

I-80/Hiddenbrooke Parkway Interchange Project
**Initial Study with
Proposed Mitigated Negative Declaration**

Prepared for:

City of Vallejo

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I-80/Hiddenbrooke Parkway Interchange Project

Project Title: I-80/Hiddenbrooke Parkway Interchange Project

Lead Agency: City of Vallejo

Contact Person: David Yatabe, Traffic Engineer, David.Yatabe@cityofvallejo.net

Project Location: The I-80/Hiddenbrooke Interchange is along Interstate 80 (I-80) between postmiles 7.8 to 8.5 within the City of Vallejo's Sphere of influence.

General Plan Land Use: City of Vallejo's Sphere of Influence

Zoning: City of Vallejo Zoning Map does not include a zoning designation for the project site. Surrounding Solano County zoning is Exclusive Agricultural, and Napa County zoning is Agriculture, Watershed & Open Space

Project Summary: The City of Vallejo is proposing operational improvements at the I-80/Hiddenbrooke Parkway interchange to address existing and future vehicle queues on Hiddenbrooke Parkway. The project will convert the existing stop sign-controlled intersections of the I-80 ramps with American Canyon Road and Hiddenbrooke Parkway, and the intersection of Hiddenbrooke Parkway and McGary Road, into roundabouts. Conversion of these intersections to roundabouts will not require modification of the existing American Canyon Road overcrossing of I-80. The project will require modification of the on and off-ramps where they intersect with local roads but would not involve changes to the ramp connections with I-80 or the existing mainline of the freeway. All proposed improvements would occur within existing State and local public rights of way. No displacement of an existing business or homes, nor the acquisition of private property would be required. In addition, no nonstandard design features are necessary to implement the project.

Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by the project, involving at least one impact that is a potentially significant or significant impact as indicated by the checklist on the following pages. Mitigation measures have been provided for each significant impact, reducing all to a less-than-significant level. Prior to issuance of a grading permit, documentation shall be submitted to the Planning and Development Services Director that all preconstruction mitigation measures have been complied with, and all construction and post-construction mitigation measures will be implemented.

- | | |
|--|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture & Forestry Resources |
| <input checked="" 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 type="checkbox"/> Noise & Vibration | <input type="checkbox"/> Population & Housing |
| <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Transportation & Circulation | <input type="checkbox"/> Tribal Cultural Resources |
| <input type="checkbox"/> Utilities & Service Systems | <input type="checkbox"/> Wildfire |
| <input checked="" type="checkbox"/> Mandatory Findings of Significance | |

Determination

On the basis of this Initial Study:

- 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 mitigation measures that are imposed upon the proposed project, nothing further is required.

Christina Ratcliffe,
Interim Planning and Development Services Director

Date

1 Project Description

This chapter provides an overview of existing conditions at the project site, the surrounding environment, changes to the existing environment proposed as a part of the project, key project objectives, and required permits and approvals.

The project will be funded by the City of Vallejo. Because the project is considered discretionary, the California Environmental Quality Act (CEQA) applies. The determination of a lead agency under CEQA is outlined in the 2020 CEQA Guidelines, and states that where multiple agencies are involved the lead agency shall be the agency carrying out the project. The City of Vallejo will be the agency carrying out this project and is therefore the lead agency under CEQA.

1.1 Project Location and Setting

The project site includes the Interstate 80 (I-80)/Hiddenbrooke Parkway/American Canyon Road interchange, as well as the intersection of Hiddenbrooke Parkway and McGary Road, on the northeast edge of Vallejo's Sphere of Influence (SOI) in Solano County, California (see **Figure 1**). The project site overlaps the border between Solano and Napa counties, extending from postmile 7.8 to 8.5 along I-80. As such, Solano and Napa counties are responsible agencies under CEQA and their policies and regulations are taken into account where appropriate. However, as the lead agency for the project, the analysis provided herein relies chiefly on the regulations and policies of the City of Vallejo.

The project site includes existing on- and off-ramps at Hiddenbrooke Parkway and American Canyon Road, the American Canyon Road overcrossing, the Hiddenbrooke Parkway and McGary Road intersection, and small areas of American Canyon Road and Hiddenbrooke Parkway near the existing ramps. The project site is accessible from Hiddenbrooke Parkway from the east and American Canyon Road from the west. Hiddenbrooke Parkway provides access to the Hiddenbrooke Golf Club and residential development surrounding the golf club. American Canyon Road provides access to predominately residential areas of the City of American Canyon. McGary Road is a frontage road that runs parallel to the existing I-80 ramps on the eastern side of the interchange. The project site is shown on **Figure 2**.

1.2 Project Site Characteristics

The project site is comprised of approximately 6.1 acres of public right-of-way belonging to the State (California Department of Transportation, or Caltrans), Napa and Solano counties, and the City of Vallejo. The project site is in a rural area and consists of transportation and infrastructure uses. There is no residential or commercial development in the surrounding area. There are overhead powerlines crossing the project site diagonally from the western side of the McGary Road/Hiddenbrooke Parkway interchange to northeast of American Canyon Road. There is minimal vegetation at the project site, with most trees and shrubs located along McGary Road near the intersection with Hiddenbrooke Parkway.

The existing interchange is a tight diamond. The intersection of McGary Road with Hiddenbrooke Parkway is approximately 80 feet south of the eastbound ramp junction, shown on **Figure 2**. The ramp junctions and the intersection of McGary Road/Hiddenbrooke Parkway are all-way stop-controlled (stop signs). Similarly, the ramp junction at American Canyon Road is stop sign controlled.

1.3 Surrounding Land Uses and Setting

The project site is in the northern portion of the nine county Bay Area, north of the Carquinez Straight and east of the Napa River. Most development in this area follows the San Francisco Bay (Bay) edge and the Napa River edge where it enters the Bay. Moving inland from these coastal communities, the project site vicinity is comprised of largely rural, agricultural unincorporated areas of Solano and Napa counties.

The project site is north of Vallejo's city limit, east of the City of American Canyon, and within unincorporated areas of Napa and Solano counties (see **Figure 3**). The southwest edge of the project site is within Napa County, where the land use designation is Agriculture, Watershed & Open Space. This land use designation continues for a large area surrounding the project site. The surrounding land use designation in Solano County is Exclusive Agricultural.

The nearest developed land uses are in Vallejo and American Canyon. In Vallejo, there are recreational and residential uses southeast of the project site approximately 1 mile away, and residential uses to the south/southwest approximately 2 miles away. In American Canyon, there are residential uses approximately 2 miles to the west of the project site.

1.4 Project Characteristics

Project Background and History

The proposed improvements to the I-80/Hiddenbrooke Parkway interchange were included as a part of development agreements for development of the Hiddenbrooke Community, a residential development surrounding the Hiddenbrooke golf course. Development of the Hiddenbrooke Community began with the designation of Sky Valley (now known as Hiddenbrooke) as a specific planning area by Vallejo's Planning Commission in August 1985. A Draft Specific Area Plan (SAP), prepared in March 1986, served as the subject for an environmental review that resulted in the Sky Valley Draft Environmental Impact Report (EIR) dated May 1986. After receiving public comment, a revised Draft SAP was developed, a revised Draft EIR was prepared, and a Final EIR was certified on April 28, 1987.

As part of the planning and environmental process, traffic studies were prepared that indicated the need for improvements to the I-80/Hiddenbrooke Parkway interchange upon build-out of the Hiddenbrooke Community. Vallejo and the developer executed an agreement for improvements to the interchange. As a result of this agreement, Vallejo has collected fees to make improvements to the interchange.

Beginning in 2009, it became evident based on traffic flow that improvements were needed at the interchange. The initial purpose and need for the project was developed in coordination with Caltrans, and traffic counts were collected in 2010. The project was put on hiatus in late 2010/early 2011 due to the impact of the Great Recession and statewide budget constraints. However, in October 2011 a community workshop was held to share the project background, needs, and Vallejo's initial screening of project alternatives with the community. Additional project meetings and community meetings were held in 2012 through 2014, with a focus on developing and refining project alternatives, and soliciting community input on alternatives.

In 2015, short- and long-term options were explored for interchange improvements, and a cooperative agreement was developed between Caltrans and Vallejo. Additionally, updated traffic analysis was performed, and a roundabout assessment was completed. Between 2015 and 2017, additional community workshops were held including surveys on the preferred alternative for the project. In 2018, the Vallejo City Council approved the roundabout design and directed staff to proceed with the project development process, including environmental analysis under CEQA.

In February 2020, Caltrans District 4 confirmed the project will qualify for the Permit Engineering Evaluation Report (PEER) process to streamline project approvals and implementation. Criteria for use of the PEER process include: the project must be entirely funded by local dollars, must be a “non-complex” project based on Caltrans’ definition, and must have a construction cost of under \$3,000,000 within the State right-of-way. The project meets all the above criteria and will be reviewed and ultimately approved by Caltrans using the PEER process.

The analysis and determinations of compliance within this Initial Study chiefly rely on the codes and regulations for the City of Vallejo, as the lead agency responsible for approving and carrying out the project. However, as responsible agencies under CEQA, Solano and Napa County codes and regulations are referenced where appropriate.

Project Components

The project is comprised of several components, including the addition of roundabouts on both sides of the interchange, reconfiguration of McGary Road, pedestrian improvements, the addition of medians to American Canyon Road and Hiddenbrooke Parkway, and the addition of landscaping/vegetation, shown on **Figure 3**. Beginning on the western side of the project, improvements would include:

- The addition of a triangular median on American Canyon Road, to allow vehicles to safely enter and exit the roundabout
- Removal of the 4-way stop-controlled intersection of the I-80 ramps and American Canyon Road, and replacement with a roundabout that allows for vehicles to exit and enter I-80 westbound
- Realignment of the existing on- and off-ramps at the intersection of American Canyon Road to allow vehicles to safely enter and exit the roundabout
- On the eastern side of the American Canyon Road overcrossing, the addition of a triangular median on American Canyon Road to allow vehicles to safely enter and exit the roundabout
- The removal of the I-80 ramps/Hiddenbrooke Parkway intersection and the McGary Road/Hiddenbrooke Parkway intersection, and replacement with a roundabout that allows vehicles to enter and exit I-80 eastbound from both McGary Road and Hiddenbrooke Parkway
- Landscaping/vegetation within the new roundabout at Hiddenbrooke Parkway
- The addition of triangular medians where McGary Road meets the roundabout
- The addition of a median along Hiddenbrooke Parkway to allow vehicles to safely enter and exit the roundabout

Implementation of the project would not remove or change the existing manmade waterfall on the northern side of Hiddenbrooke Parkway. The existing American Canyon Road overcrossing would remain in place.

Construction

Project construction is anticipated to begin in 2022 and continue through 2023, with the project becoming operational in early 2024. Construction is anticipated to take up to 24 months to complete.

1.5 Project Objectives

Under existing conditions, the close spacing between the intersection of the I-80 ramps/Hiddenbrooke Parkway and McGary Road/Hiddenbrooke Parkway creates operational deficiencies and causes traffic to back up on Hiddenbrooke Parkway during peak commute hours.

During the AM peak hour, the level of service (LOS)¹ is very poor along Hiddenbrooke Parkway: the roadway functions at LOS F. This creates vehicle queues, where cars are backed up along Hiddenbrooke Parkway waiting to enter I-80 eastbound. The maximum eastbound queue during the AM peak hour is 10-12 vehicles at the Hiddenbrooke/McGary Road intersection. The stop-controlled intersection is the major factor contributing to this delay. Recent traffic studies indicate that both local roadway intersections at the interchange will continue to deteriorate over time, and the American Canyon Road intersection will operate at LOS F conditions by 2035. By 2030, queues along northbound Hiddenbrooke Parkway are projected to increase to longer than 0.33 miles during the AM peak hour, and the delay along northbound Hiddenbrooke Parkway is projected to exceed 4 minutes.

Based on the above, the project objectives include:

- Relieve existing congestion on Hiddenbrooke Parkway and improve the flow of traffic on Hiddenbrooke Parkway
- Improve traffic operations at the I-80 Ramps/American Canyon Road intersection to maintain acceptable LOS
- Provide improvements consistent with local planning documents and state standards

¹ Level of service (LOS) describes the operating conditions experienced by users of a highway or roadway. LOS is a qualitative measure of the effect of various factors, including speed and travel time, traffic interruptions, freedom to maneuver, driving comfort, and convenience. Levels are designed A through F, with A being the best and F being the worst. LOS A through E generally represents traffic volumes at less than roadway capacity, while LOS F represents over capacity and/or forced flow conditions.

1.6 Required Permits and Approvals

Table 1 identifies the permits and approvals that would be required for project implementation.

Table 1 Permits and Approvals

Agency	Permit/Approval	Status
Regional Water Quality Control Board	Section 401 Certification	Issued during the final design phase
Caltrans	Encroachment Permit (Through PEER process)	Issued prior to project approval
Napa County/Solano County	Building Permit	Issued prior to construction



Figure 2
Project Site

Source: Mark Thomas, 2018

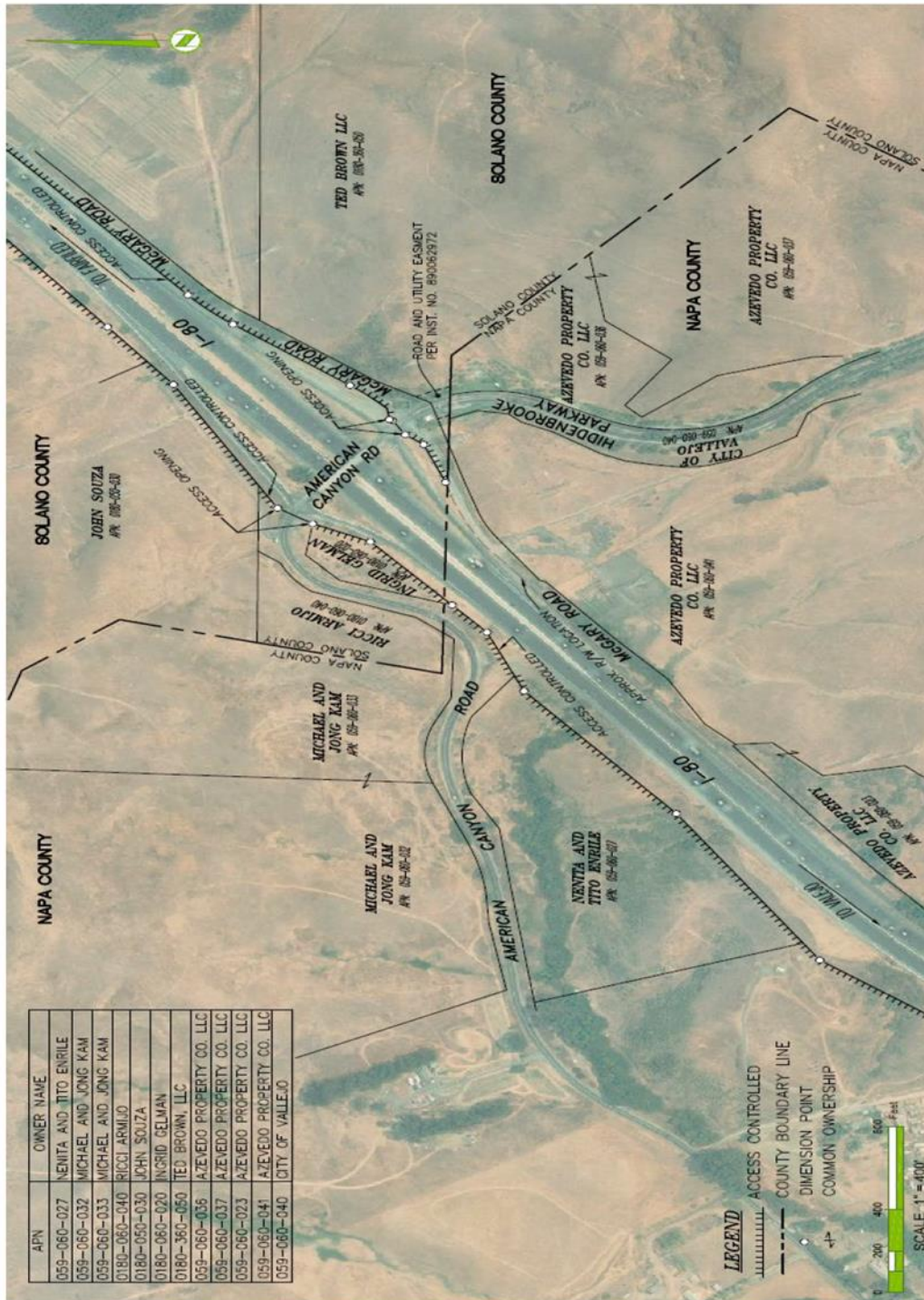
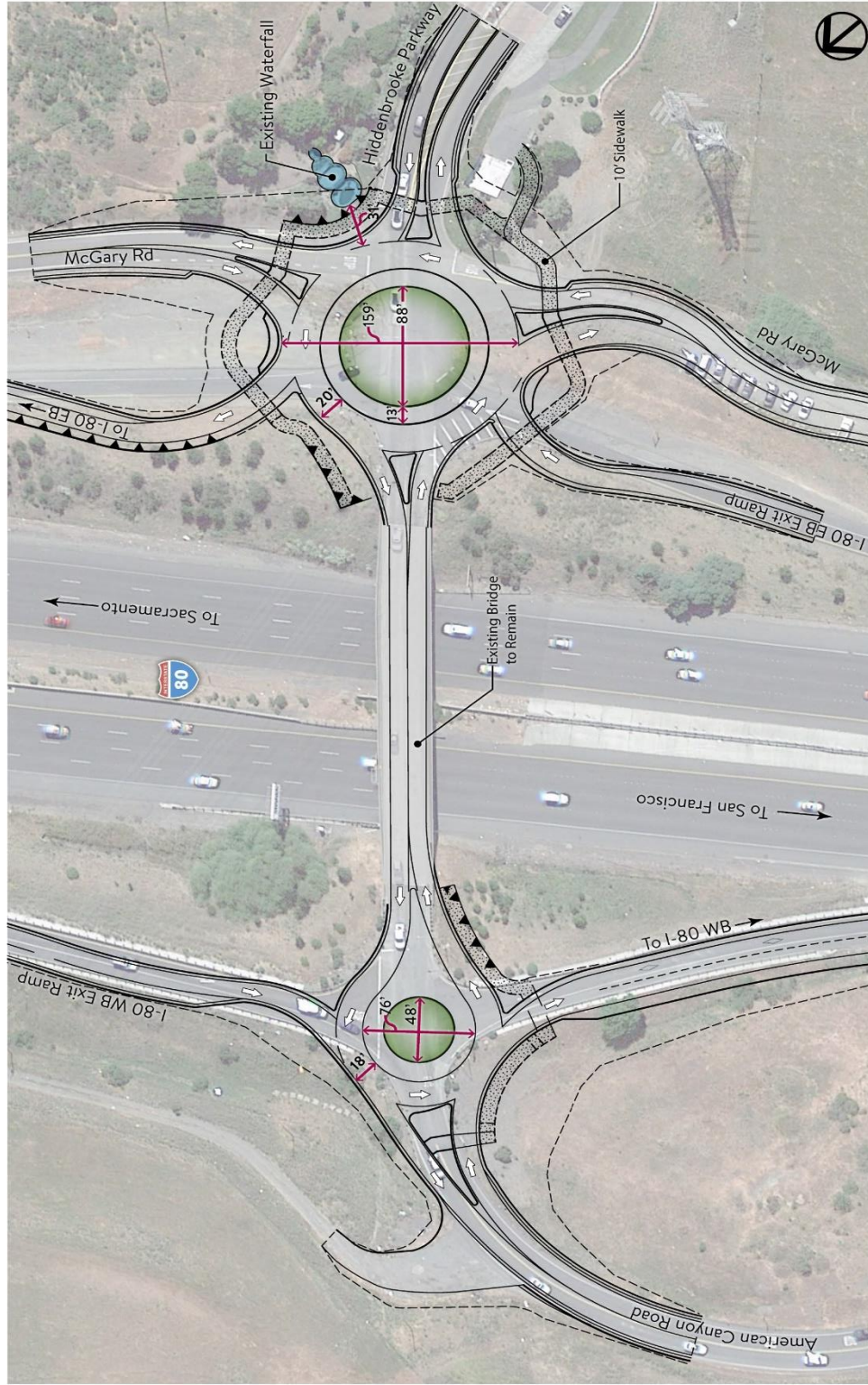


Figure 3

Ownership Exhibit

Source: Mark Thomas, 2020

I-80/Hiddenbrooke Parkway Interchange



Not to Scale

Proposed Improvements

Figure

4

Source: Mark Thomas, 2020

I-80/Hiddenbrooke Parkway Interchange



Not to Scale
N

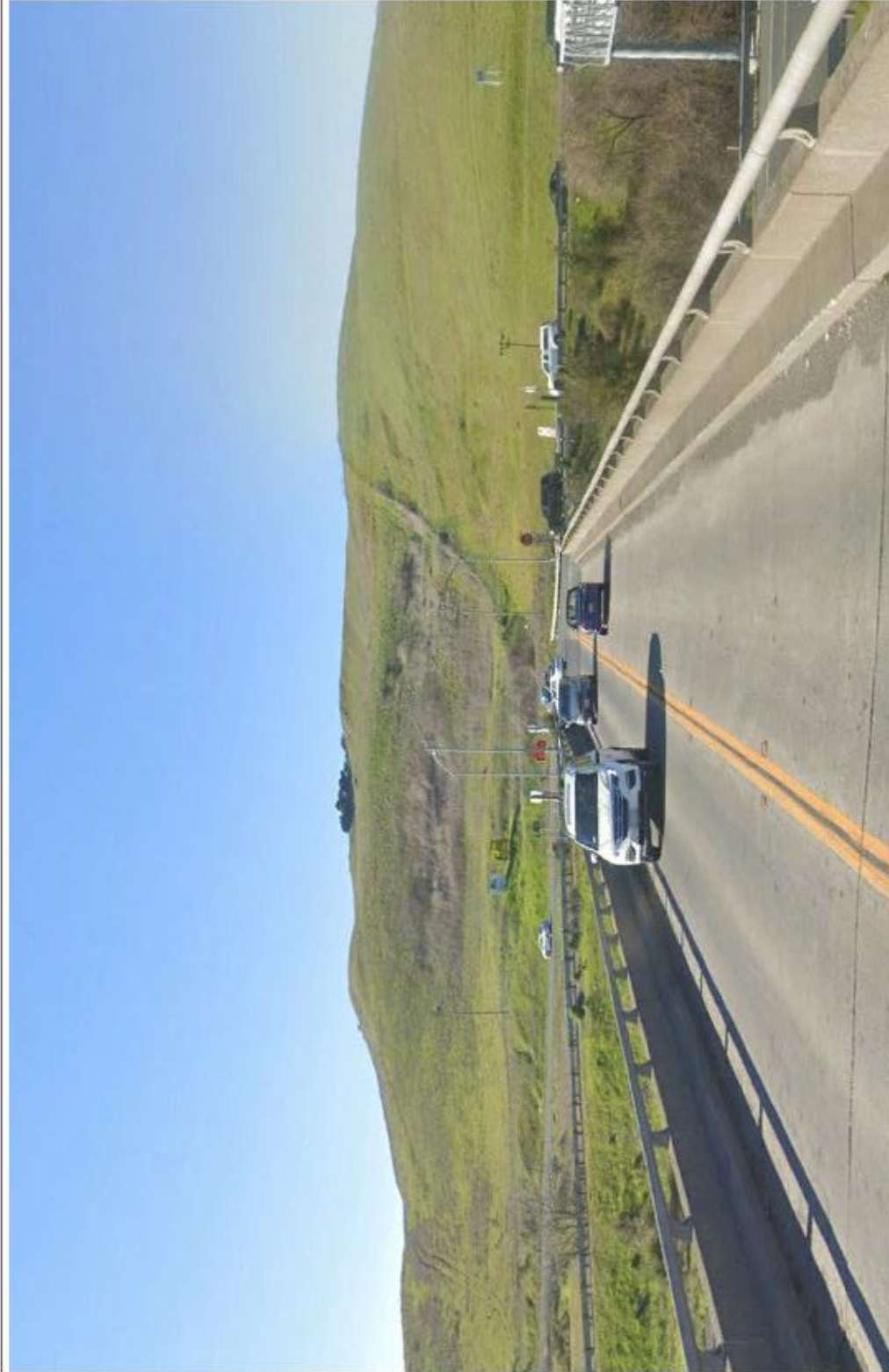
Bird's Eye View of Project Site

Figure

5

Source: Google Earth, 2020

I-80/Hiddenbrooke Parkway Interchange



Not to Scale

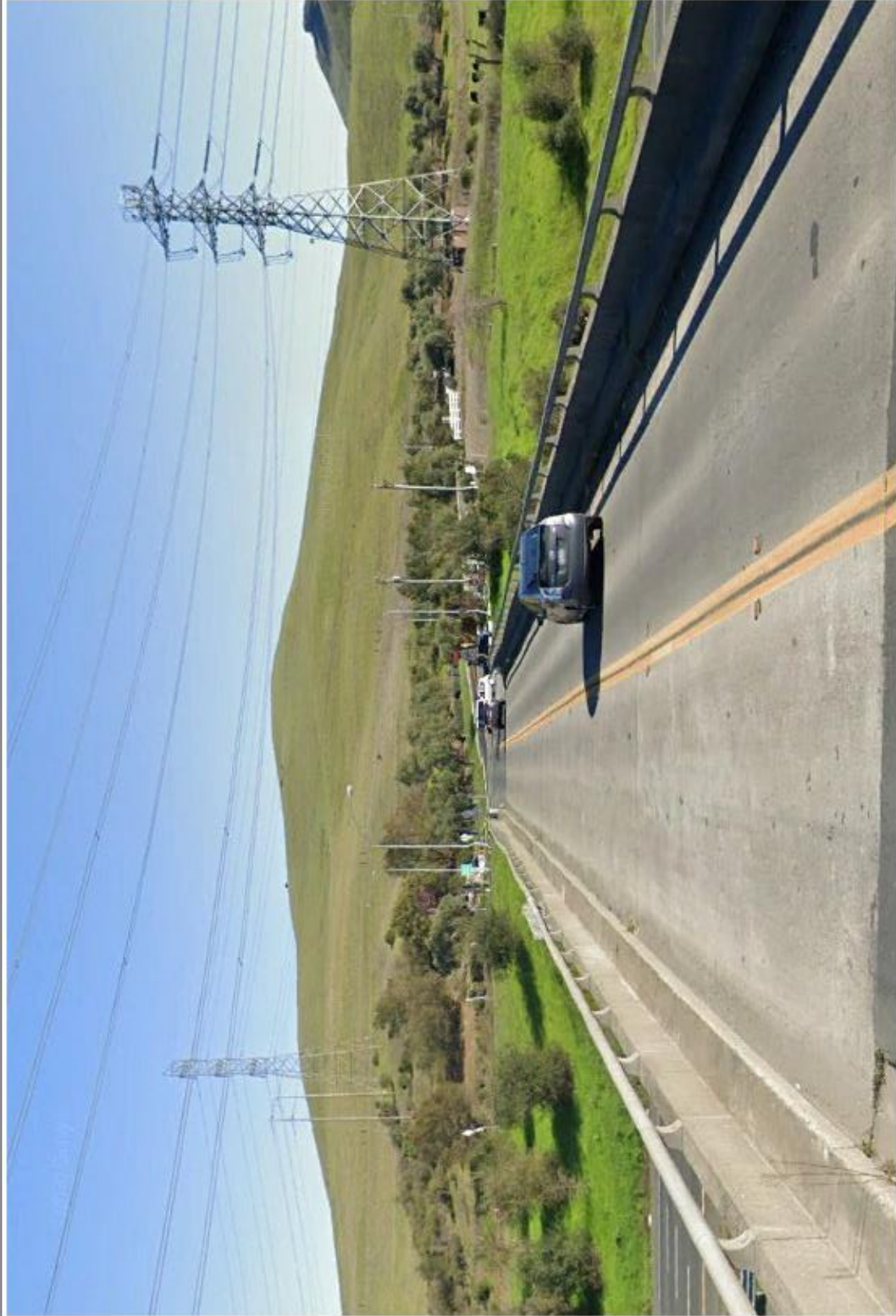
View from I-80 Overcrossing Looking Northeast Towards the American Canyon Road/I-80 Interchange

Figure

6

Source: Google Earth, 2020

I-80/Hiddenbrooke Parkway Interchange



Not to Scale

View from I-80 Overcrossing Looking Southwest Towards the Hiddenbrooke Parkway/I-80 Interchange

Figure

7

Source: Google Earth, 2020

I-80/Hiddenbrooke Parkway Interchange



Not to Scale

View from Northbound I-80 Looking Northwest
Underneath I-80 Overcrossing

Figure

8

Source: Google Earth, 2020

I-80/Hiddenbrooke Parkway Interchange



Not to Scale

View from Southbound I-80 Looking Southeast
Underneath I-80 Overcrossing

Figure

9

Source: Google Earth, 2020

2 Evaluation of Environmental Impacts

This Initial Study evaluates impacts based on the California Environmental Quality Act (CEQA) Guidelines Appendix G Environmental Checklist:

- No Impact indicates that there is no impact.
- Less than Significant Impact indicates that, while there is some impact, the impact does not exceed identified thresholds.
- Less than Significant with Mitigation Incorporated indicates that a potentially significant and/or significant impact has been identified in the course of this analysis and mitigation measures have been provided to reduce the impact to a less-than-significant level.
- Significant Impact indicates that not all impacts have been reduced to less than significant and an Environmental Impact Report (EIR) will be required. As noted previously, mitigation measures developed for this project reduce any significant impacts to a less-than-significant level and an EIR will not be required.
- Section XVIII, Mandatory Findings, discusses cumulative impacts. Cumulative impacts are two or more individual effects, which when combined, are considerable or which compound or increase other environmental impacts. Cumulative impacts can result from individually minor but collectively significant projects taking place over time. If a significant cumulative impact is identified, the project's contribution to the significant cumulative impact is considered.

