notification Procedure				
	<p>If human remains are encountered, work within 25 feet of the discovery shall be redirected and the Contra Costa County Coroner notified immediately. At the same time, an archaeologist shall be contacted to assess the situation. If the human remains are of Native American origin, the Coroner must notify the NAHC within 24 hours of this identification. The NAHC will identify a Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods. Upon completion of the assessment, the archaeologist shall prepare a report documenting the methods and results, and provide recommendations for the treatment of the human remains and any associated cultural materials, as appropriate and in coordination with the recommendations of the MLD. The report shall be submitted to CCCPWD and the Northwest Information Center.</p>	During construction	CCCPWD; Construction Contractor; Qualified Archaeologist	CCCPWD	

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
VII. Geology and Soils					
GEO-1: Impacts from fault rupture, ground shaking, liquefaction, and unstable soil	Mitigation Measure GEO-1: Project design and inspection				
	The Project design and construction will take the existing seismic conditions and soil conditions into account. The Project will be designed in accordance with the Caltrans Seismic Design Criteria and the regulations detailed in the Alquist-Priolo Earthquake Fault Zoning Act.	Prior to construction	CCCPWD	CCCPWD	
	Potential surface deformation resulting from aseismic creep can be mitigated by a regular maintenance program to repair the road surface, curbs, and other engineered facilities. Annual inspection should be carried out to assess ongoing creep damage.	After Construction	CCCPWD	CCCPWD	Ongoing
	A geotechnical and foundation study will be completed to inform the final design, and the recommendations would be incorporated into the Project plans. The study will include site-specific exploratory borings and laboratory testing to delineate potentially liquefiable materials. Potentially liquefiable deposits will either have to be removed or the foundation designed to extend beyond potentially liquefiable deposits.	Prior to and during construction	CCCPWD; Construction Contractor	CCCPWD	
IX. Hazards and Hazardous Materials					
HAZ-1: Mobilization of Contaminants	Mitigation Measure HAZ-1: Waste Management, Worker Safety, and Groundwater procedures				
	The CCCPWD will follow the following recommendations to minimize potential for accidental release of contaminants. Recommendations include: <ul style="list-style-type: none"> • The Bay Area Air Quality Management District will be notified through their Asbestos Notification System prior to bridge demolition. • Waste management guidance for the proper disposal of excavated shallow soil, lead-based paint, and bridge expansion joint insulation (which must be removed prior to demolition). • Worker safety recommendations for employees working at the site follow state and federal hazardous material handling regulations during construction activities. • Untreated groundwater should not be discharged into natural channels or storm drains. Groundwater and any water comingled with groundwater should be treated under the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) VOC and Fuel General Permit (Order No. R2-2017-0048) prior to discharge 	Prior to construction	CCCPWD Environmental Services Division	CCCPWD	

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
HAZ-1: Mobilization of Contaminants	or be discharged to the nearest sanitary sewer under pretreatment permit from either the Central Contra Costa Sanitary District or City of Concord.	Prior to construction	CCCPWD Environmental Services Division	CCCPWD	
XIII. NOISE					
NOISE-1: Temporary Increase in Ambient Noise Levels	Mitigation Measure NOISE-1: Limit Ambient Noise				
	Construction activities shall be limited to non-sensitive hours for adjacent land uses (generally between 7:30 a.m. to 6:00 p.m.) consistent with the Contra Costa County General Plan Noise Element and the City of Concord Noise Ordinance. If work is necessary outside of these hours, the city and county shall both approve the extended work hours and the contractor/Resident Engineer will be available to address any noise concerns during construction.	During construction	CCCPWD; Construction Contractor	CCCPWD	
	The Project Contractor shall employ the following noise-reducing practices during Project construction: 1) Equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers' standards. 2) Locate equipment staging in areas that would create the greatest possible distance between construction-related noise sources and noise-sensitive receptors nearest the active Project Site during all Project construction. 3) Designate a "disturbance coordinator" who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaint (e.g., starting too early, bad muffler) and would determine and implement reasonable measures warranted to correct the problem.	Prior to and During construction	CCCPWD; Construction Contractor	CCCPWD	
XVII. TRANSPORTATION					
TRA-1: Temporary Disruption to traffic	Mitigation Measure TRA-1: Traffic Control and Notifications				
	1) Publish press release in local newspapers seven days before construction start date. 2) Letter notification to local residents seven calendar days in advance of construction and lane closure start date(s).	Prior to and During construction	CCCPWD; Construction Contractor	CCCPWD	

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
TRA-1: Temporary Disruption to traffic	3) Advance letter notification to local emergency response services to allow them to plan for alternate routes. 4) Placement of portable changeable message signs at various locations in Project vicinity with construction start and road closure dates and period at least seven calendar days in advance of start dates. 5) Provide accessibility to driveways to properties outside the Project area throughout the project. 6) No full lane closures allowed during commute hours; at off-peak hours one lane of Marsh Drive may be temporarily closed during active construction; reopening of lanes at the end of each working day. 7) Temporary lane closures may be scheduled at times of minimal traffic volumes such as nights, weekends, and off-commute hours where low traffic volumes are expected. 8) Traffic control including flaggers will be used as warranted to adjust flow as vehicle volume increases in either direction. 9) Placement of construction zone speed limits. 10) Emergency vehicle access at all times.	Prior to and During construction	CCCPWD; Construction Contractor	CCCPWD	