2.1 Aesthetics

	Significant Impact	Less than Significant with Mitigation	Less-than-Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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) Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Regulatory Setting

Federal and State

State Scenic Highway Program

The State Scenic Highway Program was created by the California State Legislature in 1963 and is under the jurisdiction of the California Department of Transportation (Caltrans). The program is intended to protect and enhance the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. The State laws governing the Scenic Highway Program are found in the Streets and Highways Code, Sections 260 through 263. The California State Scenic Highway System Map does not identify designated scenic highways or highways eligible for designation at the project site (Caltrans 2020). However, I-80 is a county-designated scenic roadway as assigned by both Solano County and Napa County.

Regional

Solano County General Plan

The Resources Element of the Solano County General Plan addresses scenic resources and cites “agricultural landscapes, the delta and marshlands, and the oak and grass covered hills” as valuable scenic vistas. *Figure RS-5, Scenic Roadways*, in the Solano County General Plan illustrates scenic roadways in Solano County, which include the entire length of I-80, I-505, and Pleasants Valley Road. In addition, the Solano County General Plan contains the following policies which aim to limit impacts on

visual resources. Policy RS.P-37 states that the County will “[p]rotect the visual character of designated scenic roadways,” and Implementation Program RS.I-21 states the County will “[p]reserve the visual character of scenic roadways as shown in *Figure RS-5* through design review, designating alternate routes for faster traffic, regulating off-site advertising, limiting grading in the view corridor through the grading ordinance, limiting travel speeds, and providing pullover areas with trash and recycling receptacles.” Additionally, the Solano County Plan includes Policy RS.P-36 which supports and encourages practices that reduce light pollution and preserve views of the night sky.

Napa County General Plan

The Community and Character Element of the Napa County General Plan discusses aesthetics, views, and scenic roadways, and sets hillside development standards based on the County’s 2001 Viewshed Protection Ordinance intended to preserve the unique scenic quality of Napa County and protect ridgelines and hillsides from disruptive development. There are approximately 280 miles of County-designated scenic roadways in Napa County. The County has historically refrained from seeking official state designation due to concerns regarding improvement and maintenance costs.

Policy CC-13 states “[n]ew roadway construction or expansion shall retain the current landscape characteristics of County-designated scenic roadways, including retention of existing trees to the extent feasible and required re-vegetation and re-contouring of disturbed areas”. The Napa County General Plan also includes Policy CC-32, which states “street lighting on County roadways shall be limited to the minimum amount needed for public safety and shall be designated to focus light only where it is needed”. American Canyon Road is a County-designated scenic roadway as displayed in *Figure CC-3, Scenic Roadways Subject to Viewshed Protection Program* in the Napa County General Plan.

Local

City of Vallejo General Plan

Vallejo’s General Plan 2040 does not designate official scenic view corridors or vistas within Vallejo or its SOI. However, there are views in Vallejo that could be considered scenic, including public views of scenic resources, including San Pablo Bay, Mare Island Strait, Vallejo Waterfront, White Slough, Napa River Wetlands, Vaca Mountains, Sulphur Springs Mountain, and Sky Valley. Public views of these resources are primarily from roadways at higher elevations such as hilltops.

The following policy presented in the Vallejo’s General Plan 2040 ensures that new development and redevelopment projects protect scenic views and other scenic resources:

Policy NBE-1.5: *Scenic Vistas*. Protect and improve scenic vistas, including views from Interstate 80 and State Route 37 in Vallejo.

Environmental Setting

The Vallejo General Plan Land Use Map shows the project site is within Vallejo’s SOI and is therefore subject to guidelines and policies outlined in Vallejo’s General Plan 2040. The project site is approximately 4.5 miles north of Vallejo’s urbanized downtown, and is surrounded by hilly terrain and open space. The project site itself is on graded areas developed to meet roadway profile safety standards and is therefore relatively flat. The Hiddenbrooke Community consists of residences and a golf course 1.5 miles southeast of the project site, accessed along Hiddenbrooke Parkway, and is the nearest developed area.

Scenic Resources

Views of the project site from adjacent roadways are characterized by the I-80 freeway corridor and associated roadway infrastructure, electrical towers, and overhead powerlines. In the background, rolling hills are visible with intermittent vegetation (**Figure 5** through Error! Reference source not found.). Public views throughout the project site consist of roadway infrastructure with hills in the background. Typical viewers include motorists traveling along I-80, Hiddenbrooke Parkway, American Canyon Road, and McGary Road.

Scenic resources identified in Vallejo's General Plan 2040 are not visible from the project site due to the surrounding hilly terrain combined with the considerable distance of these resources from the project site. The closest scenic resource to the project site is Sulphur Springs Mountain 3 miles south-east away. The Sulphur Springs Mountain – Sky Valley area provides visual amenities to the surrounding communities. In addition, the Vallejo General Plan states that important scenic views include views of the hillside and mountain areas.

Light and Glare

Light pollution refers to all forms of unwanted light in the night sky, including glare, light trespass, sky glow, and over-lighting. Views of the night sky are an important part of the natural environment, and excessive light and glare can be visually disruptive to humans and nocturnal animal species. Existing sources of light and glare at the project site include passing vehicle headlights and intermittent streetlights along the I-80 freeway and associated on- and off-ramps, Hiddenbrooke Parkway, and American Canyon Road.

As discussed in the Regulatory Settings section, the Resource Element of the Solano County General Plan includes Policy RS.P-36, which supports and encourages the use of lighting fixtures that reduce light pollution and preserve views of the night sky. Additionally, the Community Character Element of the Napa County General Plan includes Policy CC-32, which states “street lighting on County roadways shall be limited to the minimum amount needed for public safety and shall be designated to focus light only where it is needed”.

Impact Discussion

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

Less than Significant. There are no officially designated scenic vistas within the Solano County General Plan or Napa County General Plan. Vallejo's General Plan 2040 also does not contain designated scenic vistas; rather, it lists several scenic resources, listed above. None of these scenic resources are visible from the project site (see Error! Reference source not found. through Error! Reference source not found.). Vallejo's General Plan 2040 recognizes views of the hillside and mountain areas surrounding the City of Vallejo could be considered scenic. Motorists traveling through the project site would have views of nearby scenic hillside areas.

The project would involve improvements to the I-80/Hiddenbrooke Parkway interchange that would alter that existing visual conditions of the project site both temporarily and permanently. Changes from the project are discussed below, organized by construction-period changes which would be temporary and changes which would be permanent.

Construction

Construction activities would entail earthwork, paving, pile driving, concrete pouring, utility trenching, and roadway striping. Accordingly, construction work would introduce temporary visual changes to the I-80/Hiddenbrooke Parkway interchange. This would include the presence of construction equipment and stockpiles of building materials that may interrupt scenic views of hillside areas. During construction, as travelers move through the project site their view of the surrounding natural landscape may be intermittently interrupted by construction equipment, but not to the extent that scenic views would be totally obscured. These impacts would be temporary, ceasing when construction ends and construction equipment is removed. While construction of the project would result in temporary changes to the existing visual environment, such changes would not have a substantial impact on the aforementioned scenic views. Therefore, construction equipment would not substantially degrade visual quality or scenic resources.

Operation

Once operational, project features would conform to the existing visual landscape of a transportation corridor in the foreground and hillsides in the background. The existing 4-way stop-controlled intersection of the I-80 ramps and American Canyon Road as well as the I-80 ramps/Hiddenbrooke Parkway intersection and the McGary Road/Hiddenbrooke Parkway intersection would each be replaced with a roundabout to increase accessibility from I-80, McGary Road, and Hiddenbrooke Parkway. Landscaping and vegetation would be added to the roundabout at Hiddenbrooke Parkway. Triangular medians would be added on either side of American Canyon Road and on McGary Road to allow vehicles to safely enter and exit the roundabout. The existing on- and off-ramps at the intersection of American Canyon Road would be realigned to function cohesively with the roundabout at the I-80 ramps/American Canyon Road roundabout. The improvements described above would alter the existing conditions of the project site, but would not extend beyond the existing transportation corridor, nor would they substantially degrade visual quality or scenic resources due to their limited size. Furthermore, the project would not obstruct or result in adverse impacts to scenic views as described in the Vallejo General Plan. This impact would be less than significant.

b) Substantially damage scenic resources, including but not limited to: trees, rock outcroppings, and historic buildings within a State scenic highway?

No Impact. The project is not located along or in the vicinity of an eligible or an officially designated state scenic highway according to the California Scenic Highway Mapping System. However, I-80 is a county-designated scenic roadway as assigned by both Solano County and Napa County. Implementation of the project would not alter scenic views from I-80, as the project would be limited to operational improvements to the existing transportation corridor. Thus, implementation of the project would not result in an impact to scenic resources within a designated state scenic highway. The project would not remove other scenic resources such as protected or scenic trees, rock outcroppings, or historic buildings. No impact would occur.

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

Less than Significant. As discussed above, construction activities required for project implementation would include demolition, earthwork, roadway construction, and paving. There would be temporary visual changes due to the presence of construction vehicles, road signage, and demolition debris. Visual changes resulting from construction activities would be visible to motorists travelling along I-80 passing by the project site, but would be removed when construction is complete.

After construction, the highway interchange improvements would conform to the existing visual landscape and the overall visual quality of the project site would remain unchanged. Permanent visual changes would include the replacement of stop-controlled intersections with roundabouts and the addition of landscaping and vegetation at the existing I-80/Hiddenbrooke Parkway-American Canyon Road interchange. Accordingly, the project would not degrade the existing visual character or quality of public views of the project site.

Scenic resources visible from the project site, such as views of the rolling hills on either side of I-80, would remain after project implementation. The quality of views from I-80, Hiddenbrooke Parkway, and American Canyon Road would remain the same after project implementation. As such, the visual character and quality of public views of views surrounding the project site would not be degraded.

Given the above, this impact would be less than significant.

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

Less than Significant. Existing sources of light and glare within the project site include freeway and roadway safety lighting and intermittent vehicle headlights. During construction of the project, new sources of light or glare would be installed in construction staging areas, such as safety lighting, spot lighting, and additional vehicle headlights. These temporary sources of light would be used during nighttime construction only. This incremental increase in nighttime lighting would be temporary in nature. During operation, the project would not introduce any significant new sources of light or glare from roadway lighting compared to existing conditions. The project would include installation of permanent safety lighting similar to existing and nearby lighting, in the form of light poles. Adherence to Policy CC-32 in the Napa County General Plan would ensure permanent lighting fixtures shall be limited to the minimum amount required for public and road safety only where needed, and that the project would not introduce new sources of substantial light or glare. This impact would be less than significant.

2.2 Agriculture and Forest Resources

	Significant Impact	Less than Significant with Mitigation	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 with 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"/>

Regulatory Setting

Federal and State

The California Land Conservation Act

The California Land Conservation Act of 1965, also referred to as the Williamson Act, is administered by the Department of Conservation (DOC) and enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use.

Farmland Mapping and Monitoring Program

The DOC's Farmland Mapping and Monitoring Program (FMMP) provides maps and data to decision makers to assist them in making informed decisions regarding the planning of the present and future use of California's agricultural land resources

California Public Resource Code/California Government Code

- Public Resources Code Section 12220(g) identifies forest land as land that can support a 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefit.
- Public Resources Code Section 4526 identifies timberland as land, other than land owned by the federal government and land designated by the State Board of Forestry and Fire Protection as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees.
- Government Code Section 51104(g) identifies timberland production zones as areas which have been zoned and are devoted to and used for growing and harvesting timer, or for growing and harvesting timber and compatible uses.

Regional

Solano County General Plan

There are no goals and policies pertaining to agriculture and forest resources in the Solano County General Plan that would be applicable to the project.

Napa County General Plan

There are no goals and policies pertaining to agriculture and forest resources in the Napa County General Plan that would be applicable to the project.

Local

City of Vallejo General Plan

There are no goals and policies pertaining to agriculture and forest resources in the City of Vallejo General Plan 2040 that would be applicable to the project.

Environmental Setting

The project site is in an undeveloped area surrounded by open space within unincorporated areas of Napa and Solano counties. The southwest edge of the project site is within Napa county, where the land use designation is Agriculture, Watershed & Open Space according to the Napa County General Plan. This land use designation continues for a large area surrounding the project site. In Solano County, the surrounding land use designation is Exclusive Agricultural.

According to both the Napa County and Solano County Important Farmlands 2016 Maps,² the project site is located on land predominately designated as Other Land interspersed with Grazing Land. The south-west portion of the project site is adjacent to land designated as Farmland of Local Importance. The project site is not on or adjacent to Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, or lands protected under a Williamson Act contract. There are no forest lands or

² FMMP mapping and data from 2016 was used for the purposes of this evaluation due to the unavailability of more recent FMMP data.

timberlands on or adjacent to the project site according to Vallejo's General Plan 2040 EIR; the nearest instance of forest resources is located approximately 2 miles south-west from the project site.

Impact Discussion

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?

No Impact. The project would not include property acquisition, and therefore would not convert any farmland or other agricultural resources to a non-agricultural use.

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

OR

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))?

OR

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

No Impact. Project improvements would be within existing public rights-of-way used for transportation purposes. The project would include operational improvements to the existing transportation network, and would not change any existing land use. As such, the project would not substantially interfere with the agricultural operations and resources of the adjacent parcels designated as Farmland of Local Importance. Further, there are no designated forest lands or timberlands adjacent to the project site. Therefore, the project would not conflict with existing zoning for forest uses nor result in the loss of forest land to non-forest use. No impact would occur.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Impact. Project improvements would be within existing public rights-of-way used for transportation purposes and thus would not involve changes to the existing environment outside of the proposed interchange improvements along Hiddenbrooke Parkway, American Canyon Road, and I-80. Implementation of the project would not lead to an increase in vehicle traffic or induce offsite population growth or other land conversion, as discussed in **Section 2.17, Transportation/Traffic** and **Section 2.14, Population and Housing**, respectively. The project would not involve other changes that would result in the conversion of farmland or forest land. No impact would occur.

2.3 Air Quality

	Significant Impact	Less than Significant with Mitigation	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" type="checkbox"/>

Regulatory Setting

Pollutants in the air can cause health problems, especially for children, the elderly, and people with heart or lung problems. Healthy adults may experience symptoms during periods of intense exercise. Pollutants can also cause damage to vegetation, animals, and property. Federal, state, and regional agencies regulate air quality in the San Francisco Bay Area Air Basin (SFBAAB). The information in this section is based on the Air Quality and Greenhouse Gas Technical Report prepared for the project in July 2020 (**Appendix A**).

Federal and State

The federal and State governments established ambient air quality standards for the protection of public health. The United State Environmental Protection Agency (EPA) is the federal agency designated to administer air quality regulation, while the California Air Resources Board (CARB) is the State equivalent. County-level Air Quality Management Districts (AQMDs) provide local management of air quality. CARB has established air quality standards and is responsible for the control of mobile emission sources, while the local AQMDs are responsible for enforcing standards and regulating stationary sources. CARB has established 15 air basins statewide, including SFBAAB.

The EPA has set primary national ambient air quality standards for ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter (PM) with a diameter of up to 10 microns (PM₁₀) and up to 2.5 microns (PM_{2.5}), and lead (Pb). Primary standards are those levels of air quality deemed necessary, with an adequate margin of safety, to protect public health. In addition, California

has established health-based ambient air quality standards for these and other pollutants, some of which are more stringent than the federal standards. **Table 2** lists the current federal and State standards for regulated pollutants.

Table 2 Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Primary Standards	California Standards
Ozone (O ₃)	1-Hour	---	0.09 ppm
	8-Hour	0.070 ppm	0.070 ppm
Carbon Monoxide (CO)	1-Hour	35.0 ppm	20.0 ppm
	8-Hour	9.0 ppm	9.0 ppm
Nitrogen Dioxide (NO ₂)	1-Hour	0.100 ppm	0.18 ppm
	Annual	0.053 ppm	0.030 ppm
Sulfur Dioxide (SO ₂)	1-Hour	0.075 ppm	0.25 ppm
	24-Hour	---	0.04 ppm
	Annual	---	---
PM ₁₀	24-Hour	150 µg/m ³	50 µg/m ³
	Annual	---	20 µg/m ³
PM _{2.5}	24-Hour	35 µg/m ³	---
	Annual	12 µg/m ³	12 µg/m ³
Lead (Pb)	30-Day Average	---	---
	3-Month Average	0.15 µg/m ³	1.5 µg/m ³

Source: CARB 2016

ppm = parts per million; µg/m³ = micrograms per cubic meter

The Bay Area Air Quality Management District (BAAQMD) is the designated air quality control agency in the SFBAAB. The SFBAAB is in nonattainment for the federal standards for O₃ and PM_{2.5} and in nonattainment for the State standards for O₃, PM_{2.5}, and PM₁₀.

Regional

BAAQMD is the primary regional agency responsible for attaining and maintaining air quality conditions in the SFBAAB through a comprehensive program of planning, regulation, and enforcement. It also reviews air quality analyses prepared for projects under CEQA and has published CEQA Air Quality Guidelines, which are commonly used in the evaluation of air quality impacts.

BAAQMD Air Quality Management Plan

BAAQMD is responsible for developing a Clean Air Plan, which guides the region's air quality planning efforts to attain the CAAQS. BAAQMD adopted the 2017 Clean Air Plan (2017 Plan) in April 2017. The

2017 Plan contains district-wide control measures to reduce the ozone precursor emissions, reactive organic gases (ROG), oxides of nitrogen (NO_x), particulate matter, TACs, and GHG emissions.

BAAQMD Significance Thresholds

In June 2010, BAAQMD adopted thresholds of significance to assist in the review of projects under CEQA. These thresholds were designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA. BAAQMD updated the CEQA Air Quality Guidelines in 2017 to include the latest significance thresholds, which were used in this analysis and are summarized in **Table 3**. Because the project itself would not generate additional air pollutants compared to existing conditions, BAAQMD thresholds for operations were not analyzed. Only construction-period emissions were quantified and therefore only construction-period thresholds are shown below.

Table 3 BAAQMD Air Quality Significant Thresholds

Pollutant/Precursor	Construction Emissions (average lbs/day)
ROG	54
NO _x	54
PM ₁₀	82
PM _{2.5}	54

Source: BAAQMD 2017

lbs/day = pounds per day;

Napa County General Plan

The Conservation Element of the Napa County General Plan contains the following policy which pertains to reducing air pollution:

Policy CON-81: The County shall require dust control measures during construction and grading activities and enforcing winter grading deadlines.

Solano County General Plan

Policy RS. I-49: Require all off-road diesel powered vehicles used for construction to be newer model, low-emission vehicles, or use retrofit emission control devices, such as diesel oxidation catalyst and diesel particulate filters verified by the California Air Resources Board.

Local

City of Vallejo General Plan

Action CP-1.12F: Update City regulations to prohibit grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour, or require the use of water trucks to wet soil.

Environmental Setting

Existing Conditions

Solano County is within the SFBAAB, under the jurisdiction of BAAQMD. Air pollutant emissions in the SFBAAB are generated by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point and area sources. Point sources occur at a specific location and are often identified by an exhaust vent or stack. Examples include boilers or combustion equipment that produce electricity or generate heat. Area sources are widely distributed and include sources such as residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and some consumer products. Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions, and are classified as either on-road or off-road. On-road sources may be legally operated on roadways and highways, while off-road sources include aircraft, ships, trains, and self-propelled construction equipment. Air pollutants can also be generated by the natural environment, such as when high winds suspend fine dust particles.

Sensitive Receptors

Some groups are more sensitive to air pollution than others. These groups are referred to as sensitive receptors and include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiorespiratory diseases. Residential areas are considered sensitive receptors because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Other sensitive receptors include retirement facilities, hospitals, and schools. Recreational land uses are considered moderately sensitive to air pollution, while industrial, commercial, retail, and office areas are considered the least sensitive to air pollution. The closest sensitive receptors to the project site are residences located in the Hiddenbrooke Community; the nearest of these residences are approximately 1.5 miles southeast of the project site.

Impact Discussion

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less than Significant. The California Clean Air Act requires that air districts create a Clean Air Plan (CAP) that describes how the jurisdiction will meet air quality standards. In the Bay Area, the 2017 Plan is the most recently adopted BAAQMD CAP. The 2017 CAP does not include control measures that apply directly to individual development projects. Instead, the CAP includes control measures related to stationary sources, transportation, energy, buildings, agriculture, natural and working lands, waste management, water, and super-GHG pollutants. Under BAAQMD's methodology, a determination of consistency with the 2017 CAP should demonstrate that a project:

- Supports the primary goals of the air quality plan
- Includes applicable control measures from the air quality plan
- Does not disrupt or hinder implementation of any air quality plan control measures

On an individual project basis, consistency with BAAQMD quantitative thresholds is interpreted as demonstrating support for the CAP's goals and indicate the project would not interfere with implementation of the air quality plan. Control measures do not apply to this project. As shown in the response to **Impact (b)** below, the project would not result in new or more frequent vehicle trips or an

increase in vehicle miles traveled, and therefore would not result in exceedances of BAAQMD thresholds for criteria air pollutants and thus would not conflict with the 2017 CAP goal to attain air quality standards. As such, the project would not conflict with or hinder the implementation of an applicable air quality plan. Furthermore, with implementation of the following Standard Condition, this impact would be less than significant.

Standard Condition:

Consistent with the City of Vallejo General Plan 2040 Policy Action CP-1.12F, grading operations shall be prohibited when wind speeds (as instantaneous gusts) exceed 25 miles per hour.

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

Less than Significant with Mitigation. As demonstrated below, with the recommended application of **Mitigation Measure AQ-1**, the project would not result in a cumulatively considerable net increase in pollutant emissions.

Construction

Project construction would involve demolition, site preparation, grading, roadway construction, concrete work, and asphalt paving. These activities have the potential to generate air pollutant emissions. **Table 4** summarizes the estimated maximum daily emissions of ROG, NO_x, PM₁₀, and PM_{2.5}, and SO_x during project construction. As shown in **Table 4**, project construction emissions for all criteria pollutants would be below BAAQMD thresholds.

Table 4 Construction Emissions

	Estimated Emissions (lbs/day)				
	ROG	NO _x	PM ₁₀	PM _{2.5}	SO _x
Maximum Daily Emissions	5.1	49.8	2.3	2.1	0.1
BAAQMD Thresholds (average daily emissions)	54	54	82	54	N/A
Threshold Exceeded?	No	No	No	No	N/A

lbs/day = pounds per day

Notes: All emissions modeling was completed using CalEEMod in accordance with applicant-provided data. Some numbers may not add up due to rounding. Emissions presented are the highest of the winter and summer modeled emissions. There are no BAAQMD thresholds applicable to SO_x, as indicated in the table with "N/A".

Construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of particulate matter (PM₁₀ and PM_{2.5}). Sources of fugitive dust would include disturbed soils within the construction footprint and trucks carrying uncovered loads of soils across the construction footprint and on local roadways. BAAQMD does not have quantitative thresholds for fugitive dust emissions during construction. Instead, BAAQMD recommends Best Management Practices (BMPs) be implemented to reduce fugitive dust emissions, whether or not construction-related emissions exceed applicable BAAQMD thresholds. Therefore, the following mitigation measure is recommended to be adopted to further reduce fugitive dust emissions.

Mitigation Measure AQ-1: During project construction, BAAQMD's most recent BMPs for fugitive dust emissions shall be followed, which may include but are not limited to:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-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.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- 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 detailing these measures shall be provided for construction workers at all access points.
- 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.
- A publicly visible sign shall be posted with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD phone number shall also be visible to ensure compliance with applicable regulations.

The implementation of recommended BMPs consistent with BAAQMD Basic Construction Mitigation Measures would continue to ensure that air quality impacts during construction would not exceed any applicable threshold or result in a cumulatively considerable increase in pollutant emissions.

Operation

The project is intended to serve planned growth and reduce traffic congestion. Upon completion, the project itself would not generate additional air pollutants compared to existing conditions. The only potential source of operational emissions from the project are tailpipe emissions, however, the project would not increase traffic and therefore would not increase tailpipe emissions. This is supported by the Traffic Operations Analysis Report completed for the project (**Appendix D**), which confirms the project would not result in new or more frequent vehicle trips or an increase in vehicle miles traveled (VMT). In fact, the project would reduce vehicle queues, which would alleviate congestion and reduce vehicle idling time at the interchange. Accordingly, this may result in slightly lower tailpipe emissions at the project site.

Since project emissions would not exceed BAAQMD thresholds for construction or operation, the project would not violate an air quality standard or result in a cumulatively considerable net increase in criteria pollutants. Therefore, this impact would be less than significant with mitigation.

c) Expose sensitive receptors to substantial pollutant concentrations?

No Impact. The sensitive receptors closest to the project site are the Hiddenbrooke Community residences approximately 1.5 miles away. Typical screening distance for health risk exposure from construction activities is 1,000 feet. Construction activities associated with the project would generate air pollutant emissions; however, as discussed under **Section 2.3, Air Quality, Impact b**, these emissions would not be substantial. The intervening distance between the project and nearest sensitive receptor further minimizes any affect construction emissions would have on those receptors. Therefore, nearby sensitive receptors would not be exposed to substantial air pollutant concentrations. Additionally, as discussed in **Section 2.17, Transportation/Traffic**, the project operation would not increase vehicle travel within the project site or surrounding area and as discussed in paragraph above the project may reduce vehicle queuing and vehicle idling time, and thus would not result in an increase in air pollutant concentrations. No impact would occur.

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

No Impact. During construction, odors from the use of equipment during construction activities would be intermittent and temporary, such as diesel engine exhaust and asphalt paving. Such odors generally dissipate rapidly from the source and decrease with distance. The project site does not include facilities known to produce substantial odors during operation, such as landfills and wastewater treatment facilities, and project implementation would not introduce any new uses that could result in odor generation. Additionally, there are no sensitive receptors within 1,000 feet of the project site. No impact would occur.

2.4 Biological Resources

	Significant Impact	Less than Significant with Mitigation	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 candidate, sensitive, or special status species in local or regional plans, policies, regulations, or by the California Department of Fish and Game 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 Game 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 impact 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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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"/>

Regulatory Setting

Federal

Clean Water Act

The Clean Water Act (CWA) functions to maintain and restore the physical, chemical, and biological integrity of waters of the US, which include, but are not limited to, tributaries to traditionally navigable waters currently or historically used for interstate or foreign commerce, and adjacent wetlands. On June 23, 2020, the Navigable Waters Protection Rule went into effect. This Rule clarifies that federal waters do not include ephemeral streams or features adjacent to such features. Ephemeral streams have no

connection to groundwater and only convey flows during and shortly after precipitation events. They do not include intermittent streams with a seasonal connection to groundwater and seasonal flows that persist for several days or more following rain events or persist between winter storms.

Construction activities within jurisdictional waters are regulated by the United States Army Corps of Engineers (USACE). The placement of fill into such waters must comply with permit requirements of the USACE. No USACE permit will be effective in the absence of Section 401 Water Quality Certification. The State Water Resources Control Board (SWRCB) is the state agency (together with the Regional Water Quality Control Boards [RWQCBs]) charged with implementing water quality certification in California.

Federal Endangered Species Act

The Federal Endangered Species Act (FESA) protects federally listed wildlife species from harm or “take”, which is broadly defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct.” Take can also include habitat modification or degradation that directly results in death or injury of a listed wildlife species. An activity can be defined as “take” even if it is unintentional or accidental.

The U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) have jurisdiction over federally listed, threatened, and endangered species under FESA. The USFWS also maintains lists of proposed and candidate species. Species on these lists are not legally protected under FESA, but may become listed in the near future and are often included in their review of a project.

Federal Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA), 16 U.S.C. Section 703, prohibits killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. The MBTA protects whole birds, parts of birds, and bird eggs and nests, and prohibits the possession of all nests of protected bird species whether they are active or inactive. An active nest is defined as having eggs or young, as described in its June 14, 2018 memorandum “Destruction and Relocation of Migratory Bird Nest Contents.” Nest starts (nests that are under construction and do not yet contain eggs) and inactive nests are not protected from destruction. All native bird species that occur in the biological study area (BSA) are protected under the MBTA.

State

Clean Water Act Section 401/Porter-Cologne Water Quality Control Act

The SWRCB works in coordination with the nine RWQCBs to preserve, protect, enhance, and restore water quality. Each RWQCB makes decisions related to water quality for its region, and may approve, with or without conditions, or deny projects that could affect waters of the State. Their authority comes from the CWA and the State’s Porter-Cologne Water Quality Control Act (Porter-Cologne). Porter-Cologne broadly defines waters of the State as “any surface water or groundwater, including saline waters, within the boundaries of the state.” Because Porter-Cologne applies to any water, whereas the CWA applies only to certain waters, California’s jurisdictional reach overlaps and may exceed the boundaries of waters of the US.

Because California’s jurisdiction to regulate its water resources is much broader than that of the federal government, proposed impacts on waters of the State require Water Quality Certification even if the area occurs outside of USACE jurisdiction. Moreover, the RWQCB may impose mitigation requirements

even if the USACE does not. Under the Porter-Cologne, the SWRCB and the nine regional boards also have the responsibility of granting CWA National Pollutant Discharge Elimination System (NPDES) permits and Waste Discharge Requirements for certain point-source and non-point discharges to waters. These regulations limit impacts on aquatic and riparian habitats from a variety of urban sources.

On April 2, 2019, the SWRCB adopted the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. In these new guidelines, riparian habitats are not specifically described as waters of the state but instead as important buffer habitats to streams that do conform to the State Wetland Definition. The Procedures for Discharges of Dredged or Fill Material to Waters of the State describe riparian habitat buffers as important resources that may be included in required mitigation packages for permits for impacts to waters of the state, as well as areas requiring permit authorization from the RWQCBs for impacts. The RWQCBs may impose mitigation requirements even if the USACE does not, and it should be noted that the State of California's jurisdiction to regulate its water resources is much broader than that of the federal government.

California Endangered Species Act

The California Endangered Species Act (CESA; California Fish and Game Code, Chapter 1.5, Sections 2050-2116) prohibits the take of any plant or animal listed or proposed for listing as rare (plants only), threatened, or endangered. In accordance with CESA, the CDFW has jurisdiction over state-listed species (Fish and Game Code 2070). The CDFW regulates activities that may result in "take" of individuals (i.e., "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill"). Habitat degradation or modification is not expressly included in the definition of "take" under the California Fish and Game Code. The CDFW, however, has interpreted "take" to include the "killing of a member of a species which is the proximate result of habitat modification."

CDFW has produced three lists (amphibians and reptiles, birds, and mammals) of "species of special concern" that serve as "watch lists". Species on these lists are of limited distribution or the extent of their habitats has been reduced substantially, such that threat to their populations may be imminent. Thus, their populations should be monitored. They may receive special attention during environmental review as potential rare species, but do not have specific statutory protection. All potentially rare or sensitive species, or habitats capable of supporting rare species, are considered for environmental review per the CEQA Section 15380(b).

California Fish and Game Code

Specific sections of the California Fish and Game Code describe regulations pertaining to protection of certain wildlife species. For example, Code Section 2000 prohibits take of any bird, mammal, fish, reptile, or amphibian except as provided by other sections of the code.

The California Fish and Game Code Sections 3503, 3513, and 3800 (and other sections and subsections) protect native birds, including their nests and eggs, from all forms of take. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "take" by the CDFW. Raptors (i.e., eagles, hawks, and owls) and their nests are specifically protected in California under Code Section 3503.5. Section 3503.5 states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto."

Ephemeral and intermittent streams, rivers, creeks, dry washes, sloughs, blue line streams on USGS maps, and watercourses with subsurface flows fall under CDFW jurisdiction. Canals, aqueducts, irrigation ditches, and other means of water conveyance may also be considered streams if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife.

Regional

Solano County Code

The Solano County Code contains all ordinances for Solano County. Chapter 31; Grading, Drainage, Land Leveling, and Erosion Control, and includes regulations relevant to biological resources in the BSA for the project. Section 31-11 outlines the purpose of this chapter as providing the means for controlling soil erosion, sedimentation, increased rates of water runoff and related environmental damage by establishing minimum standards and providing regulations for the construction and maintenance of fills, excavations, cuts and clearing of vegetation, revegetation of cleared areas, drainage control, and the protection of exposed soil surfaces in order to protect downstream waterways and wetlands and to promote the safety, public health, convenience and general welfare of the community.

Solano County General Plan

The Solano County General Plan contains the following relevant policies addressing biological resources:

Resource Implementation Element RS.I-3: This policy directs the development and adoption of an ordinance to protect oak woodlands as defined in Senate Bill (SB) 1334, and defines heritage oak trees as:

- Trees with a trunk diameter of 15 inches or more measured at 54 inches above natural grade;
- Any oak tree native to California, with a diameter of 10 inches or more measured at 54 inches above natural grade;
- Any tree or group of trees specifically designated by the County for protection because of its historical significance, special character, or community benefit.

Resource Implementation Element RS.I-8: This policy requires the planting of shade and roadside trees in development projects; encourages the use of native tree species, especially native oaks; and directs the County to evaluate the feasibility of planting of roadside trees as part of major County road improvement projects.

Napa County Code

A small portion of the BSA, along McGary Road in the southwestern part of the site, is within Napa County. The Napa County Code contains all ordinances for Napa County. Title 16, Environment, includes regulations relevant to biological resources in the BSA as discussed below.

General provisions – Wetlands. Chapter 18.108.026 states that construction of main or accessory structures, earthmoving activity, land clearing or agricultural uses of land shall be set back 50 feet from the delineated wetland boundary. In limited circumstances, the 50-foot setback may be reduced if recommended by a qualified professional biologist and approved by the director.

Local

City of Vallejo General Plan 2040

There are no goals and policies pertaining to biological resources in the City of Vallejo General Plan 2040 that would be applicable to the project.

Environmental Setting

The information in this section is based on the Biological Resources Report and Wetland Delineation prepared for the project. These reports are included as **Appendix B**.

The approximately 29.9-acre BSA is in unincorporated Solano and Napa Counties, north of the city limit of Vallejo and east of the City of American Canyon. It is located within the Cordelia, California 7.5-minute USGS quadrangle. The BSA is in a rural area and consists of transportation and infrastructure uses. A majority of the BSA comprises the I-80/Hiddenbrooke Parkway/American Canyon Road interchange, as well as McGary Road, a frontage road that runs parallel to the existing I-80 ramps on the eastern side of the interchange. Hiddenbrooke Parkway provides access to the Hiddenbrooke Golf Club and residential development surrounding the golf club. American Canyon Road provides access to predominantly residential areas of the City of American Canyon. The surrounding lands in Solano County are designated Exclusive Agricultural, and the surrounding lands in Napa County (at the southwest edge of the BSA) are designated Agriculture, Watershed, and Open Space.

Reconnaissance-level surveys identified seven habitat types/land uses in the study area: developed/landscaped (16.34 ac), California annual grassland (12.05 ac), perennial emergent wetland (0.13 ac), ditch (0.10 ac), seasonal wetland (0.43 ac), ephemeral drainage (0.24 ac), and riparian woodland/scrub (0.85 ac). These features are depicted on **Figure 9**. Plant species observed during the reconnaissance survey are listed in **Appendix B**.

Wetlands and Waters of the US

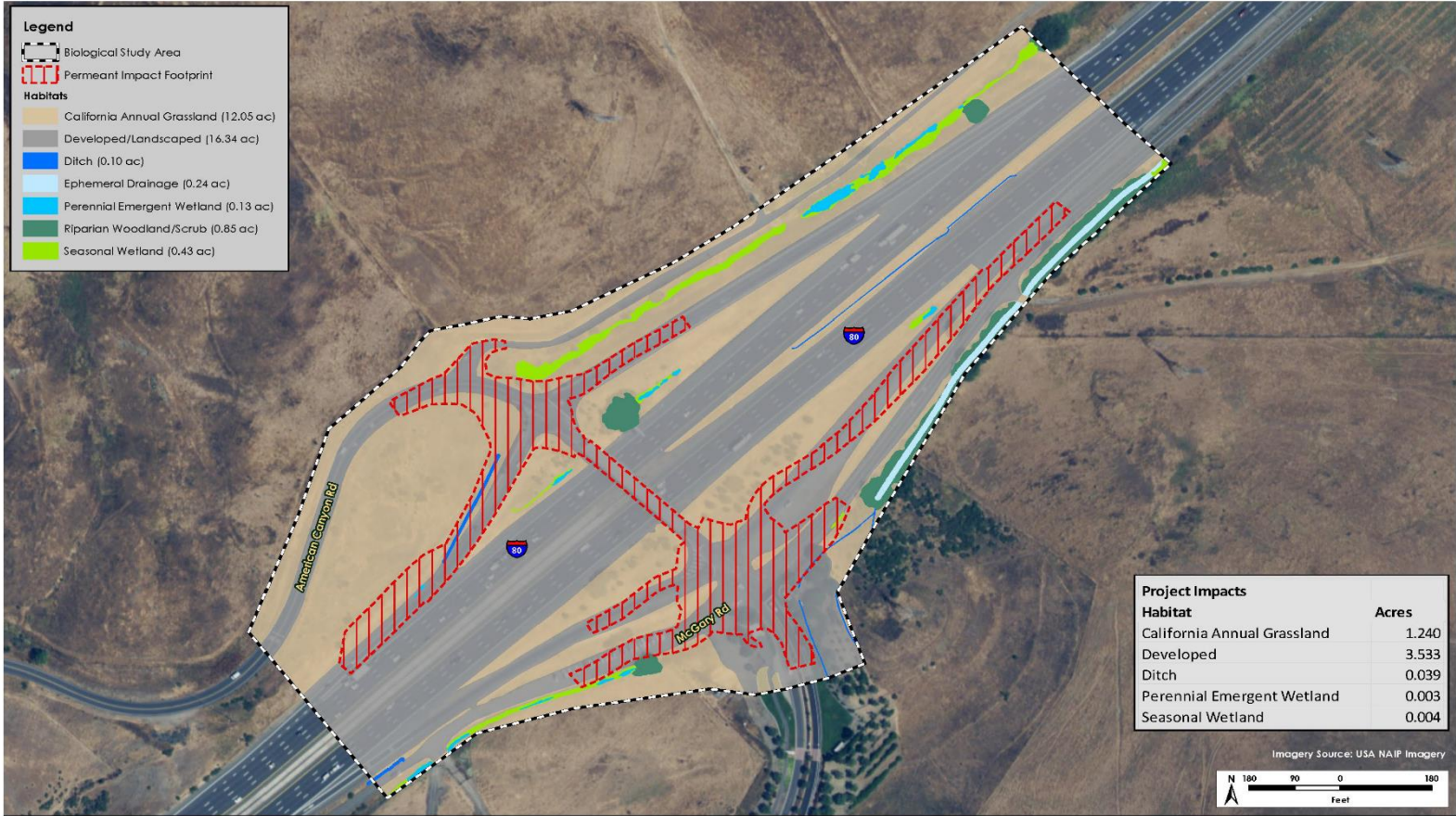
Portions of the study area contain wetlands that do not meet the criteria to be claimed as waters of the US by the USACE under the Navigable Waters Protection Rule. The drainage to the outside of McGary Road in the northeast part of the BSA is considered an ephemeral drainage, and therefore drainages and wetlands near it may not be claimed as jurisdictional waters of the US based on the new federal treatment of ephemeral drainages.

Similarly, the wetland ditch on the north side of the northeast part of the project site drains via ephemeral drainages to the nearest waters of the US, as do the wetlands to the outside of McGary Road in the southwest portion of the BSA. Finally, wetlands near the westbound on-ramp do not have any clear connecting or natural drainage between this area and American Canyon Creek to the west. The features that were designated as ditches (see **Figure 9**) were excavated in uplands to convey runoff from roadsides and are not jurisdictional wetlands or other waters of the US.

Waters of the State

Portions of the BSA contain wetlands and riparian habitats that may be claimed as waters of the State or important buffers to waters of the State by the RWQCB. The features that were designated as ditches (see **Figure 9**) were excavated in uplands to convey runoff from roadsides and are not jurisdictional waters of the state.

I-80/Hiddenbrooke Parkway Interchange



Biological Resources in the Study Area **Figure 10**

Source: HT Harvey, 2020

Federally-Listed Species

No suitable habitat for federally listed plant species is present in the BSA. One federally listed animal species, the California red-legged frog, is known to occur nearby and may occur in the BSA during dispersal (especially during the wet season) or use wetlands and other habitats in the BSA as nonbreeding habitat. A second federally listed animal species, the Callippe Silverspot butterfly, may breed in the BSA if its larval host plant is present.

State-Listed Species

No suitable habitat for any state listed plant or animal species occurs in the BSA. Thus, no state listed plant or animal species are expected to occur in the BSA.

California Department of Fish and Wildlife Jurisdiction

The ephemeral drainage located on the southeast side of McGary Road in the northeastern part of the BSA is not a downstream continuation of a stream, and it only collects localized runoff and irrigation from the nearby landscaping at Hiddenbrooke Road. However, this feature has a defined bed and banks and is the remnant of a historic irrigation canal that connects downstream of the BSA to an unnamed tributary of Green Valley Creek. As a result, the channel bed and associated riparian vegetation would therefore be regulated by the CDFW under California Fish and Game Code Section 1603. The features that were designated as ditches were excavated in uplands to convey runoff from roadsides and do not meet CDFW criteria for regulated riparian areas. Most native bird, mammal, and other wildlife species that occur in the BSA and in the immediate vicinity are protected by the California Fish and Game Code.

Impact Discussion

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

Less than Significant with Mitigation. As described below, with application of mitigation measures, the project would not significantly impact any listed or candidate species.

Special-Status Plants

One plant species, bristly leptosiphon, is categorized by the California Native Plant Society (CNPS) as a rare plant, and has the potential to occur within the California annual grassland habitat in the BSA. If present, project development may affect special-status plants due to disturbance of individuals within the populations and disturbance or destruction of suitable habitat. As construction work would generally be limited to the existing footprint of the I-80/Hiddenbrooke Parkway/American Canyon Road interchange, as well as the intersection of Hiddenbrooke Parkway and McGary Road, most direct impacts to the species, if present, would be avoided. However, the replacement of stop-controlled intersections with roundabouts would enlarge the footprint of the roadway network and could result in direct impacts, including grading or filling areas supporting these species, trampling, or crushing of plants, and soil compaction. Indirect impacts could include increased mobilization of dust onto plants, which can affect their photosynthesis and respiration, or changes to hydrology supporting these plants within adjacent wetlands due to grading or construction in nearby habitats.

According to the Biological Resources Report (**Appendix B**), if this species is present, and impacts occur to 20 percent or less of the population (by individuals or occupied area) extending into the study area, such a low level of impacts would not be expected to cause the extirpation of such a population, as long as the remaining plants were avoided and protected. However, impacts to more than 20 percent of a population could contribute to extirpation of that population, and therefore a reduction in this species' range or genetic resources. Due to the regional rarity of this species, this would be considered significant under CEQA. Implementation of **Mitigation Measures BIO-1 through BIO-3** would reduce impacts on special-status plants to a less-than-significant level.

Mitigation Measure BIO-1: Pre-Activity Surveys for Special-Status Plants.

Prior to initial ground disturbance and during the appropriate blooming period (April–early June) a focused survey for bristly leptosiphon will be conducted within suitable habitat in the project footprint and a 50-foot buffer around the project footprint. This buffer may be increased by the qualified plant ecologist depending on site-specific conditions and activities planned in the areas, but must be at least 50 feet wide. Situations for which a greater buffer may be required include proximity to proposed activities expected to generate large volumes of dust, such as grading; potential for project activities to alter hydrology supporting the habitat for the species in question; or proximity to proposed structures that may shade areas farther than 50 feet away. The purpose of the survey will be to assess the presence or absence of the potentially occurring species. If bristly leptosiphon is not found in the impact area or the identified buffer, then no further mitigation will be warranted. If bristly leptosiphon individuals are found in the impact area, then Mitigation Measure BIO-2 shall be implemented.

Mitigation Measure BIO-2: Avoidance and Minimization Buffers.

To the extent feasible, and in consultation with a qualified plant ecologist, the project proponent will design and construct the project to avoid impacting all populations of bristly leptosiphon within the BSA or within the identified buffer of the impact area, or at least to minimize the impacts to this species' populations. Avoided special-status plant populations (or portions thereof) will be protected by establishing and observing the identified buffer between plant populations and the impact area. All such populations located in the impact area or the identified buffer, and their associated designated avoidance areas, will be clearly depicted on any construction plans. In addition, prior to initial ground disturbance or vegetation removal, the limits of the identified buffer around special-status plants to be avoided will be flagged or fenced. The flagging will be maintained intact and in good condition throughout project-related construction activities.

If special-status plant populations can be completely avoided, or if no more than 20 percent of the population (by occupied area or number of individuals) will be impacted within implementation of avoidance and minimization buffers, no further mitigation is necessary. If avoidance of at least 80 percent of the population (by occupied area or individuals) is not feasible so that more than 20 percent of the population would be impacted as determined by a qualified plant ecologist, Mitigation Measure 3 shall be implemented.

Mitigation Measure BIO-3: Preserve Off-Site Populations of Special-Status Plant Species.

If avoidance of bristly leptosiphon is not feasible so that more than 20 percent of the population would be impacted, compensatory mitigation will be provided via the preservation, enhancement,

and management of occupied habitat for the species. To compensate for impacts on bristly leptosiphon, off-site occupied habitat will be preserved and managed in perpetuity at a minimum 1:1 mitigation ratio (at least one plant preserved for each plant affected, and at least one occupied acre preserved for each occupied acre affected), for any impact over the 20 percent significance threshold.

Areas proposed to be preserved as compensatory mitigation for this impact must contain a verified extant population of bristly leptosiphon. Mitigation areas will be managed in perpetuity to encourage persistence and even expansion of this species. Mitigation lands cannot be located on land that is currently held publicly for resource protection unless substantial enhancement of habitat quality will be achieved by the mitigation activities. The mitigation habitat will be of equal or greater habitat quality compared to the impacted areas, as determined by a qualified plant ecologist, in terms of soil features, extent of disturbance, vegetation structure, and dominant species composition, and will contain at least as many individuals of the species as are impacted by project activities. The permanent protection and management of mitigation lands will be ensured through an appropriate mechanism, such as a conservation easement or fee title purchase. A habitat mitigation and monitoring plan (HMMP) will be developed and implemented for the mitigation lands. That plan will include, at a minimum, the following information:

- A summary of habitat impacts and the proposed mitigation;
- A description of the location and boundaries of the mitigation site and description of existing site conditions;
- A description of measures to be undertaken to enhance (e.g., through focused management that may include removal of invasive species in adjacent suitable but currently unoccupied habitat) the mitigation site for the focal special-status species;
- A description of measures to transplant individual plants or seeds from the impact area to the mitigation site, if appropriate (which will be determined by a qualified plant or restoration ecologist);
- Proposed management activities to maintain high-quality habitat conditions for the focal species;
- A description of habitat and species monitoring measures on the mitigation site, including specific, objective final and performance criteria, monitoring methods, data analysis, reporting requirements, monitoring schedule, etc. At a minimum, performance criteria will include demonstration that any plant population fluctuations over the monitoring period do not indicate a downward trajectory in terms of reduction in numbers and/or occupied area for the preserved mitigation population that can be attributed to management (i.e., that are

not the result of local weather patterns, as determined by monitoring of a nearby reference population, or other factors unrelated to management); and

- Contingency measures for mitigation elements that do not meet performance criteria.

The HMMP will be prepared by a qualified plant or restoration ecologist. Approval of the HMMP by the City will be required before the project impact occurs.

Callippe Silverspot Butterfly

Callippe silverspot butterflies are known in the BSA region; the Cordelia Hills population is approximately 2 miles southeast of the BSA. If Callippe silverspot butterflies, larvae, or the larval host plant (*Viola pedunculata*) are present in the BSA, project activities could impact this rare species. Heavy equipment use, vehicle traffic, and worker foot traffic within impact areas could result in the injury or mortality of Callippe silverspot butterflies (including larvae and pupae) or their host plants (e.g., physically breaking, crushing, wilting, burying, or uprooting plants and damaging their roots as a result of soil disturbance by heavy equipment). In addition, Callippe silverspot butterflies and their host plants may be affected by petrochemicals, hydraulic fluids, and solvents that are spilled or leaked from construction vehicles or equipment. Implementation of **Mitigation Measures BIO-4 through BIO-6** would reduce project impacts on the Callippe silverspot butterfly to a less-than-significant level.

Mitigation Measure BIO-4: Worker Environmental Awareness Program.

All construction personnel will participate in a worker environmental awareness program. These personnel will be informed about the presence of listed species and habitats associated with the species and that unlawful take of a federally listed animal is a violation of FESA. Prior to construction activities, a qualified biologist will instruct all construction personnel about (1) the description and status of the species; (2) the importance of their associated habitats; and (3) a list of measures being taken to reduce impacts on these species during project construction and implementation. A fact sheet conveying this information will be prepared for distribution to the construction crew and anyone else who enters the project site. The fact sheet conveying this information will also be posted on site.

Mitigation Measure BIO-5: Surveys and Avoidance.

The following measures will be implemented to determine whether the Callippe silverspot is present, and if so, whether it can be avoided.

- Appropriately-timed surveys will be performed for the species' larval host plant, *Viola pedunculata*. Prior to commencement of Project activities, a qualified biologist will survey the BSA to identify any areas supporting larval host plants. If no host plants are detected, the Callippe silverspot will be presumed absent and no further action will be necessary.
- If larval host plants are detected, they will be protected, if feasible, by establishing buffer zone around individual plants or populations. Ideally, the buffer will be at least 50 feet, although a reduced buffer will be acceptable as long as the plants are not directly impacted. Project personnel and equipment will not operate within such areas. All avoided larval host

plants will be clearly depicted on project plans and marked in the field with ESA fencing or flagging.

- If host plants are present but avoidance of individual host plants is not feasible, a qualified biologist will conduct appropriately-timed focused surveys for individual larvae, pupae, and adults in areas surrounding the host plants. If no individuals are detected, the species will be presumed absent, and no further action will be necessary.

Mitigation Measure BIO-6: Compensatory Mitigation for Callippe Silverspot Butterfly and Occupied Habitat. If individual larvae, pupae, or adults are detected, the habitat will be considered occupied, and compensatory mitigation will be provided at a 3:1 ratio (on an acreage basis) for the habitat occupied by the larval host plant as well as contiguous suitable habitat, as determined by a qualified biologist. Compensatory mitigation will be provided via purchase of credits in a USFWS-approved conservation bank, if one exists, or project-specific mitigation via preservation and management of suitable habitat for the species, at an appropriate off-site location within the range of the species.

Prior to the initiation of construction, the project proponent will purchase credits from a mitigation bank approved by the applicable resource agencies and/or prepare a Habitat Mitigation and Management Plan (HMMP) describing the proposed mitigation. The HMMP will be prepared by a qualified ecologist and will include the following:

- A summary of habitat impacts
- The location of the habitat mitigation area (which must be within the range of the Callippe silverspot) and description of habitats in the mitigation area (which must include grassland supporting the silverspot's larval host plant)
- A summary of information on the occurrence and distribution of the Callippe silverspot and its larval host plant on and/or in the immediate vicinity of the mitigation site
- A description of any measures that will be implemented to enhance the mitigation area (e.g., management of non-native vegetation)
- Measures that will be implemented to manage the mitigation site and maintain suitable habitat for the Callippe silverspot
- A funding plan to fund maintenance, management, monitoring, and reporting in perpetuity
- A monitoring plan (including final and performance criteria, monitoring methods, data analysis, reporting requirements, monitoring schedule, etc.). At a minimum, success criteria will include maintenance of populations of the larval host plant on the mitigation site
- Contingency measures and adaptive management measures to be implemented if necessary

California red-legged frog

While California red-legged frogs are not known or expected to reside or breed in the BSA, occasional individuals from nearby populations may opportunistically occupy non-breeding aquatic or terrestrial habitats in the BSA, especially during the wet season. The number of individuals that may occur in the BSA is expected to be low due to the limited extent of aquatic habitats in the BSA, as well as the lack of

upland refugia such as downed wood, debris, or small mammal burrows for dispersing or sheltering individuals.

If individuals are present during construction activities, injury or mortality of individuals could result from vegetation removal, grading, excavation, and movement of personnel and heavy equipment. Seasonal movements may be temporarily and locally affected during construction activities because of disturbance, and substrate vibrations may cause individuals to move out of refuges, exposing them to a greater risk of predation or desiccation.

In addition, petrochemicals, hydraulic fluids, and solvents that are spilled or leaked from construction vehicles or equipment may kill individuals. Further, increases in human concentration and activity in the vicinity of potentially suitable dispersal habitat may result in an increase in native and nonnative predators that would be attracted to trash left at the work site and that would prey opportunistically on individuals of this species. The project would result in impacts to up to 1.59 acres of non-developed habitat types that could potentially be used by this species during dispersal. Most such habitat, such as the California annual grassland that would be impacted, is of low value to the species due to the absence of high-quality cover and the surrounding roadways and highway.

Nevertheless, potential impacts to individual frogs and potential habitat could occur. Implementation of **Mitigation Measure BIO-4** and **Mitigation Measures BIO-7 through BIO-14** described below would reduce project impacts on the California red-legged frog to a less-than-significant level.

Mitigation Measure BIO-7: Seasonal Work Restrictions.

California red-legged frogs spend most of their lives in and near sheltered backwaters of ponds, marshes, springs, streams, and reservoirs, and their movement through upland areas occurs primarily during the rainy season. Therefore, work will be avoided within habitat suitable for California red-legged frog (i.e., any non-developed habitat) during the rainy season, from October 15 (or the first measurable fall rain of 1 inch or greater) to April 15. If avoidance is not feasible, work may be performed during the wet season in upland areas where clearing and grubbing have already been completed, so that habitat conditions for special-status species are no longer suitable, and where exclusion fencing isolates suitable habitats from the work area.

Mitigation Measure BIO-8: Preconstruction surveys.

A qualified biologist will conduct pre-construction surveys for California red-legged frogs in suitable habitat no more than 48 hours prior to commencement of Project activities. If individuals are found, work will not begin until the frogs have moved on their own, or are relocated by a qualified biologist (which would require USFWS approval), out of the construction zone to an appropriate relocation site.

Mitigation Measure BIO-9: Exclusion Fencing.

Wildlife exclusion fencing consisting will be installed on the northern and southern boundaries of the project area where construction activities border California red-legged frog aquatic and upland dispersal habitat. The lower 6 inches of the fence will be buried in the ground to prevent animals from crawling under, and at least 36 inches will extend above the ground. Fencing will be inspected

daily during construction (i.e., any day on which construction or biological personnel are present on the site), and any damaged sections will be repaired immediately.

Mitigation Measure BIO-10: Construction Monitoring.

A qualified biologist will be present for wildlife exclusion fence installation and initial ground disturbing activities, including vegetation clearing and grubbing. If any California red-legged frogs are detected within areas where they could be impacted by project activities, they will be allowed to move out of the impact areas on their own. If they will not do so, the qualified biologist will relocate any individuals found within the impact area to appropriate locations outside the site (which would require USFWS approval). Following the completion of initial clearing and grubbing, the qualified biologist will inspect the site weekly during the remainder of construction activities. If an animal that is thought to potentially be a California red-legged frog is detected by construction personnel, all work that could affect the frog will stop; a qualified biologist will be contacted; and the qualified biologist will determine whether the animal is a red-legged frog and what next steps are appropriate.

Mitigation Measure BIO-11: Monofilament Plastic.

No monofilament plastic will be used in erosion control features to avoid entanglement of frogs.

Mitigation Measure BIO-12: Inspection of Open Trenches.

Construction personnel will inspect open trenches in the morning and evening for trapped California red-legged frogs. If any frogs are found trapped, all work that could affect the frog will stop; a qualified biologist will be contacted; and the qualified biologist will determine whether the animal is a red-legged frog and what next steps are appropriate.

Mitigation Measure BIO-13: Artificial Lighting.

Any new roadway lighting shall be designed and placed to minimize the spillover of light into natural habitats. The intensity of lighting will be the minimum necessary for public safety; lighting will be directed downward rather than outward; and lighting will be shielded to direct light into the roadway.

Mitigation Measure BIO-14: Compensatory Mitigation for California Red-legged Frog and Occupied Habitat.

Compensatory mitigation will be provided at a 2:1 ratio (on an acreage basis) for all potential California red-legged frog habitat (i.e., any areas that are not occupied by developed habitat except for the median between the eastbound and westbound lanes of the highway) that is permanently impacted by the project. This ratio is appropriate given the relatively low quality of red-legged frog habitat but the likelihood that the species occasionally occurs on the project site. Compensatory mitigation will be provided via purchase of credits in a USFWS-approved conservation bank, if one exists, or project-specific mitigation via preservation and management of suitable habitat for the species, at an appropriate off-site location within the range of the species.

Prior to the initiation of construction, the project proponent will purchase credits from a mitigation bank approved by the applicable resource agencies and/or prepare a HMMP describing the proposed mitigation. The HMMP will be prepared by a qualified ecologist and will include the following:

- A summary of habitat impacts
- The location of the habitat mitigation area (which must be within the range of the California red-legged frog and likely to support the species given habitats on and contiguous with the site) and description of habitats in the mitigation area
- A summary of information on the occurrence and distribution of the California red-legged frog on and/or in the immediate vicinity of the mitigation site
- A description of any measures that will be implemented to enhance the mitigation area
- Measures that will be implemented to manage the mitigation site and maintain suitable habitat for the California red-legged frog
- A funding plan to fund maintenance, management, monitoring, and reporting in perpetuity
- A monitoring plan (including final and performance criteria, monitoring methods, data analysis, reporting requirements, monitoring schedule, etc.). At a minimum, success criteria will include maintenance of suitable habitat for the California red-legged frog
- Contingency measures and adaptive management measures to be implemented if necessary

Golden Eagle, Swainson’s Hawk, White-tailed Kite, and Loggerhead Shrike

The white-tailed kite (California fully-protected species), the Swainson’s hawk (a California threatened species), and the loggerhead shrike (a California species of special concern when nesting) may all nest in trees or structures within or adjacent to the BSA. The golden eagle (*Aquila chrysaetos*), a California fully-protected species, is not expected to breed in the BSA due to the lack of suitably large trees or towers and the level of existing human activity, but it has a low potential to breed within 1 mile of the BSA. All these species may forage over the BSA.

Heavy ground disturbance, noise, and vibrations caused by project activities could potentially disturb foraging or roosting individuals of these species and cause them to move away from work areas. Project grading and tree removal may result in the removal of active nests or the disturbance of nests adjacent to the study area, possibly to the point of abandonment of active nests with eggs or nestlings.

Eggs or young in nests of Swainson’s hawks, white-tailed kites, or loggerhead shrikes may be killed or injured by construction personnel or equipment, or by removal of vegetation containing nests. Nesting may be disrupted to the extent that birds may abandon the nest. In addition, project activities causing a substantial increase in noise, movement of equipment, or human presence may have a direct effect on the behavior of individuals causing them to avoid work sites and possibly exposing them to increased competition with other birds in the areas to which they disperse and increased levels of predation caused by unfamiliarity with the new area. Implementation of **Mitigation Measures BIO-15 through BIO-17** would reduce impacts on nesting special-status birds to less-than-significant levels.

Mitigation Measure BIO-15: Avoidance.

To the extent feasible, construction activities should be scheduled to avoid the nesting season. If construction activities are scheduled to take place outside the nesting season, all impacts on nesting birds protected under the MBTA and California Fish and Game Code will be avoided. The nesting

season for most birds in the project vicinity extends from February 1 through August 31. The nesting season for golden eagles extends from January 1 to August 31.

Mitigation Measure BIO-16: Preconstruction/Pre-disturbance Surveys.

If it is not possible to schedule construction activities between September 1 and December 31, then preconstruction surveys for nesting birds will be conducted by a qualified biologist to ensure that no nests will be disturbed during project implementation. These surveys will be conducted no more than 7 days prior to the initiation of construction activities. During this survey, the ornithologist will inspect all trees and other potential nesting habitats (e.g., trees, shrubs, ruderal grasslands, buildings) in and adjacent to the impact areas for nests. Surveys will cover all areas within 1 mile for golden eagle, a half-mile for Swainson's hawk, 300 feet for other raptors, and 100 feet for other species.

Mitigation Measure BIO-17: Buffers.

If an active nest is found sufficiently close to work areas to be disturbed by these activities, the biologist will determine the extent of a construction-free buffer zone to be established around the nest (typically 1 mile for golden eagle (USFWS 2017), a half-mile for Swainson's hawk (California Energy Commission and California Department of Fish and Game 2010), 300 feet for other raptors, and 100 feet for other species) to ensure that no nests of species protected by the MBTA and California Fish and Game Code will be disturbed during project implementation. These buffers may be adjusted based on the judgment of a qualified biologist if a reduced buffer is determined to be adequate (e.g., due to intervening vegetation or topography that prevents the project area from being visible from the nest location).

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

Less than Significant with Mitigation. As described below, with application of mitigation measures, the project would not significantly impact riparian habitat or other sensitive natural communities.

Riparian Habitat

Riparian habitat occurs in scattered patches associated with roadside ditches and wetlands within the BSA, as well in a more contiguous area along the ephemeral stream near McGary Road. The riparian habitat along the ephemeral stream in the northeastern portion of the BSA is of moderate quality, but this habitat will be avoided by the project. No riparian tree removal is anticipated from the project. Indirect impacts to riparian habitat within the BSA will be avoided through compliance with the Statewide General Construction permit and stormwater treatment features required by regional stormwater orders. Additionally, all riparian understory vegetation will be avoided due to being wetlands or being comprised of invasive species such as Himalayan blackberry, and would not be considered an adverse impact to remove from these areas.

However, native riparian willows occur very close to the project footprint. Removal of any riparian trees due to project activities would be considered a significant impact. Implementation of **Mitigation Measure BIO-18** would reduce this impact to a less-than-significant level.

Mitigation Measure BIO-18: Avoid Impacts to Riparian Habitat.

As discussed above, the project has been designed to avoid most impacts to riparian habitat within the BSA, particularly the higher quality riparian habitat within the banks of the ephemeral stream. All riparian habitat shown on **Figure 9** to be avoided by the project will be clearly shown on project construction plans and will be clearly separated from project work areas by ESA fencing or flagging. Fencing will be installed on the driplines of riparian trees (the tree protection zone, TPZ) to avoid impacts to the canopy or roots from nearby work activities or ground disturbance. If work must take place within the dripline of any riparian tree to be preserved, Mitigation Measure BIO-18 Option A shall be implemented.

Mitigation Measure BIO-18 Option A: Arborist Evaluation of Tree Impacts within TPZs.

If work must occur to a riparian tree preserved within a TPZ, any ground disturbance or trimming affecting more than 15 percent of the canopy will be monitored by an ISA certified arborist to ensure that impacts are minimized to the greatest extent feasible, and that the tree can be expected to survive following project implementation. If the arborist cannot make a determination that the riparian tree is expected to survive, the tree will be mitigated as per Mitigation Measure BIO-18 Option B.

Mitigation Measure BIO-18 Option B: Compensate for Loss of Riparian Trees.

All native riparian trees greater than 6 inches diameter at breast height (dbh) to be removed or that may be killed by the project (as determined by a certified arborist) will be replaced in a suitable location, which may include other roadside locations with sufficient hydrology within the BSA per a project riparian mitigation and monitoring plan (MMP). Native willows will be replaced at a ratio of 3:1 (replacement trees to impacted trees) while native oaks will be replaced at a ratio of 3:1 for trees 6 – 12 inches dbh and 5:1 for any riparian oak trees greater than 12 inches dbh³. The MMP will include at a minimum:

- A summary of habitat impacts and the proposed mitigation;
- A description of the location and boundaries of the mitigation site and description of existing site conditions;
- A description of measures to be undertaken to enhance (e.g., through focused management that may include removal of invasive species in adjacent suitable but currently unoccupied habitat) the mitigation site for planted riparian habitat;
- Proposed management activities to maintain the restored riparian habitat, including replacement of trees that do not survive, if necessary;

³ Solano County. 2008. Solano County General Plan. Chapter 4 Resources. Available at: <https://www.solanocounty.com/civicax/filebank/blobdload.aspx?BlobID=6494>. Accessed June 2020.

Napa County. 2021. Napa County Municipal Code. Available at: https://library.municode.com/ca/napa_county/codes/code_of_ordinances. Accessed June 2020.

- A description of habitat and species monitoring measures on the mitigation site, including specific, objective final and performance criteria, monitoring methods, data analysis, reporting requirements, monitoring schedule, etc. At a minimum, performance criteria will include demonstration that 75 percent canopy cover of riparian vegetation has been achieved by year 5; and
- Contingency measures for mitigation elements that do not meet performance criteria within the 5-year monitoring period. For example, the MMP may indicate that if 75 percent canopy cover of riparian vegetation has not been achieved by year 5, additional trees will be planted and the monitoring period will be extended until that 75 percent cover criterion is met.

The MMP will be prepared by a qualified plant or restoration ecologist. Approval of the MMP by the City will be required before the project impact occurs.

Non-Native and Invasive Species

During construction, disturbed areas would be highly susceptible to colonization by non-native, invasive species that occur locally, or species that could be transported by personnel, vehicles, and other equipment. The BSA contains invasive species with the potential to invade the sensitive wetland habitats, such as fennel, Fuller’s teasel, and black mustard. All three species are located in uplands directly adjacent to sensitive wetland habitats, where project activities could cause them to spread further into the wetlands in and adjacent to the study area. Invasive species can spread quickly and can be difficult to eradicate. Implementation of **Mitigation Measure BIO-19** would reduce potential weed-related impacts on sensitive habitats and the species they support to a less-than-significant level.

Mitigation Measure BIO-19: Invasive Species Best Management Practices (BMPs).

The following BMPs will be implemented to limit the spread of invasive species into sensitive habitats:

- All ground disturbing equipment used adjacent to the wetland habitat will be washed (including wheels, tracks, and undercarriages) at a legally operating equipment yard both before and after being used at the site.
- All applicable construction materials used on site, such as straw wattles, mulch, and fill material, will be certified weed free.
- The project will follow a Stormwater Pollution Prevention Plan as per the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit; Water Board Order No. 2009-0009-DWQ).
- All disturbed soils will be stabilized and planted with a native seed mix from a local source following construction.
- If excavating, soil and vegetation removed from weed-infested areas will not be used in general soil stockpiles and will not be redistributed as topsoil cover for the newly filled areas. All weed-infested soil will be disposed of off-site at a landfill or buried at least 2.5 ft below final grade.

- c) **Have a substantial adverse impact 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?**

Less than Significant with Mitigation. There are not wetlands or waters in the BSA that would be under the jurisdiction of the USACE, based on the Clean Water Act rule changes implemented in 2020. Perennial freshwater wetlands and seasonal wetlands that may be subject to the regulatory jurisdiction of the RWQCB are present in the BSA, and therefore Section 401 permitting would be required. Project improvements would directly impact two small wetland areas shown on **Figure 9**: a perennial emergent wetland along the I-80 southbound on-ramp and a seasonal wetland along McGary Road. These wetlands would be impacted by filling and/or grading. Other wetlands in the BSA could be indirectly impacted by the project if construction in non-wetland areas disrupts the hydrology of wetlands that rely on run-off. Further, temporary impacts to wetlands could occur due to construction access or staging. Implementation of **Mitigation Measure BIO-20** would reduce temporary and permanent wetland impacts to a less-than-significant level.

Mitigation Measure BIO-20: Compensatory Mitigation for Wetland Habitats.

The project proponent will obtain permits from the RWQCB (as needed) to obtain authorization to impact jurisdictional waters. Mitigation for temporary or permanent impacts on wetlands may be achieved through one or more options, potentially including but not limited to:

- Onsite restoration or creation of wetlands or aquatic habitats (including removal of onsite fill) if feasible onsite restoration opportunities exist;
- Offsite restoration/creation of wetlands; or
- Purchase of mitigation credits at approved mitigation banks within the San Francisco Bay/Vallejo Region (e.g., the Elsie Gridley Wetlands Mitigation Bank in Solano County provides appropriate wetland mitigation credits, and the site is on the border of the bank's service area).

Temporary impacts to wetlands that are restored in-place within one year or less will be mitigated at a ratio of 1:1 (restoration area: impact area). For permanent impacts, if bank credits are purchased as mitigation the amount of compensatory mitigation provided will be at least 1:1. If wetlands are created as mitigation, the amount of compensatory mitigation provided will be at least 2:1 to account for the time required for created wetland to reach maturation and replace the ecological function of the impacted wetland habitat.

Prior to construction, the project proponent will purchase credits from a mitigation bank approved by the applicable resource agencies and/or prepare a wetlands MMP (WMMP) describing the proposed creation of wetlands that will satisfy the mitigation requirements. Impacts on jurisdictional wetlands and other waters may not commence until the adequate credits in a mitigation bank have been purchased and/or the project proponent prepares the WMMP, so that the total mitigation requirement is satisfied. The WMMP will be prepared by a qualified restoration ecologist and will include the following:

- A summary of wetland impacts and the proposed wetland creation mitigation

- Goals of the restoration to achieve no net loss of habitat functions and values
- The location of the mitigation site and description of existing site conditions
- Mitigation design:
 - Existing and proposed site hydrology, geomorphology, and geotechnical stability, if applicable
 - Grading plan if appropriate, including bank stabilization or other site stabilization features
 - Soil amendments and other site preparation elements as appropriate
 - Planting plan
 - Irrigation and maintenance plan
 - Construction schedule
- Monitoring plan (including specific, objective final and performance criteria, monitoring methods, data analysis, reporting requirements, monitoring schedule, etc.). Performance criteria will include the establishment of wetland vegetation on any vegetated wetland mitigation area within 5 years of mitigation implementation.
- A contingency plan for mitigation elements that do not meet performance or final success criteria within 5 years; this plan will include specific triggers for remediation if performance criteria are not being met. For example, the WMMP may indicate that if wetland vegetation is not established within the mitigation area by year 5, a qualified restoration ecologist will investigate whether the issue has resulted from deficient hydrology due to the mitigation design or drought, mortality of planted or seeded vegetation, disturbance by wildlife, or other factors. The restoration ecologist will then propose remedial measures to address the problem, and following implementation of those remedial measures, monitoring will continue until performance criteria are met.

If permits from the RWQCB have different mitigation requirements for impacts to wetlands from those described here, the agency-required mitigation would supersede that described in this document.

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?

Less than Significant. The BSA is centered on an existing interstate highway alignment that currently functions as a nearly complete barrier to wildlife movements, except for most birds. Migratory birds are addressed under **Impact A** above. The operational improvements included in the project would not result in further fragmentation of the surrounding natural habitats or increase the existing barriers to wildlife movement across the alignment.

The quality of habitat provided by the ruderal and annual grassland habitats the project footprint is low. The predominantly non-native, sparse vegetation provides little structural diversity or cover, and the habitat is consistently subjected to high levels of disturbance from high-speed traffic on I-80 and lower

speed traffic on Hiddenbrooke Parkway and American Canyon Road. Animals that may use these habitats for movement are already exposed to high levels of disturbance, which would not change with implementation of the project.

Impacts to wetland and riparian habitats would be limited to small, isolated portions of non-linear features. As such, they represent both a small fraction of the overall wetland habitat available in and near the BSA and regionally, and do not represent existing linear pathways that may be currently utilized by animals moving along riparian corridors. Therefore, this impact would be less than significant.

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

Less than Significant with Mitigation. The Solano County General Plan protects the following trees from removal and pruning without appropriate permitting:

- Trees with a trunk diameter of 15 inches or more measured at 54 inches above natural grade
- Any oak tree native to California with a diameter of 10 inches or more measured at 54 inches above natural grade

Project implementation would not require removal of protected trees. Additionally, riparian trees would be protected as described in **Mitigation Measures BIO-18** above. Therefore, impacts related to conflict with local policies or ordinances protecting heritage trees would be mitigated to a less-than-significant level.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. The BSA is not in an area covered by an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, the project would not conflict with any such documents and no impact would occur.

2.5 Cultural Resources

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

Regulatory Setting

The information in this section is based on the Cultural Resources Assessment prepared for the project in August 2020 (**Appendix C**).

Federal and State

California Public Resources Code

Archaeological, paleontological, and historical sites are protected by a wide variety of State policies and regulations under the California Public Resources Code (PRC). Under the PRC, the State Historical Resources Commission is responsible for oversight of the California Register of Historical Resources (California Register) and designation of State Historical Landmarks and Historical Points of Interest. Key provisions of the PRC that provide protection to cultural and paleontological resources are outlined below:

- PRC Sections 5097.9–5097.991 provides protection to Native American historical and cultural resources and sacred sites and identifies the powers and duties of the Native American Heritage Commission (NAHC). It also requires notification of discoveries of Native American human remains and provides for treatment and disposition of human remains and associated grave goods.
- PRC Section 5097.98 provides that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation until the coroner has evaluated the remains and made recommendations concerning the treatment and disposition of the human remains to the person responsible. If the coroner has reason to believe the remains are Native American, they shall contact the NAHC by telephone within 24 hours.
- PRC Section 5097.5 prohibits “knowing and willful” excavation, removal, destruction, injury, or defacement of any paleontological feature on public lands, except where the agency with jurisdiction has granted permission.

California Environmental Quality Act

Historic Resources

The CEQA Guidelines define a significant resource as any resource listed in or determined to be eligible for listing in the California Register.⁴ The California Register includes resources listed in or formally determined eligible for listing in the National Register of Historic Places (NRHP), as well as some California State Landmarks and Points of Historical Interest.

Archeological Resources

CEQA also requires lead agencies to consider whether projects will affect “unique archaeological resources” (Public Resources Code, Section 21083.2(g)) which are defined as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Treatment options for unique archaeological resources include preservation in place in an undisturbed state; excavation and curation or study in place without excavation and curation (if the study finds that the artifacts would not meet one or more of the criteria for defining a “unique archaeological resource”).

Native American Burials

California law protects Native American burials, skeletal remains, and associated grave goods regardless of their antiquity and provides for the sensitive treatment and disposition of those remains (section 7050.5(b) of the California Health and Safety Code). CEQA Guidelines section 15064.5(e) requires excavation activities be stopped whenever human remains are uncovered, and that the county coroner or medical examiner be contacted to assess the remains, as described above.

Regional

Solano County General Plan

The Cultural Resources Chapter of the Solano County General Plan outlines goals and policies aimed at protecting cultural resources from destruction by development and preserving the County’s values cultural resources. Policies listed in the County’s General Plan include:

Policy RS.P-38: Identify and preserve important prehistoric and historic structures, features, and communities.

⁴ See Public Resources Code, Section 21084.1 and CEQA Guidelines Section 15064.5 (a) and (b).

Policy RS.P-40: Consult with Native American governments to identify and consider Native American cultural places in land use planning.

Napa County General Plan

The Cultural Resources Chapter of the Napa County General Plan outlines goals and policies aimed at protecting cultural resources from destruction by development and preserving the County's values cultural resources. Policies listed in the County's General Plan include:

Action Item CC-23.2: Impose the following conditions on all discretionary projects in areas which do not have a significant potential for containing archaeological or paleontological resources:

"The Planning Department shall be notified immediately if any prehistoric, archaeological, or paleontologic artifact is uncovered during construction. All construction must stop and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology shall be retained to evaluate the finds and recommend appropriate action."

"All construction must stop if any human remains are uncovered, and the County Coroner must be notified according to Section 7050.5 of California's Health and Safety Code. If the remains are determined to be Native American, the procedures outlined in CEQA Section 15064.5 (d) and (e) shall be followed."

Local

City of Vallejo General Plan

Various policies in Vallejo's General Plan 2040 have been adopted for the purpose of avoiding or mitigating impacts to cultural resources. Approved projects in Vallejo are subject to the cultural resource policies listed in the Vallejo General Plan, including the following:

Policy NBE-1.9: Cultural Resources. Protect and preserve archaeological, historic, and other cultural resources.

Action NBE-1.9A: Continue to require that land use activities comply with State requirements and follow best practices to ensure that cultural resources are not impacted and that appropriate agencies and technical experts are involved in the evaluation and protection of resources and sites.

Environmental Setting

Build Historic and Archaeological Resources

A non-confidential California Historical Resources Information System (CHRIS) records search from the Northwest Information Center (NWIC) at Sonoma State University was completed for the project site and surrounding area on July 14, 2020 (**Appendix C**). The NWIC records search identified previously conducted cultural resources studies and one previously recorded cultural resource within the project site.

The previously recorded cultural resource is recorded in 2011 as a 110.91-acre rural parcel with several associated historic features, including historic-era debris, modern refuse, two wood spring boxes with drainage, and a concrete trough. Although the resource/parcel boundaries intersect the northern corner of the project site, the features associated with the resource are 0.80 miles north-northwest of the project site. A pedestrian survey was conducted on July 22, 2020 to inspect project site for prehistoric artifacts, marine shells or bones, or soil discoloration that may indicate the presence of cultural midden, soil depressions, and features that could indicate the former presence of structures, including historic debris. No cultural resources were identified during the pedestrian survey and no evidence of the aforementioned resource was observed. No other potential, previously unrecorded cultural resources were observed.

Tribal Cultural Resources

CEQA requires analysis of tribal cultural resources, which are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a tribe that are listed, or determined to be eligible for listing, in the national, state, or local register of historical resources. Refer to **Section 2.18, Tribal Cultural Resources**, for a discussion of tribal cultural resources.

Impact Discussion

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

No Impact. The project site is currently dedicated to transportation infrastructure including local roads and a portion of the State highway system, and there are no structures or other built historic resources on the project site eligible for listing in the NRHP or the California Register. As described above, one of the parcels included in the project footprint has been previously recorded as containing historic resources. A review of the prior documentation and a new site survey confirmed the portion of the parcel included in the project site does not contain built historic resources. There are no built historic resources adjacent to the project that could be affected by a change in setting. Further, the project would not change the existing setting, as it would consist of operational improvements to an existing modern transportation facility. No impact would occur.

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

Less than Significant with Mitigation. According to the CHRIS records search, the project footprint includes a small portion of a parcel which contains a previously recorded cultural resource. Although the parcel boundaries intersect with the project site, the features associated with the cultural resource are 0.8 miles northwest of the project site. No cultural resource features were previously recorded in the project site area, and none were observed during the pedestrian survey on July 22, 2020.

Due to the development of American Canyon Road, Hiddenbrooke Parkway, and I-80, it is unlikely that archaeological resources exist within the current project site. However, grading, excavation, and other ground-disturbing activities at the project site could result in the exposure or destruction of unknown archaeological resources. Implementation of **Mitigation Measure CUL-1** outlined below would reduce

this potential impact to a less-than-significant level by ensuring any archeological resources encountered are appropriately evaluated and, if necessary, recovered.

Mitigation Measure CUL-1: If archaeological resources are encountered during ground-disturbing activities, work in the immediate area shall be halted and an archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for archaeology shall be contacted immediately to evaluate the find. If necessary, the evaluation may require preparation of a treatment plan and archaeological testing for California Register of Historical Resources (CRHR) eligibility. If the discovery proves to be eligible for the CRHR and cannot be avoided by the project, additional work, such as data recovery excavation, may be warranted to mitigate any significant impacts to archeological resources.

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

Less than Significant. While there are no known prehistoric archaeological sites within the project site, the project could disturb unmarked prehistoric archaeological habitation or burial sites during construction activities. If human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the county coroner makes a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the county coroner must be notified immediately. If the human remains are determined to be prehistoric, the coroner will notify the Native American Heritage Commission, which will determine and notify a most likely descendant (MLD). The MLD shall complete the inspection of the site and provide recommendations for treatment to the landowner within 48 hours of being granted access. With adherence to the existing Codes cited above, this impact would be less than significant.

2.6 Energy

	Significant Impact	Less than Significant with Mitigation	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"/>

Regulatory Setting

Federal and State

Construction Equipment Fuel Efficiency Standard

The EPA sets emission standards for construction equipment. The first federal standards (Tier 1) were adopted in 1994 for all off-road engines over 50 horsepower (hp) and were phased in by 2000. A new standard was adopted in 1998 that introduced Tier 1 for all equipment below 50 hp and established the Tier 2 and Tier 3 standards. The Tier 2 and Tier 3 standards were phased in by 2008 for all equipment. Tier 4 is the current iteration of emissions standards for construction equipment, contained in 40 Code of Federal Regulations Parts 1039, 1065, and 1068. Emissions requirements for new off-road Tier 4 vehicles were required to be completely phased in by the end of 2015.

California Energy Plan

The California Energy Commission (CEC) is responsible for preparing the California Energy Plan. The Plan identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The 2008 California Energy Plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this goal, the plan identifies several strategies including assistance to public agencies and fleet operators in purchasing zero-emission vehicles and addressing their infrastructure needs, as well as encouraging urban designs that reduce VMT and accommodate pedestrian and bicycle access.

California Renewable Portfolio Standard and Senate Bill 100

Established in 2002 under Senate Bill (SB) 1078, and accelerated by SB 107 (2006), SB X 1-2 (2011), and SB 100 (2018), California’s Renewable Portfolio Standard (RPS) obligates investor-owned utilities, energy service providers, and community choice aggregators to procure 33 percent total retail sales of electricity from renewable energy sources by 2020, 60 percent by 2030, and 100 percent by 2045. SB 100 also states “it is the policy of the State that eligible renewable energy resources and zero-carbon

resources supply 100 percent of retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045". The California Public Utilities Commission (CPUC) and the CEC are jointly responsible for implementing the program.

Pavley Standards (Assembly Bill 1493)

Assembly Bill (AB) 1493, known as the Pavley Bill, amended California Health and Safety Code sections 42823 and 43018.5, thereby requiring the California Air Resources Board (CARB) to develop and adopt regulations that achieve maximum feasible and cost-effective reduction of GHG emissions from passenger vehicles, light duty trucks, and other vehicles used for noncommercial personal transportation in California.

Implementation of new regulations prescribed by AB 1493 required that the State apply for a waiver under the federal Clean Air Act (CAA). Although the EPA initially denied the waiver in 2008, the EPA approved a waiver in June 2009, and in September 2009, CARB approved amendments to apply the Pavley standards to new passenger vehicles in model years 2009 through 2016. According to CARB, implementation of the Pavley regulations is expected to reduce fuel consumption while also reducing GHG emissions.

As of September 2019, the federal government has revoked the State's CAA waiver. However, the waiver may be reinstated by the federal government at a later date. Since the repeal of the waiver, the decision has been challenged in court and the case is ongoing.

Energy Action Plan

The CEC's Energy Action Plan includes their energy policy vision, such as the emerging importance of climate change, transportation-related energy issues, and research and development activities. The CEC adopted the current Energy Action Plan in February 2008 that supplements the earlier energy action plans and examines the State's ongoing actions in the context of global climate change.

Regional

Solano County General Plan

The Energy Chapter of the Solano County General Plan outlines goals and policies aimed at conserving energy and ensuring more efficient uses of energy. Policies listed in the County's General Plan include:

Policy RS.P-49: Ensure energy conservation and reduced energy demand in the county through required use of energy-efficient technology and practices.

Napa County General Plan

There are no goals or policies pertaining to energy in the Napa County General Plan that would be applicable to the project.

Local

City of Vallejo Climate Action Plan

The City of Vallejo adopted its Climate Action Plan (CAP) in March 2012. The CAP contains a 2008 GHG emissions inventory and identifies policies to achieve 15 percent GHG emissions reduction below 2008 levels by 2020, and a 30 percent reduction by 2035. The CAP outlines a GHG reduction strategy

organized into the following topic areas: City government operations; community engagement; renewable energy; transportation demand management; optimized travel; water, wastewater, and solid waste; off-road equipment and adaptation.

Environmental Setting

Energy Use and Supply

Electricity and natural gas in California are generally consumed by stationary uses such as residential, commercial, and industrial facilities. Petroleum consumption is generally accounted for transportation-related energy use. In 2018, the most recent year for which data was available, total energy use per person in California was 202 million British thermal units (BTU), which is one of the lowest energy consumption rates per-capita in the nation. California's total energy supply was approximately 2,408 trillion BTU in 2018, which represents approximately 2.5 percent of the national energy supply.⁵ The transportation sector represented 39.8 percent of the total energy consumed by the state in 2018. In 2019, California residents consumed 15.3 billion gallons of gasoline and 3.1 gallons of diesel fuel.⁶

According to the 2018 American Community Survey, there were approximately 438,530 residents in Solano County and 140,530 residents in Napa County. This would equate to approximately 117 trillion BTU's of energy consumption per year in Napa and Solano counties.⁷ It is anticipated that on-road automotive fuel and heavy-duty diesel fuel consumption throughout Napa and Solano counties has remained steady since 2011, consistent with statewide projections.⁸

Energy Provider

Pacific Gas and Electric (PG&E) provides electricity and natural gas services to Solano and Napa counties, and owns and maintains above- and below-ground networks of electric and gas transmission and distribution facilities throughout the majority of Northern and Central California. PG&E provides renewable power to its customers consistent with State requirements, and has already met and exceeded the State's minimum requirements for renewable power by 2020.

The PG&E 2018 power mix was as follows, based on PG&E's 2019 reporting:

- 39 percent renewables
- 34 percent nuclear
- 15 percent natural gas
- 13 percent large hydroelectric

PG&E would supply electricity to the project site.

⁵ EIA, 2020

⁶ CDTFA, 2020

⁷ 202 million BTU/resident * 579,060 residents = 116,970 million BTU

⁸ CDTFA, 2020

Impact Discussion

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

AND

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

Less than Significant. Construction equipment would require the temporary consumption of fuel and energy, but these energy demands would be typical for construction and would be in line with State and federal programs for energy efficiency. As described in Section 2.3, Air Quality, the EPA has national requirements for construction equipment engines which ensures engines become cleaner and more efficient over time. Equipment used to construct the project would meet federal and State engine requirements. Additionally, construction would be completed as quickly and efficiently as possible; the construction contractor would be motivated to complete the project with as little waste as possible to conserve costs. Therefore, construction would not result in wasteful, inefficient, or unnecessary consumption of energy resources.

Once construction is complete, the project would not stimulate growth, result in a change to existing land use, or increase roadway capacity such that it would increase energy consumption compared to existing conditions. As discussed in **Section 2.17, Transportation/Traffic**, the project would reduce operational inefficiencies, relieving congestion and improving traffic operations on the I-80/Hiddenbrooke Parkway and I-80/American Canyon Road intersection. Overall vehicle energy consumption would be reduced to the extent the project relieves congestion by enhancing operations and improving travel times within the transportation corridor. Therefore, the project would not result in wasteful, inefficient, or unnecessary energy consumption nor conflict with state or local plans pertaining to renewable energy or energy efficiency. This impact would be less than significant.

2.7 Geology and Soils

	Significant Impact	Less than Significant with Mitigation	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? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input 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 wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Regulatory Setting

Federal and State

California Code of Regulations

Title 24 of the California Code of Regulations, also known as the California Building Standards Code (CBC), sets minimum requirements for building design and construction. The 2016 version of the CBC is effective as of January 1, 2017. The CBC is a compilation of three types of building standards from three different origins:

- Building standards that have been adopted by state agencies without change from building standards contained in national model codes;
- Building standards that have been adopted and adapted from the national model code standards to meet California conditions; and
- Building standards, authorized by the California legislature, that constitute extensive additions not covered by the model codes that have been adopted to address particular California concerns.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (SHMA) was passed in 1990 to address earthquake hazards such as seismic-induced liquefaction and landslides (DOC 2019). Under SHMA, seismic hazard zones are mapped through the California Geological Survey's (CGS) Seismic Hazards Zonation Program to identify areas prone to liquefaction, earthquake-induced landslides, and amplified ground shaking. The purpose of SHMA is to reduce the threat to public health and safety and to minimize the loss of life and property that may result from earthquake-triggered ground failures.

Paleontological Resources

Treatment of paleontological resources under CEQA is generally similar to treatment of cultural resources, requiring evaluation of resources in a project's area of potential affect, assessment of potential impacts on significant or unique resources, and development of mitigation measures for potentially significant impacts, which may include monitoring combined with data recovery and/or avoidance.

Regional

Solano County General Plan

There are no goals or policies pertaining to geology and soils in the Solano County General Plan that would be applicable to the project.

Napa County General Plan

There are no goals or policies pertaining to geology and soils in the Solano County General Plan that would be applicable to the project.

Local

City of Vallejo General Plan

Various policies in the Vallejo General Plan 2040 have been adopted for the purpose of avoiding or mitigating geological impacts resulting from development within Vallejo. Approved projects in Vallejo are subject to the policies listed in the Vallejo General Plan 2040, including the following:

Action NBE-5.4B: Continue to require drainage and erosion control measures for landslide-prone or geologically hazardous hillside areas to minimize risks to downhill areas.

City of Vallejo Municipal Code

Title 12, Section 12.40.070, Excavating, Grading, and Filling, of the City of Vallejo Municipal Code (Vallejo Municipal Code) includes a grading ordinance that seeks to mitigate hazards associated with erosion and land stability. The ordinance establishes requirements for grading permits, including submittal and construction requirements. An erosion and sedimentation control plan must be submitted with a grading permit application, along with a drainage plan and pollution control plan. Implementation of these plans will help ensure that the storm water runoff from a construction site will help meet applicable water quality standards. For a more detailed discussion about water quality standards, please refer to **Section 2.10, Hydrology and Water Quality**.

Environmental Setting

Napa and Solano County are situated in the region of California known as the Coast Ranges geomorphic province; this province is characterized by a series of northwest trending ridges and valleys whose orientation is controlled by tectonic folding and faulting. The project site is surrounded by hilly terrain. The project site itself, which includes the I-80/Hiddenbrooke Parkway/American Canyon Road interchange as well as the intersection of Hiddenbrooke Parkway and McGary Road, is on graded areas that meet local and state standards for safety regarding roadway profile and is thus relatively flat compared to the surrounding terrain.

Regional Geology

The project site is located near the Sky Valley, a narrow, northwest-trending valley that is atop Great Valley Sequence material of Lower Cretaceous age. Stratigraphic units at and near the project site may be classified as the following:

- Marine sedimentary and metasedimentary rocks, such as sandstone, shale, and conglomerate, generally above the igneous and metamorphic layers, from the Lower Cretaceous through late Tertiary period

Most of the project site is composed of Dibble-Los Osos clay loams with 9 to 30 percent slopes. The soil profile for Dibble complex is clay loam and weathered bedrock. The soil profile for Los Osos complex is clay loam, clay, and weathered bedrock according to the US Department of Agriculture. Soil slope affects the flow of water that can erode soil. As described in the Vallejo General Plan 2040 EIR, slopes between 15 and 25 percent are considered moderately steep and slopes above 25 percent are considered steep.

Seismicity and Seismic Hazards

The Alquist-Priolo Earthquake Zoning Act (1972) and the Seismic Mapping Act (1990) direct the State Geologist to establish regulatory zones (known as Earthquake Fault Zones) around the surface traces of active faults to prevent the construction of buildings used for human occupancy. Local agencies must regulate relevant development projects, which include land divisions and most structures for human occupancy. Pursuant to this act, a structure for human occupancy cannot be placed over the trace of the fault and must be set back from the fault (generally at least 50 feet). The project site is not located within the Alquist-Priolo Earthquake Zone, and no active faults have been mapped on the project site.⁹

The diverse geologic conditions underlying the Sky Valley and greater Bay Area are largely defined by the network of major active faults that occur within the region. The San Andreas Fault System is one of the most prominent geologic features in the region; it includes several major fault zones (San Andreas, Hayward, and Calaveras) as well as smaller active and potentially active faults. Smaller active faults located nearby can ground shaking at the project site include Concord-Green Valley Fault approximately 5 miles east and the West Napa Fault approximately 3 miles northwest. This is common for the region, and the project site is not particularly at risk from seismicity.

Liquefaction

Liquefaction occurs when water-saturated soils lose structural integrity due to seismic activity. Typically, liquefaction is associated with soils near the ground surface. Factors that contribute to liquefaction include soil age, type, cohesion, density, and depth to groundwater. Soils that are saturated, uniformly graded, and loose are more susceptible to liquefaction. According to the Vallejo General Plan 2040 EIR *Figure 4.5-4 Liquefaction Potential* (Geology and Soils) and Napa County General Plan EIR *Figure 4.10-3 Liquefaction Susceptibility* (Geology and Soils), the project site is located within a low potential liquefaction hazard zone.

Landslides

Landslides result from the downgradient movement of earthen material along a slope or hillside. Landslides can result from a variety of causes such as steepness of slope, type of material, water content of slope soils, amount and type of vegetation, and major natural hazards such as earthquakes, volcanic eruptions, wildfires, and floods. Landslides can occur as rapid deterioration or slow, progressive movements over time. The project site is surrounded by hilly terrain, but the project site itself is on graded areas that do not contain steep slopes or hillsides that would be susceptible to landslides (**Figure 5** through Error! Reference source not found.). Furthermore, the project site is not located in an Earthquake-Induced Landslide Zone on the California Geological Survey's Earthquake Zone Map.¹⁰

Expansive Soils

Expansive soils have a high shrink-swell potential and occur where a sufficient percentage of certain clay materials are present in the soil. These conditions can impact the structural integrity of buildings and other structures, if not designed and constructed in a manner to adapt to expansive soils. According to Vallejo's General Plan 2040 EIR, much of the soils in the area are moderately to highly expansive.

⁹ DOC, 2020

¹⁰ DOC, 2020

According to Solano County's General Plan EIR, soils having high shrink-swell potential in at least the top 12 inches can be found throughout Solano County.

Paleontological Resources

Paleontological resources are fossilized remains and/or traces of prehistoric plant and animal life exclusive of human remains or artifacts. Organic remains must be older than 10,000 years old to be considered fossils. The potential for paleontological resources at a location can be predicted by the age of geological layers, the type and composition of the layers, and previous fossil occurrence in similar geologic layers.

According to Solano County's General Plan EIR, there are 238 identified fossil locations within or directly adjacent to the County. Most sedimentary geological units and some of the igneous geological units of Solano County are paleontologically sensitive.

Impact Discussion

a) Expose people or structures to potential substantial adverse effects including the risk of loss, injury or death involving:

- i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.**

No Impact. The Alquist-Priolo Earthquake Zoning Act (1972) and the Seismic Mapping Act (1990) direct the State Geologist to delineate regulatory zones to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The project site is not located within the Alquist-Priolo Earthquake Zone, and no active faults have been mapped on the project site. Because the project site is not located on or immediately adjacent to an active fault line, no impact would occur.

- ii. Strong seismic ground shaking?**

AND

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

Less than Significant. In the Bay Area, there is a complex system of subparallel faults, which include the San Andreas, San Gregorio, Hayward, Rogers Creek, and Calaveras faults, among others. These faults are all considered active or potentially active and capable of producing significant intensities and durations of seismic ground-shaking at the site. Recent studies by the United States Geological Survey indicate a 63 percent probability of a magnitude 6.7 or greater earthquake in the Bay Area in the next 30 years. The intensity of such an event and the severity of ground shaking at the project site would depend on the causative fault and the distance to the epicenter, the depth of the rupture below ground surface, the movement magnitude, and the duration of shaking.

The project site is in proximity to several faults that, during a seismic event, could cause seismic ground shaking. Potential seismic ground shaking hazards would be minimized through application of federal and State safety and engineering requirements to reduce the risks of roadway damage during seismic shaking. These include requirements for soil testing, excavation and grading, and foundation design, all

of which can significantly lower the risks of strong seismic shaking. With the application of standard engineering requirements for seismic safety in California, this impact would be less than significant.

Liquefaction occurs when water-saturated soils lose structural integrity due to seismic activity. Typically, liquefaction is associated with soils near the ground surface. Factors that contribute to liquefaction include soil age, type, cohesion, density, and depth to groundwater. Soils that are saturated, uniformly graded, and loose are more susceptible to liquefaction. According to the City of Vallejo General Plan 2040 EIR, *Figure 4.5-4 Liquefaction Potential* (Geology and Soils), the project site is in an area with low potential for liquefaction. According to the Solano County General Plan, *Figure HS-9 Liquefaction Potential*, the project is located within an area of very low liquefaction potential. As stated above, standard engineering requirements regulated by the State require that on-site soil conditions be taken into consideration and addressed. Given the low potential for liquefaction and existing regulation around engineering safety, this impact would be less than significant.

iv. Landslides?

No Impact. Landslides result from the downgradient movement of material along a slope or hillside. Landslides can result from a variety of causes such as steepness of slope, type of material, water content of slope soils, amount and type of vegetation, and major natural hazards such as earthquakes, volcanic eruptions, wildfires, and floods. As discussed in **Section 2.1 Aesthetics**, the project site does not contain steep slopes or hillsides that would be susceptible to landslides. Furthermore, the project site is not located in an Earthquake-Induced Landslide Zone on the California Geological Survey's Earthquake Zone Map. Given the above, no impact would occur.

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

Less than Significant. Project construction would involve ground disturbing activities such as excavation, grading, and trenching. Such activities would expose soils and increase the potential for soil erosion from wind or stormwater runoff. Once construction is complete the increase in potential for soil erosion would cease as construction areas would be covered by roadway infrastructure and related landscaping. As discussed in **Section 2.10, Hydrology and Water Quality**, the project would be subject to the regional National Pollutant Discharge Elimination System (NPDES) General Permit and the City of Vallejo's Excavating, Grading, and Filling ordinance, which includes erosion control measures, including the following:

- Sediment basins shall be constructed on large developments to detain runoff into biologically sensitive areas or onto adjacent property and to trap sediment during construction up until slope erosion planting has been established. The sediment basin dam and collected silt shall then be removed and the resulting material hauled from the site or used as topsoil. Additional erosion control measures shall be employed during the rainy season (October 15 through April 15) as required by the City Engineer/Director of Public Works.
- Where suitable topsoil exists on areas to be disturbed by grading or building operations, the topsoil shall be stripped in the amount needed to complete finish grading operations, and shall be piled in convenient locations for storage during construction.

The erosion control measures outlined above would minimize soil erosion and loss of topsoil associated with construction of the project. This impact would be less than significant.

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

Less than Significant. As previously discussed under **Impact a**, the project site does not contain steep slopes or hillsides that would be subject to landslides and is located within a low potential liquefaction hazard zone. This impact would be less than significant.

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?

Less than Significant. The project site has the potential to contain expansive soils. According to Solano County's General Plan EIR, soils having high shrink-swell potential in at least the top 12 inches can be found throughout Solano County. The project would be required to conform to the standards set forth in the most recently approved CBC along with the State's highway and roadway engineering requirements, including provisions for expansive soil, grading, and stormwater controls. Implementation of these standards would reduce the potential risks associated with expansive soils. This impact would be less than significant.

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

No Impact. The project does not require the use of septic tanks or any other alternative wastewater disposal system. No impact would occur.

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

Less than Significant with Mitigation. Ground-disturbing activities could encounter undocumented paleontological resources during project construction. In the event that paleontological resources are discovered during construction, application of **Mitigation Measure PAL-1** would reduce this potential impact to a less-than-significant level by ensuring the resources are evaluated by a qualified professional and, if necessary, collected.

Mitigation Measure PAL-1: If paleontological resources are encountered during ground-disturbing activities, work in the immediate area shall be halted and a professionally qualified paleontologist shall be contacted immediately to evaluate the find. If necessary, the evaluation may require preparation of a treatment plan. Additional work, such as data recovery excavation, may be warranted to mitigate any significant impacts to paleontological resources.

2.8 Greenhouse Gas Emissions

	Significant Impact	Less than Significant with Mitigation	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"/>

Regulatory Setting

Federal and State

Assembly Bill 32 and CEQA

The Global Warming Solutions Act (also known as “AB 32”) codified the State’s GHG emissions target by directing CARB to reduce the State’s global warming emissions to 1990 levels by 2020. AB 32 was signed and passed into law by Governor Schwarzenegger on September 27, 2006. Since that time, the CARB, CEC, CPUC, and Building Standards Commission have all been developing regulations that will help meet the goals of AB 32 and Executive Order S-3-05.

A Scoping Plan for AB 32 was adopted by CARB in December 2008. It contains the State’s main strategies to reduce GHGs from business-as-usual emissions projected in 2020 back down to 1990 levels. Business-as-usual (BAU) is the projected emissions in 2020, including increases in emissions caused by growth, without any GHG reduction measures. The Scoping Plan has a range of GHG reduction actions, including direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms such as a cap-and-trade system. Per AB 32, the Scoping Plan must be updated every five years to evaluate the mix of AB 32 policies to ensure that California is on track to achieve the 2020 GHG reduction goal. The first update to the Scoping Plan was approved by CARB in May 2014. Additional State law and regulations related to the reduction of GHG emissions includes SB 375, the Sustainable Communities and Climate Protection Act, the State’s Renewables Portfolio Standard for Energy Standard (SB 2X) and fleet-wide passenger car standards (Pavley Regulations).

The California Natural Resources Agency, as required under State law (Public Resources Code Section 21083.05) has amended the State Guidelines to address the analysis and mitigation of GHG emissions. In these changes to the Guidelines, Lead Agencies, such as the City of Vallejo, retain discretion to determine the significance of impacts from GHG emissions based upon individual circumstances. Neither CEQA nor the Guidelines provide a specific methodology for analysis of GHGs and under the amendments to the Guidelines, a Lead Agency may describe, calculate, or estimate GHG emissions

resulting from a project and use a model and/or qualitative analysis or performance-based standards to assess impacts.

Senate Bill 375

Senate Bill (SB) 375 was enacted to expand the efforts of AB 32 by controlling indirect GHG emissions caused by urban sprawl. SB 375 provides incentives for local governments and applicants to implement new conscientiously planned growth patterns. This includes incentives for creating attractive, walkable, and sustainable communities and revitalizing existing communities. The legislation also allows applicants to bypass certain environmental reviews under CEQA if they build projects consistent with the new sustainable community strategies. Development of more alternative transportation options that would reduce vehicle trips and miles traveled, along with traffic congestion, would be encouraged. SB 375 enhances CARB's ability to reach the AB 32 goals by directing the agency in developing regional GHG emission reduction targets to be achieved from the transportation sector for 2020 and 2035. CARB works with the metropolitan planning organizations (e.g. Association of Bay Area Governments [ABAG] and Metropolitan Transportation Commission [MTC]) to align their regional transportation, housing, and land use plans to reduce VMT and demonstrate the region's ability to attain its GHG reduction targets. A similar process is used to reduce transportation emissions of ozone precursor pollutants in the Bay Area.

SB 350 Renewable Portfolio Standards

In September 2015, the California Legislature passed SB 350, which increases the State's Renewables Portfolio Standard (RPS) for content of electrical generation from the 33 percent target for 2020 to a 50 percent renewables target by 2030.

Executive Order EO-B-30-15 (2015) and SB 32 GHG Reduction Targets

In April 2015, Governor Brown signed Executive Order (EO) B-30-15, which extended the goals of AB 32, setting a GHG emissions target at 40 percent of 1990 levels by 2030. On September 8, 2016, Governor Brown signed SB 32, which legislatively established the GHG reduction target of 40 percent of 1990 levels by 2030. In November 2017, CARB issued California's 2017 Climate Change Scoping Plan. While the State is on track to exceed the AB 32 scoping plan 2020 targets, this plan is an update to reflect the enacted SB 32 reduction target.

The new Scoping Plan establishes a strategy that will reduce GHG emissions in California to meet the 2030 target (note that the AB 32 Scoping Plan only addressed 2020 targets and a long-term goal). Key features of this plan are:

- Cap and Trade program places a firm limit on 80 percent of the State's emissions;
- Achieving a 50-percent Renewable Portfolio Standard by 2030 (currently at about 29 percent statewide)
- Increase energy efficiency in existing buildings
- Develop fuels with an 18-percent reduction in carbon intensity;
- Develop more high-density, transit-oriented housing;
- Develop walkable and bikeable communities
- Greatly increase the number of electric vehicles on the road and reduce oil demand in half

- Increase zero-emissions transit so that 100 percent of new buses are zero emissions;
- Reduce freight-related emissions by transitioning to zero emissions where feasible and near-zero emissions with renewable fuels everywhere else; and
- Reduce “super pollutants” by reducing methane and hydrofluorocarbons or HFCs by 40 percent.

In the updated Scoping Plan, CARB recommends statewide targets of no more than six metric tons (MT) of carbon dioxide equivalents (CO₂e) per capita (statewide) by 2030 and no more than 2 MT CO₂e per capita by 2050. The statewide per capita targets account for all emissions sectors in the State, statewide population forecasts, and the statewide reductions necessary to achieve the 2030 statewide target under SB 32 and the longer-term State emissions reduction goal of 80 percent below 1990 levels by 2050.

Regional

Bay Area Air Quality Management District CEQA Guidelines and 2010 Bay Area Clean Air Plan

BAAQMD identifies thresholds of significance for operational GHG emissions from land-use development projects in its guidelines. These guidelines include recommended significance thresholds, assessment methodologies, and mitigation strategies for GHG emissions. Under the Guidelines, if a project would result in operational-related GHG emissions of 1,100 MT (also called the “bright line” threshold), or 4.6 metric tons per service population of carbon dioxide equivalents (CO₂e) per year or more, it would make a cumulatively considerable contribution to GHG emissions and result in a cumulatively significant impact to global climate change. In jurisdictions where a qualified Greenhouse Gas Reduction Strategy has been reviewed under CEQA and adopted by decision-makers, compliance with the Greenhouse Gas Reduction Strategy would reduce a project’s contribution to cumulative GHG emission impacts to a less than significant level. The Guidelines also outline a methodology for estimating GHGs.

The Clean Air Plan is a multi-pollutant plan that addresses GHG emissions along with other air emissions in the San Francisco Bay Area Air Basin. One of the key objectives in the Clean Air Plan is climate protection. The Clean Air Plan includes emission control measures in five categories: Stationary Source Measures, Mobile Source Measures, Transportation Control Measures, Land Use and Local Impact Measures, and Energy and Climate Measures. Consistency of a project with current control measures is one measure of its consistency with the Clean Air Plan. The current Clean Air Plan also includes

performance objectives, consistent with the State’s climate protection goals under AB 32 and SB 375, designed to reduce emissions of GHGs to 1990 levels by 2020 and 40 percent below 1990 levels by 2035.

BAAQMD does not have a quantitative threshold for construction-period GHG emissions, but rather recommends they be quantified and minimized through BMPs.

Solano County Climate Action Plan

Solano County adopted its CAP in June 2011. The CAP contains a 2005 GHG emissions inventory and identifies policies to achieve at 20 percent GHG emissions reduction below 2005 levels. The Solano County General Plan lists the following policy pertaining to GHG emissions.

Policy RS.P-49: Ensure energy conservation and reduced energy demand in the county through required use of energy-efficient technology and practices.

Napa County Climate Action Plan

Napa County adopted its CAP in January 2011. The CAP contains a 2005 GHG emissions inventory and identifies policies to achieve at 15 percent GHG emissions reduction below 2005 levels. The Napa County General Plan lists the following policy pertaining to GHG emissions.

Policy CON-65(e) Consider GHG emissions in the review of discretionary projects. Consideration may include an inventory of GHG emissions produced by the traffic expected to be generated by the project, any changes in carbon sequestration capacities caused by the project, and anticipated fuel needs generated by building heating, cooling, lighting systems, manufacturing, or commercial activities on the premises. Projects shall consider methods to reduce GHG emissions and incorporate permanent and verifiable emission offsets.

Local

City of Vallejo Climate Action Plan

The City of Vallejo adopted its CAP in March 2012. The CAP contains a 2008 GHG emissions inventory and identifies policies to achieve at 15 percent GHG emissions reduction below 2008 levels. The CAP outlines a GHG reduction strategy organized into the following topic areas: City government operations; community engagement; renewable energy; transportation demand management; optimized travel; water, wastewater, and solid waste; off-road equipment and adaptation.

Environmental Setting

Unlike emissions of criteria and toxic air pollutants, which have local or regional impacts, emissions of GHGs have a broader, global impact. Global warming associated with the “greenhouse effect” is a process whereby GHGs accumulating in the atmosphere contribute to an increase in the temperature of the earth’s atmosphere. The most common GHGs contributing to global warming and associated climate change are carbon dioxide (CO₂) perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs). Emissions of GHGs contributing to global climate change are attributable to a variety of natural processes and human activities. Emissions of GHGs by human activities are associated with the transportation, industrial and manufacturing, utility, residential, commercial, and agricultural sectors.

Under existing conditions at the project site, there are stop-controlled intersections of the I-80 on- and off-ramps with American Canyon Road and Hiddenbrooke Parkway, as well as a stop-controlled intersection at McGary Road and Hiddenbrooke Parkway. The existing interchange configuration results in traffic congestion and long vehicle queues.

Impact Discussion

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

Construction

Less than Significant. BAAQMD’s Air Quality Guidelines do not provide a numeric threshold for determining whether a project’s construction-period GHG emissions would result in a significant impact. Project construction would involve demolition, site preparation, grading, roadway construction, and asphalt paving that have the potential to generate air pollutant emissions. **Table 5** summarizes the estimated CO₂e emissions during project construction. Emissions would be minimized through the use of EPA Tier 4 engines on construction equipment and through efficient construction planning and processes, such as limiting idle time. The use of EPA-compliant engines are a standard requirement, and maximizing construction efficiency is also a standard best practice in the contractor’s best interest. The City of Vallejo may require additional best practices in the bid package, at their discretion. With implementation of EPA requirements, construction-period GHG emissions would be less than significant. No mitigation is required.

Table 5 Estimated Construction GHG Emissions

Year	Project Emissions (MT of CO ₂ e)
2022	575.5
2023	1,029.8
2024	98.4
Total	1,703.7

MT = metric tons

CO₂e = carbon dioxide equivalents

Operation

Less than Significant. The project would reduce operational inefficiencies, relieving congestion and improving traffic operations on Hiddenbrooke Parkway and I-80/American Canyon Road intersection, as discussed in **Section 2.17, Transportation/Traffic**. Automobile-related GHG emissions may be reduced to the extent the project relieves congestion by enhancing operations and improving travel times within the transportation corridor. The interchange improvements would provide the same access and automobile capacity as the existing bridge. There would likely be no change in VMT during project operation, and thus no significant change in automobile-related GHG emissions. This impact would be less than significant.

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

Less than Significant. The recommended actions in CARB’s Scoping Plan are broad policy and regulatory initiatives that are being implemented at the State level, regional planning level, or land use decisions made at the local level, and are not directly implemented by individual projects such as this project. As described above, the project would not impede the state developing or implementing the greenhouse gas reduction policies identified in the Scoping Plan. Therefore, the project would not conflict with AB 32, SB 32, or the Climate Change Scoping Plan. This impact would be less than significant.

2.9 Hazards and Hazardous Materials

	Significant Impact	Less than Significant with Mitigation	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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 the risk of loss, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Regulatory Setting

Federal and State

Division of Occupational Safety and Health (Cal-OHSA)

The California Division of Occupational Safety and Health (Cal-OSHA) enforces hazard communication program regulations, which contain worker safety training and hazard information requirements. These requirements include procedures for identifying and labelling hazardous substances, communicating hazard information related to hazardous substances and their handling, and preparation of health and safety plans to protect workers and employees.

Department of Toxic Substances Control and Regional Water Quality Control Board

The Department of Toxic Substances Control (DTSC) regulates hazardous waste and remediation of existing contamination and evaluates procedures to reduce the hazardous waste produced in California.

DTSC regulates hazardous waste in California primarily under the authority of the Resource Conservation and Recovery Act (RCRA) and the California Health and Safety Code. The San Francisco Bay Regional Water Quality Control Board (RWQCB) (Region 2) also provides regulatory oversight for sites with contaminated groundwater or soils.

Government Code Section 65962.5 (Cortese List)

Section 65962.5 of the Government Code requires the California Environmental Protection Agency (CalEPA) to develop and annually update a list of hazardous waste and substances sites, known as the Cortese List. The Cortese List is used by State and local agencies and developers to comply with CEQA requirements. The Cortese List includes hazardous substance release sites identified by DTSC and the State Water Resources Control Board (SWRCB). The project site is not located on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

Regional

Solano County General Plan

The Health and Safety element of the Solano County General Plan contains the following policies with pertain to hazard and hazardous materials:

- Policy HS.P-26: Minimize the risks associated with transporting, storing, and using hazardous materials through methods that include careful land use planning and coordination with appropriate federal, state, or County agencies.
- Policy HS.P-27: Work to reduce the health risks associated with naturally occurring hazardous materials such as radon, asbestos, or mercury.

Napa County General Plan

The Safety Element of the Napa County General Plan contains the following policy which pertains to hazard and hazardous materials:

- Policy SAF-31: All development projects proposed on sites that are suspected or known to be contaminated by hazardous materials and/or are identified in a hazardous material/waste search shall be reviewed, tested, and remediated for potential hazardous materials in accordance with all local, state, and federal regulations.

Local

City of Vallejo General Plan 2040

Various policies in the Vallejo General Plan 2040 have been adopted for the purpose of avoiding or mitigating hazards and hazardous materials impacts resulting from development within Vallejo. Approved projects in Vallejo are subject to the hazards and hazardous materials policies listed in the Vallejo General Plan, including the following:

- Policy NBE-5.10: *Site Safety*. Ensure that affected soil, groundwater, or buildings will not have the potential to adversely affect the environment or the health and safety of site occupants.

Policy NBE-5.11: *Risk Reduction*. Reduce the risk of hazardous materials accidents, spills, and vapor releases, and minimize the effects of such incidents if they occur.

Action NBE-5.11D: Continue to require compliance with all hazardous waste transport standards established by State and federal agencies.

Policy NBE-5.4: *Project Location and Design*. Prohibit development in any area where it is determined that the potential risk from natural hazards cannot be mitigated to acceptable levels.

Action NBE-5.4C: Continue to use the development review process to ensure that development is planned and constructed to resist the encroachment of uncontrolled fire.

Environmental Setting

Hazardous Materials Search

Hazardous materials released on or near the project site could present a risk to construction workers or future users, depending on the type, location, and severity of hazardous conditions. Hazardous releases can occur from previous site uses, such as agricultural and industrial uses. Common types of hazardous releases are diesel fuel, gasoline, and oil spills, as well as pesticide use and aerially deposited lead from historic use of leaded gasoline. Leaking underground storage tanks (LUST) are one of the most common types of hazardous releases.

An online search of available, public databases published by the State was conducted in May 2020 to determine whether there are known hazardous materials at or near the project site. Geotracker is the SWRCB's online database system used to track and archive compliance data from discharges of waste to land and unauthorized releases of hazardous substances from underground storage tanks. Additionally, EnviroStor is the Department of Toxic Substances Control's (DTSC) online data system for tracking cleanup, permitting, enforcement, and investigation efforts at hazardous waste facilities and sites with known or suspected contamination.

An EnviroStor search identified a certified cleanup site at American Canyon High School, located 2.1 miles west of project site, where naturally occurring asbestos (NOA) affected soil near the school site in 2007. The site has since been cleared of contamination. DTSC participates in annual NOA operation and maintenance inspection reports; the latest report occurred on August 27, 2019. The school cleanup site was the closest known contamination site found in the EnviroStor search conducted for the project.

The Geotracker search revealed no presence of hazardous materials on the project site; however, there is a LUST Cleanup Site 1.2 miles southeast of the project site near Hiddenbrooke Parkway. This area was flagged as a LUST cleanup due to potential diesel contamination. After the underground storage tank and associated piping were removed, the case was closed 1998 and the site was cleared of any remaining contaminants. Additionally, there is an open cleanup site at St. John's Mine Road, an inoperative mercury mine, 2.2 miles southeast of project site. Potential hazardous media of concern include contaminated surfaces/structures, sediments, soil, and surface water. As of June 4, 2020,

SWRCB is in the process of evaluating the site for impacts to human health and the environment. These two sites are the closest known occurrences found in the Geotracker search conducted for the project.

Schools

The project site is in a rural area and consists of transportation and infrastructure uses. The nearest residential development is the Hiddenbrooke Community southeast of the project site approximately 1.5 miles away. Additionally, there are two schools near of the project site: American Canyon High School, 2.1 miles west of project site along American Canyon Road in Napa County, and Solano Middle School, 2.5 southwest of the project site in the City of Vallejo.

Airports

The project site is 5.1 miles southwest of Napa County Airport (NCC) and 4.1 miles west of Garibaldi Brothers Airport. The project site is not within NCC's Airport Impact Areas, as noted in the Airport Land Use Compatibility Plan. Garibaldi Brothers Airport is a private airstrip in Solano County, which includes an aircraft landing strip and an airport hangar on the property.

Emergency Safety and Evacuation Plans

The City of Vallejo has a comprehensive emergency plan in place to protect help the health and safety of the community should disaster strike. The City works closely with and refers to Solano County for broader emergency service planning. The Solano County Office of Emergency Services addresses the development, establishment, and maintenance of programs and procedures that provide protection from the effects of natural or man-made disasters. The Solano County Emergency Operations Plan (EOP) facilitates multi-jurisdictional and interagency coordination in the event of emergency situations, particularly between local government, the geographic boundary of Solano County, and appropriate State and federal agencies. The EOP serves as an operational plan as well as a reference document that may be used for emergency planning and operations.

Impact Discussion

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

Less than Significant. As described below, the project would not create a significant hazard from the transport or disposal of hazardous materials.

Construction

Construction would require routine transport of materials to and from the site, such as diesel fuel, concrete, asphalt, and other building materials. Worker safety regulations cover hazards related to the prevention of exposure to hazardous materials and a release to the environment from hazardous materials use. The California Division of Occupational Safety and Health (Cal-OSHA) also enforces hazard communication program regulations, which contain worker safety training and hazard information requirements, such as procedures for identifying and labelling hazardous substances, communicating hazard information related to hazardous substances and their handling, and preparation of health and safety plans to protect workers and employees. Because contractors would be required to comply with existing and future hazardous materials laws and regulations covering the transport, use, and disposal of

hazardous materials, the impacts related to hazardous materials used during project construction would be less than significant.

Operation

As a transportation infrastructure project, the project would not directly involve the routine use, disposal, or transportation of hazardous materials and would not have a significant impact on the public or the environment. No impact would occur.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less than Significant with Mitigation. As described below, with implementation of **Mitigation Measure HAZ-1**, impacts related to hazardous materials would be less than significant.

Construction

Construction of the project would require ground-disturbing activities such as grading, excavation, and trenching, which could disturb contaminants in the soil. Common contaminants in roadside areas include aerially deposited lead (ADL), oil, and fine metal particles. If aerially deposited lead is present in substantial concentrations, soil may need to be disposed of off-site at an approved facility that handles contaminated soil. Accordingly, **Mitigation Measure HAZ-1** would be implemented to avoid risks associated with ADL.

Mitigation Measure HAZ-1: During the final design phase, soil testing shall be completed at the project site to investigate hazardous materials concerns related to ADL. Soil samples collected to evaluate ADL shall be analyzed for total lead and soluble lead to evaluate whether the lead-affected soils could be reused as fill within the project limits, or if they need to be disposed of as hazardous material.

Operation

As a transportation infrastructure project, the project would not directly involve the release of hazardous materials into the environment. No impact would occur.

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

No Impact. There are no existing or proposed schools within one-quarter mile of the project site. The nearest schools are American Canyon High School, approximately 2.1 miles west away along American Canyon Road in Napa County, and Solano Middle School, 2.5 miles southwest of the project site in the City of Vallejo. The project does not include uses or activities that would emit hazardous emissions or handle hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. No impact would occur.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact. The project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result would not create a significant hazard to the public or the environment. Therefore, no impact would occur.

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?

No Impact. The project site is not located within an airport land use plan, nor is it within 2 miles of a public airport or public use airport. The nearest airport is Garibaldi Brother's Airport, a small private airport located 4.1 miles east of the project site in Solano County. The project site is also 5.1 miles southwest of Napa County Airport (NCC), and is not within NCC's Airport Impact Areas, as noted in the Airport Land Use Compatibility Plan. The project would not exacerbate safety hazards or excessive noise for people residing or working in the project area; therefore, no impact would occur.

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

Less than Significant. The project would not interfere with the Solano County EOP. No property owned or used by emergency service providers would be acquired, and as an operational improvement project it would reduce congestion and delays to enter and exit I-80. Construction activities would have the potential to temporarily disrupt roadway access at the interchange, potentially affecting emergency access. Temporary detours or delays due to construction would be made known to motorists, pedestrians, and emergency services beforehand to facilitate access in and out of the project site during construction as a standard practice implemented by the City of Vallejo. This impact would be less than significant.

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

No Impact. California Department of Forestry and Fire Protection identifies hazards based on the relevant factors, such as fuels, terrain, and weather. Due to the open space areas surrounding the project site, the risk for wildfire is considered high, and as such, is designated a High Fire Hazard Severity Zone in a State Responsibility Area. However, the project would not require the installation of infrastructure or new facilities that would exacerbate fire risks; for a more detailed discussion of hazards relating to wildfire, refer to **Section 2.20, Wildfire**. No impact would occur.

2.10 Hydrology and Water Quality

	Significant Impact	Less than Significant with Mitigation	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 groundwater 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 patterns 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:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) result in a 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 offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input 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 type="checkbox"/>	<input checked="" 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"/>

Regulatory Setting

Federal and State

Clean Water Act and Porter-Cologne Water Quality Control Act

SWRCB and its nine Regional Water Quality Control Boards are responsible for the regulation and enforcement of the water quality protection requirements of the federal CWA and the state's Porter-

Cologne Water Quality Control Act. Vallejo and its SOI are within the jurisdiction of the San Francisco Bay RWQCB (Region 2). The Porter-Cologne Act authorizes the SWRCB and RWCQB to issue and enforce waste discharge requirements, NPDES permitting program, Section 401 water quality certifications, and other approvals. The NPDES permitting program ensures point source dischargers comply with the CWA and Porter-Cologne Act. This regulatory framework protects the beneficial uses of the state's surface and groundwater resources for public benefit and environmental protection. Requirements for stormwater discharges from the project site would be required to follow the provisions outlined in the RWQCB San Francisco Bay Region Municipal Regional Stormwater NPDES Permit (Permit Number CAS612008).

Under the provisions of the MRP, projects that involve the disturbance of one acre or more of land would be subject to NPDES construction permit requirements, including preparation of a Stormwater Pollution Prevention Plan (SWPPP), which includes BMPs to limit the discharge of sediment and non-stormwater discharges from the site. BMPs may include damp street sweeping, providing appropriate covers, drains, and storage precautions for outdoor material storage areas, temporary cover of disturbed surfaces, etc., that would help protect water quality. Additionally, development projects that disturb more than 10,000 square feet are required to design and construct stormwater treatment controls to treat post-construction stormwater runoff. Post-construction runoff from re-development projects must treat 100 percent of calculated runoff by using Low Impact Development (LID) drainage design treatment control measures, such as implementation of bioswales, infiltration trenches, pervious surface treatments, and bioretention areas.

Regional

Solano County General Plan

The Solano County General Plan contains the following policies which pertain to hydrology and water quality:

- Goal RS.G-9: Protect, monitor, restore and enhance the quality of surface and groundwater resources to meet the needs of all beneficial uses.
- Policy RS.P-68: Protect existing open spaces, natural habitat, floodplains, and wetland areas that serve as groundwater recharge areas.
- Policy RS.P-72: Preserve riparian vegetation along county waterways to maintain water quality.

Napa County General Plan

The Conservation Element of the Napa County General Plan contains the following policy which pertains to hydrology and water quality:

- Goal CON-8: Reduce or eliminate groundwater and surface water contamination from known sources (e.g., underground tanks, chemical spills, landfills, livestock grazing, and other dispersed sources such as septic systems).
- Goal CON-9: Control urban and rural storm water runoff and related non-point source pollutants, reducing to acceptable levels pollutant discharges from land-based activities throughout the county.

Policy CON-48: Proposed developments shall implement project-specific sediment and erosion control measures (e.g., erosion control plans and/or stormwater pollution prevention plans) that maintain pre-development sediment erosion conditions or at minimum comply with state water quality pollution control (i.e., Basin Plan) requirements and are protective of the County’s sensitive domestic supply watersheds. Technical reports and/or erosion control plans that recommend site-specific erosion control measures shall meet the requirements of the County Code and provide detailed information regarding site specific geologic, soil, and hydrologic conditions and how the proposed measure will function.

Local

City of Vallejo General Plan 2040

Various policies in the City of Vallejo’s General Plan 2040 have been adopted for the purpose of avoiding or mitigating hydrology and water quality impacts in Vallejo. Approved projects in Vallejo are subject to the hydrology and water quality policies listed in the Vallejo General Plan, including the following:

Action NBE-1.1A: Cooperate with federal, State, and local regulatory and stewardship agencies to promote the restoration and long-term sustainability of local natural resources.

Action NBE-5.6D: Continue to enforce City regulations that prohibit development, grading, and land modification activities that would adversely affect the local drainage system or create unacceptable erosion impacts.

City of Vallejo Municipal Code

The Vallejo Municipal Code includes various directives pertaining to water supply and conservation issues:

- **Chapter 12.40 – Excavating, Grading, and Filling.** This grading ordinance seeks to mitigate hazards associated with erosion and land stability. The ordinance establishes requirements for grading permits, including submittal and construction requirements. An erosion and sedimentation control plan must be submitted with a grading permit application, along with a drainage plan and pollution control plan. Implementation of these plans will help ensure that the storm water runoff from a construction site will help meet applicable water quality standards.
- **Chapter 12.41 – Stormwater Management and Discharge Control.** This regulation is intended to protect and enhance the water quality within the City of Vallejo’s watercourses, water bodies, and wetlands and carry out the conditions specified in the MRP that requires appropriate source control measures, site design measures, and stormwater treatment measures for new development and redevelopment projects within Vallejo to protect the health, safety, and general welfare of Vallejo’s citizens.

The release of non-stormwater discharges to the stormwater system is prohibited, including discharges that would result in violation of the MRP. It is also unlawful to establish, use or, maintain drainage connections to the stormwater system, and to continue unauthorized discharges to the stormwater system. BMPs shall be adopted for any project that may cause discharge of non-stormwater to the stormwater system.

- **Chapter 16.71 – Water Efficient Landscaping Requirements.** This regulation meets the requirements of the State’s water efficient landscaping ordinance guidance and requires submittal of a landscape documentation package for new or rehabilitated landscapes ranging in size from 1,500 to 5,000 square feet (depending on the project). The landscape documentation package must include a water efficient landscape worksheet, soil management report, landscape design plan, irrigation design plan, and a grading design plan with the goal of minimizing water irrigation rates and maximizing water irrigation efficiency.

Environmental Setting

The project site is in the San Pablo Bay Watershed, which encompasses approximately 900 square miles, and is shared between Contra Costa County on the southern and eastern shores, Solano and Sonoma counties on the northern shores, and Marin County on the western shore. Major municipalities on the shores of San Pablo Bay include Richmond in Contra Costa County, Vallejo in Solano County, along with San Rafael in Marin County. The Bay receives the waters of the Petaluma and Napa rivers. The watershed is part of the San Francisco Bay-Delta Estuary, which drains more than 40 percent of California’s surface area.

The project site does not include lakes, ponds, rivers, or creeks. The nearest surface water is an unnamed, ephemeral drainage¹¹ on the northeast side of McGary Road, outside the project footprint. Additionally, there is a waterfall feature on the northern side of Hiddenbrooke Parkway that is manmade and serves for decorative purposes.

The project site is composed of roadways and an interchange, which consist of mostly impervious surfaces. There is existing stormwater drain infrastructure that moves water across the site and is designed to drain excess stormwater from impervious surfaces.

The Napa-Sonoma Valley Groundwater Basin is located approximately 3 miles southwest of the project site. According to the Vallejo General Plan 2040 EIR, shallow groundwater levels in Vallejo typically range between 5 to 28 feet below the surface. However, the General Plan 2040 indicates the project site does not overlay a groundwater basin or contain groundwater recharge sites. According to Federal Emergency Management Agency (FEMA) Flood Insurance Maps, the project site is located in an area classified as Zone X. Zone X is defined as an area outside the 1-percent annual chance floodplain, areas of 1-percent annual chance sheet flow flooding where average depths are less than 1 foot, areas of 1-percent annual chance stream flooding where the contributing drainage area is less than 1 square mile, or areas protected from 1-percent annual chance flood by levees (FEMA 2019). According to Vallejo General Plan 2040 EIR, the project site is not in a tsunami evacuation area.

Impact Discussion

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

Less than Significant. As described below, construction and operation of the project would not violate any water quality or waste discharge requirements.

¹¹ Ephemeral streams flow for a short time, usually after a large storm or snowmelt when there is an increase in water runoff. Ephemeral streams are very small and normally have a dry channel during the year.

Construction

Project construction would involve approximately 6.1 acres of ground disturbing activities, including excavation, removal of existing pavement, and vegetation removal; therefore, the project is subject to NPDES construction permit requirements under the provisions of the MRP.

Construction activities associated with the project would have the potential to result in runoff that contains sediment and other pollutants that could degrade water quality if not properly controlled. Sources of pollution associated with construction include the use, management, and storage of construction equipment and vehicles, which increase the possibility of chemical spills, possibly introducing chemicals into nearby surface water features. Compliance with the existing NPDES permit would ensure that development of the project would not violate any water quality standards or waste discharge requirements. If groundwater is encountered during construction, dewatering activities would be subject to MRP provisions.

Waste discharge requirements are stipulated in the MRP; as discussed above, these requirements include the preparation and implementation of a SWPPP. Implementation of a SWPPP would control discharge and protect water quality from potential contaminants in stormwater runoff emanating from the construction site.

Operation

Project operation would not substantially increase the amount of impervious surface area at the project site. Additionally, because the project would not increase traffic volumes and would potentially reduce vehicle idling there would not be an increase in pollutants in runoff. Project operation is not anticipated to increase long-term erosion or sedimentation and would not otherwise impact water quality.

Given the above, the project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. This impact would be less than significant.

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

No Impact. The project site does not overlay a groundwater basin, and there are no groundwater recharge sites located within the project site according to the Vallejo General Plan 2040 EIR. The closest groundwater recharge facility is the Napa-Sonoma Valley Groundwater basin located approximately 3

miles southwest of the project site. The project is not anticipated to substantially increase impervious surface area at the project site such that it would interfere with groundwater recharge. Operation of the project would not require the regular use of water, aside from minor landscaping irrigation similar to existing conditions. No impact would occur.

- c) **Substantially alter the existing drainage patterns 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 a substantial erosion or siltation on- or off-site;**
AND
 - ii. **substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;**
AND
 - 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
AND
 - iv. **impede or redirect flood flows?**

Less than Significant. Project construction would involve ground disturbing activities such as excavation, grading, and trenching but would not substantially alter existing drainage patterns. Such activities would expose soils and increase the potential for soil erosion from wind or stormwater runoff. The project would be subject to the City of Vallejo’s NPDES grading and excavation permit guidelines and the City of Vallejo’s Excavating, Grading, and Filling ordinance (Section 12.40.070), which includes erosion control measures, including the following:

- Sediment basins shall be constructed on large developments to detain runoff into biologically sensitive areas or onto adjacent property and to trap sediment during construction up until slope erosion planting has been established. The sediment basin dam and collected silt shall then be removed and the resulting material hauled from the site or used as topsoil. Additional erosion control measures shall be employed during the rainy season (October 15 through April 15) as required by the City Engineer/Director of Public Works.
- All graded surfaces and materials, whether filled, excavated, transported or stockpiled, shall be wetted, protected or contained in such a manner as to prevent any nuisance from dust or spillage upon adjoining property or streets. A dust palliative shall be applied to the site in an amount directed by the city engineer/director of public works. Equipment and materials on the site should be used in such a manner as to avoid excessive dust. This may include limiting grading during windy periods.
- No grading shall be conducted so as to alter the furnished gradient of natural damage channels which would cause erosion or flooding.

- Where suitable topsoil exists on areas to be disturbed by grading or building operations, the topsoil shall be stripped in the amount needed to complete finish grading operations, and shall be piled in convenient locations for storage during construction.
- All fills shall be compacted in conformance with the recommendation of the soils engineer
- No fill material shall be placed, spread or rolled during unfavorable weather conditions. When the work is interrupted by heavy rains, fill operations shall not be resumed until field tests by the soils engineer indicate that the moisture content and density of the fill are satisfactory for resumption of the filling operation.
- Properly designed trash racks shall be installed on the upstream end of storm drainpipes where the pipe accepts drainage from a waterway which is not to be undergrounded. These racks are to be constructed so as to preclude large debris and small children from being pulled into the pipe from heavy storm flows. The city may require the installation of trash racks at other locations as deemed necessary for proper maintenance and safety.

Implementation of these permits and requirements would ensure the project does not substantially increase erosion or siltation.

The project site is located in Flood Zone X, which is the 500-year floodplain and exhibits a low risk for flood hazards. The project would not include new structures in waterways or other flood-prone areas, and would not substantially increase impervious surfaces. Further, as described above, stormwater would be retained on-site. Therefore, the project would not increase the risk of flooding on-site.

The project would not create runoff volumes that exceed the capacity of existing or planned stormwater drainage systems or create substantial erosion or siltation as it is a transportation infrastructure project. Since the project would remove and replace existing impervious surfaces, runoff generated from the project would not substantially increase existing runoff volumes. Therefore, the project would not contribute substantial amounts of sediment to storm drainage systems. This impact would be less than significant.

The project site is not in a flood zone and would not include the addition of new structures, flood flows would not be impeded or redirected. This impact would be less than significant.

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

No Impact. The project site is in Flood Zone X, which is outside the 1 percent annual chance floodplain and exhibits a low risk for flood hazards. According to Vallejo General Plan 2040 EIR, the project site is not within a tsunami evacuation area. The project site is approximately 6 miles from the San Pablo Bay and approximately 20 miles from the San Francisco Bay. The project site is not susceptible to impacts resulting from seiche because of its distance from the San Pablo and San Francisco Bays, and is not near

any other bodies of water. Therefore, the project site is not in a tsunami, flood, or seiche zone. No impact would occur.

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

Less than Significant. As stated above, the project would not affect groundwater resources. The project site is located within the San Francisco Bay Basin (Region 2) and would be subject to restrictions and controls outlined in the associated Basin Plan that establishes beneficial water uses for waterways and water bodies. Given the above, the project would not result in water quality impacts that would conflict with or obstruct the Basin Plan. This impact would be less than significant.

2.11 Land Use and Planning

	Significant Impact	Less than Significant with Mitigation	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 a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Regulatory Setting

Regional

Solano County General Plan

The Land Use Element of the Solano County General Plan contains the following goal which pertains to land use:

Goal LU.G-4: Encourage land use development patterns and circulation and transportation systems that promote health and wellness and minimize adverse effects on agriculture and natural resources, energy consumption, and air quality.

Napa County General Plan

There are no applicable goals and policies pertaining to land use in the Napa County General Plan that would be applicable to the project.

Local

City of Vallejo General Plan 2040

Various policies in the Vallejo General Plan 2040 have been adopted for the purpose of avoiding or mitigating land use impacts resulting from development within Vallejo. Approved projects in Vallejo are subject to the land use policies listed in the Vallejo General Plan 2040, including the following:

Goal MTC-3: *Interconnected Community*. Improve connections within and between Vallejo's neighborhoods for all travel modes.

Environmental Setting

The project site is comprised of approximately 6.1 acres of public right-of-way belonging to the State (Caltrans), Napa and Solano counties, and Vallejo. This includes portions of American Canyon Road,

Hiddenbrooke Parkway, and the I-80 overpass. The project site is surrounded by hilly terrain, but the project site itself (roadways and interchange) is located on graded areas and is relatively flat.

The project site is in Vallejo's SOI, east of the City of American Canyon, and within unincorporated areas of Napa and Solano counties. The southwest edge of the project site is within Napa County, where the land use designation is Agriculture, Watershed and Open Space. This land use designation continues for a large area surrounding the project site. The surrounding land use designation in Solano County is Exclusive Agricultural.

The nearest developed land uses are in Vallejo and American Canyon. In Vallejo, there are recreational and residential uses southeast of the project site approximately 1.5 miles away, including the existing Hiddenbrooke Community and golf course. In American Canyon, there are residential uses approximately 2 miles to the west of the project site.

Impact Discussion

a) Physically divide an established community?

No Impact. Projects that have the potential to physically divide an established community include new freeways and highways, major arterials streets, and railroad corridors. The project is located in a rural area surrounded by agriculture, watershed, and open space land uses. The project would be compatible with the pattern of surrounding land uses and would not physically divide an established community; rather, the project would improve mobility by modifying existing transportation infrastructure and circulation from I-80 to the existing Hiddenbrooke Community. Therefore, no impact would occur.

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

No Impact. As discussed above, implementation of the project would modify existing transportation infrastructure aimed at improving traffic circulation along the I-80/Hiddenbrooke Parkway interchange to the existing Hiddenbrooke Community. Land use designations surrounding the project site include agriculture, watershed, and open space. Implementation of the project would not change or introduce new land uses to the project site. The project would be consistent with Goal MTC-3 in the City of Vallejo General Plan 2040, which aims to improve connections between Vallejo's neighborhoods, including the Hiddenbrooke Community. Given the above, the project would not interfere with applicable land use regulations designed to avoid or mitigate environmental effects in this area. No impact would occur.

2.12 Mineral Resources

	Significant Impact	Less than Significant with Mitigation	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 of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Regulatory Setting

State

The Surface Mining and Reclamation Act

The Surface Mining and Reclamation Act of 1975 (SMARA) provides comprehensive surface mining and reclamation policy, and regulation of surface mining operations, to assure that adverse environmental impacts are minimized and mined lands are reclaimed to a usable condition. Additionally, SMARA encourages the production, conservation, and protection of the State's mineral resources. Public Resources Code section 2207 provides annual reporting requirements for all mines in the State under which the State Mining and Geology Board (SMGB) is granted authority and obligations.

Regional

Solano County General Plan

There are no goals and policies pertaining to mineral resources in the Solano County General Plan that would be applicable to the project.

Napa County General Plan

There are no goals and policies pertaining to mineral resources in the Napa County General Plan that would be applicable to the project.

Local

City of Vallejo General Plan 2040

There are no goals and policies pertaining to mineral resources in the City of Vallejo General Plan 2040 that would be applicable to the project.

Environmental Setting

The Lake Herman Quarry, which is operated by Syar Industries Inc., is the nearest area to the project site that is designated by the SMGB under SMARA as containing mineral deposits which are of regional

significance. It is approximately 7.5 miles south of the project site, east of Vallejo's city limit near Sulphur Springs Mountain. The Lake Herman Quarry is designated by the SMGB as a regional resource of construction aggregate materials.

The Vallejo General Plan 2040 EIR states that there are no formal mineral resource deposits located within Vallejo, and that the aforementioned quarry is the only formally designated significant mineral resource within Vallejo's SOI.

Mineral Resource Zones

CGS is responsible under SMARA for classifying lands into Mineral Resource Zones (MRZs) based on the known or inferred mineral resources potential of that land. The project site is classified as an MRZ-3 zone, defined as "areas containing mineral occurrences of undetermined mineral resource significance" (DOC 2020b). Therefore, the project site has the potential to contain mineral deposits, although their significance cannot be evaluated from available data.

Impact Discussion

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?

AND

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No Impact. The project site is classified as MRZ-3 and therefore has the potential to contain mineral deposits of undetermined significance. However, there are no known mineral resources on the project site or in the project vicinity, nor is the project designated or zoned for the extraction of mineral deposits, as described in the Vallejo General Plan 2040 EIR. Therefore, the project would not result in the loss of availability of a known mineral resource of value to the region or State, and would not result in the loss of availability of a designated mineral resource recovery site. No impact would occur.

2.13 Noise and Vibration

	Significant Impact	Less than Significant with Mitigation	Less-than-Significant Impact	No Impact
Would the project:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Generation of excessive ground borne vibration or ground borne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Regulatory Setting

Noise

Noise is defined as loud, unexpected, or annoying sound. In the science of acoustics, the fundamental model used to describe noise consists of a noise source, a receptor, and the propagation path between the two. The loudness of the noise source and obstructions between the noise and the receptor determine sound levels and characteristics of the noise perceived by the receptor. As sound is generated from a source, the noise level decreases as the distance from that source increases.

Noise levels are expressed in logarithmic units called decibels (dB). The audible range of hearing in humans is between 0 dB and 130 dB. Above 130 dB, damage may occur to the ear. Since the human ear is not equally sensitive to all audible frequencies, a frequency-dependent rating scale was devised to relate noise to human sensitivity. An A-weighted dB (dBA) scale performs this compensation by discriminating against frequencies that are more sensitive to humans; the dBA scale is typically utilized for the purposes of regulating environmental noise.

With respect to how humans perceive and react to changes in noise levels, a 1 dBA increase is imperceptible, a 3 dBA increase is barely perceptible, a 6 dBA increase is clearly noticeable, and a 10 dBA increase is subjectively perceived as twice as loud. Thus, a noise-level increase of 3 dBA or more is typically considered to be substantial in terms of the degradation of the existing noise environment.

Significant noise may occur from mobile sources, stationary sources, and construction activities. Mobile noise sources are generally associated with transportation and include on-road vehicles, trains, and

aircraft. Stationary noise sources typically occur at industrial land uses; specific sources may include airports, construction sites, and machinery.

Regional

Solano County General Plan

The Public Health & Safety Element of the Solano County General Plan contains the following policies which pertain to noise effects:

Policy HS. P-49 Encourage design that minimizes negative effects of noise without compromising aesthetic values and pedestrian and auto connectivity

Policy HS.P-51 Develop strategies with residents and businesses to reduce noise conflicts.

Napa County General Plan

The Community Character Element of the Napa County General Plan contains the following policy which pertains to noise effects:

Policy CC-46: Consistent with the County’s Noise Ordinance, ensure that reasonable measures are taken such that temporary and intermittent noise associated with construction and other activities does not become intolerable to those in the area.

Local

City of Vallejo General Plan 2040

Various policies in the Vallejo General Plan 2040 have been adopted for the purpose of avoiding or mitigating noise impacts resulting from development within Vallejo. Approved projects in Vallejo are subject to the noise policies, including the following:

Policy NBE-5.15: *Noise Compatibility Standards*. Ensure that noise does not affect quality of life in the community.

City of Vallejo Municipal Code

The Vallejo Municipal Code includes various directives pertaining to the restrictions and regulation of noise:

- **Chapter 12.40 – Excavations, Grading, and Filling.** All grading – and the associated production of noise – that is conducted in residential zones or within 1,000 feet of any residential occupancy, hotel, motel, or hospital shall be limited to between the hours of 7:00 a.m. and 6:00 p.m.
- **Sections 16.72.030 – 16.72.040 – Performance Standards Regulations.** Quantified noise performance standards for Vallejo are codified to control dangerous or objectionable impacts of land uses and to implement the noise element of the Vallejo General Plan 2040. Specifically, no land use shall generate sound exceeding the maximum levels permitted when such sounds are measured in any of the zoning districts listed in **Table 6**.

Table 6 Vallejo Noise Performance Standards

Zoning District	Daytime Maximum Sound Pressure Level (dBA ²)	Nighttime ¹ Maximum Sound Pressure Level (dBA ²)
Resource Conservation, Rural Residential, and Medical Districts	60	55
Low, Medium, and High Density Residential Districts	65	60
Professional Offices, Neighborhood, Pedestrian, and Waterfront Shopping and Services Districts	75	70
Freeway, Shopping and Service, Linear Commercial, and Intensive Use Districts	80	75

Source: Vallejo Municipal Code, Section 16.72.030

1. Given the corrections in Section 16.72.030 of the Municipal Code, the above limits are extended by 5 dB for noise emissions between 7:00 a.m. and 10:00 p.m. Thus, the table limits above would apply for the nighttime period between 10:00 p.m. and the following 7:00 a.m.

2. A-weighted decibels (dBA) are an expression of relative loudness of sounds as perceived by the human ear.

- Chapter 16.72.050 – Noise Performance Standards: Exceptions.** This section of the Vallejo Municipal Code states that temporary construction noise is exempt from the noise standards in Section 16.72.030.

Vibration

Vibration is normally associated with activities stemming from operations of railroads or vibration-intensive stationary sources, but can also be associated with construction equipment such as jackhammers, pile drivers, and hydraulic hammers. Vibration displacement is the distance that a point on a surface moves away from its original static position. During construction, the operation of construction equipment can cause ground-borne vibration. Receptors may be subject to levels of vibration that can cause annoyance due to noise generated from vibration of a structure or items within a structure.

According to the Vallejo General Plan 2040 EIR, neither the City of Vallejo nor the County of Solano have specific and/or quantitative regulatory standards for construction or operational vibration sources. Additionally, there are no specific and/or quantitative vibration source regulatory standards determined in the Napa County General Plan.

Environmental Setting

Existing Noise Setting

The main sources of existing noise and vibration at the project site come from roadway and highway traffic. According to the Vallejo General Plan 2040 EIR, noise levels within 100 feet of the I-80 may reach up to 70 dBA from on-road vehicles. There are no trains, aircrafts, or stationary noise and vibration sources at the project site.

Sensitive Receivers

Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with those uses. Noise-sensitive receivers generally include residences, schools, nursing homes, hospitals, and day care operations, as indicated in the Vallejo General Plan 2040. Vibration-sensitive receivers are similar to noise-sensitive receivers and include residences and institutional uses, such as educational facilities, hospitals, or places of worship, as well as buildings where vibrations may interfere with vibration-sensitive equipment that may be affected by vibration well below those associated with human annoyance (e.g., recording studios or medical facilities with sensitive equipment). The nearest sensitive receivers to the project site are residences within the Hiddenbrooke Community, the closest of which are located approximately 1.5 miles southeast.

Impact Discussion

- 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?**

No Impact. As described below, the project would not result in an increase in ambient noise in excess of local standards.

Construction

Noise sources associated with project construction would include excavation, construction truck traffic, and other noises typically associated with a construction site. **Table 7** outlines typical noise levels for construction equipment that could be used at the project site.

Table 7 Construction Equipment Noise Levels

Construction Equipment	Maximum Noise Level dBA¹ at 50 feet
Backhoe	78
Compactor (ground)	83
Compressor (air)	78
Concrete Mixer Truck	79
Concrete Pump Truck	81
Crane	81
Dozer	82
Dump Truck	76
Excavator	81
Front End Loader	79
Generator	81
Paver	77
Pneumatic Tools	85

Construction Equipment	Maximum Noise Level dBA ¹ at 50 feet
Pumps	81
Roller	80
Scraper	84

Source: FHWA 2006

1.A-weighted decibels (dBA) are an expression of the relative loudness of sounds as perceived by the human ear.

As stated above, temporary construction noise is exempt from the noise performance standards listed in **Table 6**. Further, there are no sensitive receptors within 1,000 feet of the project site. Therefore, construction would not result in noise levels that exceed the applicable noise standard or otherwise impact sensitive receptors.

Chapter 12.40 of the Vallejo Municipal Code limits all construction activities within 1,000 feet of residential activities to daytime hours. The nearest potential sensitive receivers to the project site are the residences in the Hiddenbrooke Community approximately 1.5 miles southeast. Therefore, project construction would not be close enough to impact sensitive receptors. In addition, any project-related construction noise would be temporary.

Operation

The project would not generate operational noise. As described in Appendix D, the project would not directly or indirectly increase traffic volumes, and therefore would not permanently increase noise levels. No impact would occur.

b) Generation of excessive ground borne vibration or ground borne noise levels?

No Impact. Construction activities associated with the project would have the potential to create ground-borne vibration, including the use of vibratory rollers for the paving of roads. As discussed under **Impact a**, the nearest potential sensitive receivers or structures to the project site are residences located approximately 1.5 miles southeast in the Hiddenbrooke Community. The project would not be located within the vicinity of sensitive receptors such that significant vibratory impacts would occur, and construction-related vibration from the project would be temporary. Operation of the project would not directly or indirectly cause an increase in vibration levels, as it would not increase traffic volumes. No impact would occur.

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?

No Impact. As discussed in **Section 2.9, Hazards and Hazardous Materials**, the project site is not within 2 miles of any private airstrip or airport land use plan, and would not involve development of noise-sensitive land uses that would be exposed to aircraft noise. No impact would occur.

2.14 Population and Housing

	Significant Impact	Less than Significant with Mitigation	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"/>

Environmental Setting

Land use and population assumptions established in long-range planning documents are commonly used as the basis for growth projections within cities and regions. Planned growth can be characterized as development established in a city's or county's general plan, such as the Vallejo General Plan 2040 or the Solano County General Plan, the long-range planning documents for the City of Vallejo and Solano County, respectively. Both the Vallejo General Plan 2040 and Solano County General Plan serve as guidelines for planned growth in Vallejo and Solano County, respectively, and are used in the development of regional plans, such as Plan Bay Area, to project long-term regional growth. Rapid growth, which has not been planned for in local and regional planning documents, has the potential to disturb the jobs-housing balance of a city and result in unanticipated environmental impacts by increasing demand for services and infrastructure.

Direct population growth is facilitated by development of residential and employment uses. Indirect growth can occur as a result of projects which introduce new roadways, transit connections, and/or utility extensions to previously undeveloped areas. This can facilitate the development of residential and commercial projects that will directly contribute to growth in the area.

According to the California Department of Finance (DOF), Vallejo's population and number of housing units in January 2020 was approximately 119,063 residents and 44,815 housing units. The average number of persons per household in Vallejo is 2.65. As described in the Vallejo General Plan 2040, based on the City's current development and growth capacity, the population in Vallejo (including the extent of its SOI) will grow by approximately 12 percent and the number of households is expected to grow by approximately 9 percent between 2015 and 2040, for a total of around 131,800 residents and 44,900 households.

According to the DOF, Solano County's population and number of housing units in January 2020 was approximately 440,224 residents and 160,614 housing units. The average number of persons per household is 2.74. As described in the Solano County Housing Element update from 2015, with its current development and growth capacity, the population in Solano County is projected to grow by

approximately 9 percent and the number of households is expected to grow approximately 5 percent between 2010 and 2040, for an added total of around 98,256 new residents and 26,942 new households.

According to the DOF, Napa County's population and number of housing units in January 2020 was approximately 139,088 residents and 55,289 housing units. The average number of persons per household is 2.52. As described in the Napa County General Plan EIR, with its current development and growth capacity, the population in Napa County could grow by approximately 18,063 residents and 7,635 housing units by 2030 (Napa County 2007).

There are no residences at or immediately surrounding the project site. The proposed improvements to the I-80/Hiddenbrooke Parkway interchange were originally included in development agreements for Hiddenbrooke Community, a residential development surrounding the Hiddenbrooke Golf Club in Vallejo.

Impact Discussion

- 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)?**

No Impact. Under existing conditions, the proximity of the I-80 /Hiddenbrooke Parkway and McGary Road/Hiddenbrooke Parkway intersections creates operational deficiencies, which causes traffic to back up along Hiddenbrooke Parkway during peak commute hours. Implementation of the project would reduce congestion and improve mobility in the existing transportation corridor along Hiddenbrooke Parkway to better service the Hiddenbrooke Community. The project consists of operational improvements to an existing interchange and would not create housing or introduce new businesses to the area; therefore, it would not directly induce population growth in the area. The project would not include an expansion of infrastructure, and therefore would not indirectly contribute to unplanned growth. No impact would occur.

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

No Impact. No people or housing would be temporarily or permanently displaced as a result of the project. There are no residences within or surrounding the project site. Therefore, no impact would occur.

2.15 Public Services

	Significant Impact	Less than Significant with Mitigation	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 checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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"/>

Regulatory Setting

Federal and State

There are no federal or State policies and regulations pertaining to public services that would be applicable to the project.

Regional

Solano County General Plan

There are no applicable goals and policies pertaining to land use in the Solano County General Plan that would be applicable to the project.

Napa County General Plan

There are no applicable goals and policies pertaining to public services in the Napa County General Plan that would be applicable to the project.

Local

City of Vallejo General Plan 2040

Various policies in the Vallejo General Plan 2040 have been adopted for the purpose of avoiding or mitigating public service impacts resulting from development within Vallejo. Approved projects in Vallejo are subject to the public service policies, including the following:

Policy MTC-2.3: *Emergency Response Routes*. Ensure adequate emergency vehicle access in all areas of Vallejo.

Action MTC-2.3B: Continue to involve the Police and Fire Departments in the development review process to ensure that applicable requirements for emergency access are met.

Environmental Setting

The need for new or physically altered governmental facilities typically come from projects that directly prompt population growth such as large housing developments or employment uses, or projects that introduce new vehicle trips. As previously discussed in **Section 2.14, Population and Housing**, planned growth can be characterized as development noted in a city's or county's general plan, such as the Vallejo General Plan 2040 and Solano County General Plan, the long-range planning documents for the City of Vallejo and Solano County, respectively. The Vallejo General Plan 2040 and Solano County General Plan serve as guidelines for planned growth and can aid in planning for additional public services required to meet demand of long-term growth.

Fire Protection

Fire protection services for the project site are provided by the Vallejo Fire Department, which comprises 86 personnel and six fire stations. The closest fire station to the project site is Vallejo Fire Department Station 27 located at 1585 Ascot Court, 3.4 miles south of the project site. Station 27 is led by a Battalion Chief and is staffed with three firefighters on an Engine.

Police Protection

California Highway Patrol

California Highway Patrol (CHP) enforces traffic laws on county and State highways. The primary mission of the CHP is the management and regulation of traffic to achieve safe, lawful, and efficient use of the highway transportation system. As a major statewide law enforcement agency, the secondary mission of the CHP is to assist in emergencies exceeding local capabilities. The project site includes the overpass where American Canyon Road and Hiddenbrooke Parkway meet above I-80, which is under CHP jurisdiction.

Vallejo Police Department

Police service services for the project site are provided by the Vallejo Police Department (VPD), which operates from its headquarters at 111 Amador Street, approximately 5.8 miles south of the project site. As of 2014, VPD has operated with 101 sworn officers and has authorized staffing level of 110 sworn officers.

Schools

The project site is in the Vallejo City Unified School District (VCUSD). VCUSD operates 13 elementary schools, three K-8 schools, three middle schools serving grades 6-8, two comprehensive high schools, a continuation school, and a community day school, serving 11,500 students.¹² Local VCUSD schools located in the project vicinity include Widenmann Elementary School, Griffin Academy Middle School, and Loma Vista Elementary School.

Impact Discussion

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:**

i. **Fire Protection?**

AND

ii. **Police Protection?**

Less than Significant. The project would include operational improvements to existing transportation infrastructure. It would not include new development, new roadways, or additional traffic lanes that would induce growth. The project does not propose land uses that would increase demand for fire or police protection. However, construction activities would have the potential to temporarily disrupt roadway access along the project site, potentially affecting emergency response times for fire and police protection services. As discussed in **Section 2.9, Hazards and Hazardous Materials**, the Solano County EOP facilitates multi-jurisdictional and interagency coordination in the event of emergency situations, particularly between local government, the geographic boundary of Solano County, and appropriate state and federal agencies. Temporary detours or delays due to construction would be made known to motorists, pedestrians, and fire and police protection services beforehand to facilitate access in and out of the project site during construction. This impact would be less than significant.

iii. **Schools?**

AND

iv. **Parks?**

AND

v. **Other public facilities?**

No Impact. There are no government facilities within or adjacent to the project site. Therefore, the project would not result in direct physical impacts related to the construction or expansion of government facilities. The project consists of operational improvements to existing transportation infrastructure and would not include new development, new roadways, or additional traffic lanes that

¹² VCUSD, 2020

would induce growth. The project does not propose land uses that would increase demand for schools, parks, or other public facilities. Project implementation would not trigger the need for new or physically altered government facilities. No impact would occur.

2.16 Parks and Recreation

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

Regulatory Setting

Regional

Solano Open Space

Solano Open Space is a Joint Powers Authority (JPA) that exists to protect, manage, and plan for public benefit the 10,000 acres of open space located within the triangle formed by I-80, I-680, and Lake Herman Road adjacent to the cities of Benicia, Fairfield, and Vallejo and unincorporated Solano County.¹³ Solano Open Space created a JPA governing board that works with landowners, GVRD, and Solano Land Trust to implement the Cooperative Plan for Agriculture and Open Space Preservation, a regional park and open space preservation plan. The project site is in the JPA's triangle of jurisdiction, at the intersection of I-80 and Hiddenbrooke Parkway.

Solano County General Plan

There are no applicable goals or policies pertaining to parks or recreation facilities in the Solano County General Plan.

According to the Solano County General Plan's Park and Recreation Element, the closest regional park to the project site is Lake Herman Park, located approximately 5 miles south-east.

Napa County General Plan

There are no applicable goals or policies pertaining to parks or recreation facilities in the Napa County General Plan.

¹³ Solano Open Space, 2020

Local

Greater Vallejo Recreational District

The Greater Vallejo Recreation District (GVRD) is a separate government agency from the City of Vallejo and manages 407 acres of public park space including 20 neighborhood parks, 10 community parks, and four community centers. GVRD maintains over 1,000 acres of public land and offers programs that benefit over 120,000 Vallejo residents of all ages.¹⁴

City of Vallejo General Plan 2040

Various policies in the Vallejo General Plan 2040 have been adopted for the purpose of avoiding or mitigating park and recreation impacts resulting from development within Vallejo. Approved projects in Vallejo are subject to the park and recreation policies listed in the Vallejo General Plan 2040, including the following:

Policy MTC-1.6: *Public Access*. Promote public access to open space and trails.

Policy NBE-1.6: *Open Space*. Conserve and enhance natural open space areas in and adjacent to Vallejo and its waterfront.

Environmental Setting

There are four recreational areas near the project site. The closest park to the project site is Lynch Canyon Open Space, approximately 1.2 miles northwest of the project site. South of the project site in the Hiddenbrooke Community, there are three recreational areas: Little Park Hiddenbrooke (1.7 miles), Hiddenbrooke Golf Club (1.8 miles), and Hiddenbrooke Park (2.9 miles).

Similar to the discussion in **Section 2.15, Public Services**, the need for new or physically altered recreational facilities comes from projects that induce population growth such as large housing developments or employment uses.

Impact Discussion

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

No Impact. The project consists of operational improvements to existing transportation infrastructure and would not include new residential development, new employment uses, or other modifications that would induce a need for recreational facilities. Further, the project would not increase traffic volumes or otherwise expand access to the project site or surrounding areas. Therefore, it would not indirectly increase the use or demand for recreational facilities. No impact would occur.

¹⁴ GVRD, 2020

b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

No Impact. The project would not include recreational facilities or require the construction or expansion of recreational facilities that could result in adverse physical effect on the environment. No impact would occur.

2.17 Transportation/Traffic

	Significant Impact	Less than Significant with Mitigation	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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Regulatory Setting

The information in this section is based on the Traffic Operations Analysis Report prepared for the project in July 2020 (**Appendix D**).

State

Senate Bill 743

On September 27, 2013, Governor Brown signed SB 743, which required changes to the CEQA guidelines regarding the analysis of transportation impacts. These changes shifted the focus of transportation impact analysis away from vehicle delay (level of service, or LOS) and towards the reduction of GHG emissions. The 2019 CEQA Guidelines were revised to reflect this change, including Appendix G of the CEQA Guidelines. The Office of Planning and Research (OPR) has issued several technical advisories on implementation of SB 743 which identify VMT as the most appropriate metric to evaluate a project's transportation impacts.

In December 2018, the 2019 CEQA Guidelines were adopted and are now in effect. Lead agencies are required to use the new CEQA Guidelines as of April 2019. Section 15064.3(b) of the 2019 CEQA Guidelines outlines appropriate criteria for evaluating transportation impacts and focuses on evaluation using VMT. For transportation projects, OPR indicates that "projects that would not likely lead to a substantial or measurable increase in vehicle travel" should not require an induced travel analysis and may be presumed to have a less than significant transportation impact under CEQA. The following transportation project types are identified by OPR as ones that would not likely lead to a substantial or measurable increase in vehicle travel:

- Installation of roundabouts or traffic circles

- Installation, removal, or reconfiguration of traffic control devices, including Transit Signal Priority (TSP) features

Regional

Solano County General Plan

The Transportation and Circulation element of the Solano County General Plan contains the following goals and policies which pertain to transportation and traffic:

- Goal TC.G-1: Maintain and improve the County’s transportation systems to enhance safety, resident access to basic needs, mobility, and convenience.
- Goal TC.G-2: Promote coordinated approaches to creating, maintaining and improving transportation corridors and facilities by working with other jurisdictions and transportation agencies in funding and implementing projects.
- Policy TC.P-10: Anticipate increases in vehicular traffic on rural roads that serve agricultural-tourist centers, value-added agricultural uses in the interior valleys, and other unique land uses; complete related roadway improvements that support the viability of such uses.
- Program TC.I-2: Promote development review and mitigation (including the use of transportation impact fees) that focuses on upgrading county roads to County design standards if the new development significantly contributes to the need to upgrade these roads, whether the new development occurs inside or outside of a city.

Napa County General Plan

The Circulation Element of the Napa County General Plan contains the following policy which pertains to transportation and traffic:

- Policy CIR-2: The County will work with the cities and town through the Napa County Transportation and Planning Agency to coordinate seamless transportation systems and improve the efficiency of the transportation system by coordinating the construction of planned roadway, bicycle, pedestrian, and other transportation systems.
- Policy CIR-13.5: While not suitable for all intersections, roundabouts have a wide variety of applications, and Napa County will consider them as an alternative for intersection improvements. Roundabouts have been used extensively in Europe for several decades, and their use in the United States has grown substantially over the past several years. Research shows that they have the potential to reduce accidents, traffic delays, fuel consumption, air pollution, maintenance, and in some cases construction costs compared to more traditional intersection controls.

Napa County Transportation and Planning Agency

The Napa County Transportation and Planning Agency (NCTPA) was formed in 1998 by the cities of American Canyon, Calistoga, Napa, St. Helena, the town of Yountville, and the County of Napa. NCPTA serves as the countywide transportation planning agency, and oversees the planning and funding of paratransit, improvements of highways, streets and roads, and bicycle facilities. The NCPTA also works with the Metropolitan Transportation Commission (MTC) to coordinate funds from the Transportation Development Act for transit, paratransit, streets and roads, and bicycle projects.

Solano Transportation Authority

The Solano Transportation Authority (STA) has jurisdiction for Solano County to program much of the County's federal, state, and regional transportation funds, especially as it pertains to infrastructure. In its role as Solano County's Congestion Management Agency (CMA), STA partners with MTC and Caltrans District 4 (with jurisdiction over the nine Bay Area counties) to provide countywide planning and program prioritization, funding, operating, and maintaining transportation programs and services. The first Congestion Management Program (CMP) for Solano County was adopted in October 1991 and has been updated generally every two years since then. The most recently published updated is the 2019 CMP.

2011 Solano Countywide Bicycle Transportation Plan

The 2011 Solano County Bicycle Plan is designed to facilitate and provide safe and efficient bicycle travelling as an everyday means of transportation in Solano County. Bikeways are classified according to the following three types:

- Class I: off-street bike paths
- Class II: on-street bike lanes marked by pavement striping and signage
- Class III-on-street designated bike routes that share the road with motorized vehicles

Bicycle facilities are required to conform to the design guidance in the Bikeway Planning and Design Chapter of the Caltrans Highway Design Manual. According to the 2011 Solano County Bicycle Plan, there is a Class II bike lane along McGary Road between Hiddenbrooke Parkway and the Vallejo city limit.

Local

City of Vallejo General Plan 2040

Various policies in the Vallejo General Plan 2040 have been adopted for the purpose of avoiding or mitigating transportation and traffic impacts resulting from development within Vallejo. Approved projects in Vallejo are subject to traffic and transportation policies, including the following:

Action CP-1.6A: Identify problem locations in Vallejo regarding pedestrian/auto and bicycle/auto collisions, identify measures (e.g., traffic calming, improved street lighting) to reduce collisions, and develop a prioritized program for implementing identified measures.

Action MTC-2.3: *Emergency Response Routes*. Ensure adequate emergency vehicle access in all areas of Vallejo.

Environmental Setting

Existing Roadway Network

At the project site, the local street network includes American Canyon Road, Hiddenbrooke Parkway, and McGary Road. The freeway network includes I-80 and the I-80/Hiddenbrooke Parkway interchange ramps. These roadways are described below:

- American Canyon Road is a two-lane east-west arterial that extends from Wetlands Edge Road on the west side of American Canyon to the I-80 eastbound ramps at the project site.
- Hiddenbrooke Parkway is a two-lane east-west collector street that provides access to the Hiddenbrooke community south of the project site.
- McGary Road is a two-lane road that run parallel to I-80 between the study area and Cordelia to the northeast. McGary Road terminates approximately 1 mile south of the project site at a private property.
- I-80 is an east-west freeway that traverses the United States from San Francisco to New York. At the project site, the freeway has four lanes in each direction and serves regional traffic between the Bay Area and the Sacramento metropolitan area.

The I-80/Hiddenbrooke Parkway interchange has slip on-ramps and off-ramps. The American Canyon Road and Hiddenbrooke Parkway intersections with the I-80 westbound and eastbound ramps are both all-way stop-controlled intersections. The Hiddenbrooke Parkway and McGary Road intersection is a side-street stop-controlled intersection with northbound, eastbound, and westbound traffic yielding to the southbound approach. Freeway mainline peak hour traffic volumes are shown in **Table 8**.

Table 8 I-80 Mainline Peak Hour Volumes - Existing Conditions

Segment		Volumes	
		AM	PM
1	I-80 Eastbound – American Canyon Road Off-ramp	3,225	4,704
2	I-80 Eastbound – American Canyon Road Off- to On-ramp	3,062	4,356
3	I-80 Eastbound – American Canyon Road On-ramp	3,442	4,731
4	I-80 Westbound – American Canyon Road Off-ramp	4,217	3,769
5	I-80 Westbound – American Canyon Road Off- to On-ramp	3,981	3,357
6	I-80 Westbound – American Canyon Road On-ramp	4,344	3,540

Source: Fehr & Peers 2020

During both the AM and PM peak hours, traffic queues under existing conditions can generally be accommodated by available storage lengths. The exception to this is the northbound approach at the American Canyon Road and I-80 eastbound ramps intersection, where queues may occasionally spill back into the Hiddenbrooke Parkway and McGary Road intersection. **Table 9** shows the average maximum queue length under existing conditions during AM and PM peak hours.

Table 9 Average Maximum Queue Length - Existing Conditions

Intersection		Approach	Storage Length	Queue Length	
				AM	PM
1	Hiddenbrooke Parkway-American Canyon Road / I-80 Westbound Ramps	Northbound	440	80	80
		Southbound	>1,040	100	120
		Westbound	1,220	60	100
2	Hiddenbrooke Parkway-American Canyon Road / I-80 Eastbound Ramps	Northbound	60	<u>80</u>	<u>80</u>
		Southbound	440	80	120
		Eastbound	1,020	60	100
3	Hiddenbrooke Parkway / McGary Road	Northbound	>900	260	80
		Southbound	60	20	20
		Westbound	>620	60	40
		Eastbound	>1,020	20	20

Source: Fehr & Peers 2020

Notes: Storage length and average maximum queue length are reported in feet

Multimodal Facilities

Solano County Transit provides public transportation service to the southern Solano County cities of Vallejo and Benicia. However, while one express route (Route R) travels along I-80 adjacent to the Hiddenbrooke Community, it remains on the highway and does not make stops within the project site.

Bicycle facilities in the project site primarily serve recreational bicycling during off-peak periods. McGary Road provides a connection between the Solano Bikeway southwest of the project site and Cordelia to the northeast. East of Hiddenbrooke Parkway, McGary Road has Class II bicycle lanes on both sides of the road. West of Hiddenbrooke Parkway, bicyclists on McGary Road share the road with vehicle traffic.

The Ridge Trail is a mixed-use path that begins just south of McGary Road and continues along the west side of Hiddenbrooke Parkway into the Hiddenbrooke community. It provides a connection for bicyclists to Class II bike lanes within the community, and for people walking to a network of nearby trails. During the PM peak hour, four bicycles per hour were observed traveling along McGary Road and between McGary Road and Hiddenbrooke Parkway. No bicyclists were present during the AM peak hour.

With the exception of the Ridge Trail described above, there are no sidewalks, crosswalks, or other facilities for people walking in the project site. During the site survey completed for the project, no pedestrians were counted crossing at any of the study intersections during the AM and PM peak hours.

Impact Discussion

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less than Significant. The 1987 EIR prepared for the Hiddenbrooke Community indicated the need for improvements to the I-80/Hiddenbrooke Parkway interchange upon build-out of the Hiddenbrooke Community. Subsequently, the City of Vallejo and developer of the Hiddenbrooke Community executed an agreement for improvements to the interchange. Implementation of this project would be consistent with this agreement by enhancing traffic flow and operation of the interchange accordingly (**Appendix D**). The project would not conflict with a program, plan, ordinance, or policy addressing the roadway circulation system at the project site.

There are no pedestrian or transit facilities at the project site. There are existing Class II bicycle lanes on either side of McGary Road. Implementation of the project would alter the segment of bicycle lane along the McGary Road/Hiddenbrooke Parkway intersection, which would be realigned to the roundabout implemented as part of the project. However, this improvement would not substantially alter the existing bike lane such that it would result in unsafe or less efficient conditions for bicyclists. Therefore, this impact would be less than significant.

b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Less than Significant. Implementation of the project would involve replacement of the I-80 ramps at American Canyon Road and Hiddenbrooke Parkway, and conversion of the McGary Road/Hiddenbrooke Parkway/I-80 ramp and American Canyon Road/I-80 ramp intersections to roundabouts. Based on OPR screening criteria, the installation of roundabouts or traffic signals would not likely lead to a substantial or measurable increase in vehicle travel or VMT.¹⁵ Therefore, the project is screened from further VMT analysis and this impact would be less than significant.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact. Implementation of the project would allow for the accommodation of 2024 AM and PM peak hour volumes, with average maximum queue lengths well under available storage lengths as shown in **Table 10**. The results of the analysis show that adequate vehicle storage would be provided to accommodate the vehicle queues that would develop for these movements under all traffic scenarios.

Table 10 Average Maximum Queue Length - 2024 Opening Year Conditions

Intersection		Approach	Storage Length	Queue Length	
				AM	PM
1	Hiddenbrooke Parkway-American Canyon Road / I-80 Westbound Ramps	Northbound American Canyon Road	440	0	0
		Southbound American Canyon Road	>1,040	60	60
		Westbound I-80 Off-Ramp	1,220	60	60

¹⁵ OPR, 2018

Intersection		Approach	Storage Length	Queue Length	
				AM	PM
2	Hiddenbrooke Parkway-American Canyon Road / I-80 Eastbound Ramps	Northbound Hiddenbrooke Parkway	>900	60	20
		Southbound American Canyon Road	400	40	60
		Eastbound I-80 Off-Ramp	1,020	20	60
		Eastbound McGary Road	>620	0	0
		Westbound McGary Road	>1,020	0	0

Source: Fehr & Peers 2020

Notes: Storage length and average maximum queue length are reported in feet

Project improvements would include the realignment of the existing I-80 on- and off-ramps and the replacement of the three existing intersections at the project site with two roundabouts, both of which incorporate triangular medians for safe roundabout entry and exiting. These improvements would not result in an increase in the risk of hazards within the project site and would meet all relevant design standards. Additionally, the project would not involve incompatible land uses; all existing land uses would remain the same. No impact would occur.

d) Result in inadequate emergency access?

Less than Significant. As discussed in **Section 2.9, Hazards and Hazardous Materials**, construction activities associated with the project would have the potential to disrupt roadway access along the project site, which would potentially affect emergency access. However, temporary detours or delays due to construction would be known to motorists, pedestrians, and emergency services beforehand to facilitate access in and out of the project site during construction via facilitation through the Solano County EOP. Project operation would not result in disruptions in emergency access along the project site. Therefore, this impact would be less than significant.

2.18 Tribal Cultural Resources

	Significant Impact	Less than Significant with Mitigation	Less-than-Significant Impact	No Impact
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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)?

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

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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The information in this section is based on the Cultural Resources Assessment prepared for the project in August 2020 (**Appendix C**).

Regulatory Setting

State

Native American Tribal Cultural Resources

On September 25, 2014, Governor Edmund G. Brown signed Assembly Bill 52 (AB 52), creating a new category of environmental resources (tribal cultural resources), which must be considered under CEQA. The legislation includes new requirements for consultation regarding projects that may affect a tribal cultural resource, a definition of “tribal cultural resource”, and a list of recommended mitigation

measures. AB 52 also requires lead agencies to provide notice to tribes that are traditionally and culturally affiliated with the geographic area if they have requested to be notified of projects proposed within that area. Where a project may have a significant impact on a tribal cultural resource, consultation is required until the parties agree to mitigate or avoid a significant impact on a tribal cultural resource or when it is concluded that mutual agreement cannot be reached.

California Environmental Quality Act

Native American Burials

California law protects Native American burials, skeletal remains, and associated grave goods regardless of their antiquity and provides for the sensitive treatment and disposition of those remains (Section 7050.5(b) of the California Health and Safety Code). CEQA Guidelines section 15064.5(e) requires that excavation activities be stopped whenever human remains are uncovered, and that the county coroner or medical examiner be contacted to assess the remains. If the county coroner or medical examiner determines that the remains are those of Native Americans, the NAHC must be contacted within 24 hours. The property owner is required to consult with the appropriate Native Americans identified by the NAHC as a “most likely descendant” to develop an agreement for the treatment and disposition of the remains.

Regional

Solano County General Plan

The Resources Element of the Solano County General Plan contains the following policy which pertains to tribal cultural resources:

Policy RS.P-40: Consult with Native American governments to identify and consider Native American cultural places in land use planning.

Napa County General Plan

The Safety Element of the Napa County General Plan contains the following policy which pertains to reducing wildfire hazards:

Policy RS.I-26: Work with federal and state agencies to identify, evaluate, and protect the county’s important historic and prehistoric resources. Programs administered by such agencies may include:

- California Historic Landmarks
- California Points of Historical Interest
- California Register of Historic Resources
- National Register of Historic Places
- State Historic Building Code

Local

City of Vallejo General Plan 2040

The Cultural and Historic Resources Element of the Vallejo General Plan 2040 contains the following policy which pertains to tribal cultural resources:

Action NBE-1.9B: Maintain a dialogue with local Native American groups regarding sensitive cultural resources in Vallejo.

Environmental Setting

Tribal cultural resources are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a tribe that are listed, or determined to be eligible for listing, in the national, state, or local register of historical resources. Additionally, a tribal cultural resource may also be a resource that the lead agency determines, in its discretion, is a tribal cultural resource.

Cultural resources are generally defined as traces of human occupation and activity that include prehistoric and historic archaeological sites, districts, and objects; standing historic structures buildings, districts, and objects; and locations of important historic events of sites of traditional and/or cultural importance to various groups. Specifically, the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1 protect the following resources:

5024.1(c): A resource may be listed as an historical resource in the California Register if it meets any of the following NRHP criteria:

- (1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- (2) Is associated with the lives of persons important in our past.
- (3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
- (4) Has yielded, or may be likely to yield, information important in prehistory or history.

The Sacred Lands File, operated by the NAHC, is a confidential set of records containing places of religious or social significance to Native Americans. A Sacred Lands File search for the project site from the NAHC was requested on June 16, 2020 (included in **Appendix C**). The NAHC response on June 18, 2020 indicated that no known Native American cultural resources exist within the project site. The NAHC results also noted, however, that the absence of specific site information in the Sacred Lands File does not indicate the absence of Native American cultural resources in the project vicinity. Included with the response was a list of four Native American representatives who could provide site-specific knowledge on local Native American cultural resources.

The California Native American tribes traditionally and culturally affiliated with the geographic area of the project were contacted to help determine whether the project has the potential to result in a substantial adverse change in the significance of a tribal cultural resource. On June 18, 2020 a request was submitted to the Cortina Rancheria - Kletsel Dehe Band of Wintun Indians, Guidiville Indian Rancheria, United Auburn Indian Community of the Auburn Rancheria, and Yocha Dehe Wintun Nation

for further information regarding potential tribal resources within the project vicinity. The correspondence contained information about the project; an inquiry for any unrecorded Native American cultural resources or other areas of concern within or adjacent to the project site; and a solicitation of comments, questions, or concerns with regard the project. No responses to this notice were received.

As previously discussed in **Section 2.5, Cultural Resources**, the NWIC records search identified one cultural resource within the project site. However, the pedestrian survey completed on July 22, 2020 identified no evidence of the resource.

Impact Discussion

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)?**

No Impact. As discussed in **Section 2.5, Cultural Resources**, the project site serves as transportation infrastructure and does not contain structures or historic resources eligible for listing in the California Register. No impact would occur.

- ii. **A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.**

Less than Significant with Mitigation. As discussed in **Section 2.5, Cultural Resources**, according to the records search, there is one known cultural resource within the project site. Due to the development of American Canyon Road and the results of the pedestrian survey conducted on July 22, 2020, it is unlikely that archaeological resources exist within the current project site.

The NAHC indicated that no known Native American cultural resources exist within the project site, and Native American tribes contacted during the consultation process initiated on June 18, 2020 did not identify protected resources on the project site. Redevelopment of the project site could result in the exposure or destruction of unknown archaeological resources. Implementation of **Mitigation Measure CUL-1** discussed in **Section 2.5, Cultural Resources**, would reduce this potential impact during construction. This impact would be less than significant.

2.19 Utilities and Service Systems

	Significant Impact	Less than Significant with Mitigation	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 storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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"/>

Regulatory Setting

Federal and State

There are no federal or State policies and regulations pertaining to utilities and service systems that would be applicable to the project.

Regional

Solano County General Plan

The Public Facilities and Services element of the Solano County General Plan contains the following policies with pertain to utilities and service systems:

Policy PF.P-34: Control the rate and dispersal of runoff from developments through use of detention and retention basins, appropriate landscaping, minimal use of impervious surfaces, and other stormwater facilities.

Policy PF.P-36: Support Solano County Water Agency efforts to improve flood control and storm drain facilities.

Napa County General Plan

The Conservation Element of the Napa County General Plan contains the following policy which pertains to utilities and service systems:

Policy CON-50.5: Recognize the importance of water resources that guard against flooding and attenuate floodwaters including those rivers, creeks, streams, flood corridors, riparian habitat, and lands that may accommodate floodwater important for the purposes of groundwater recharge and stormwater management as those areas identified on the County's adopted Federal Emergency Management Agency (FEMA) Flood Insurance Rate Mapping (FIRM)¹⁹. (see also Policy SAF-25 and Figure SAF-3).

Local

City of Vallejo General Plan 2040

The Nature and Built Environment Element of the Vallejo General Plan 2040 contains the following policy which pertains to utilities and service systems:

Action NBE-5.7B: Continue to manage and maintain City-owned storm drainage infrastructure to avoid flooding and reduce the negative effects of stormwater runoff.

City of Vallejo Water Management Plan

As a participating member of the Solano Project, the City of Vallejo is required by the United States Bureau of Reclamation (USBR) to utilize BMPs for water savings and file annual program updates for USBR. The City of Vallejo Water Division prepared the City of Vallejo Water Management Plan, to meet the USBR Mid-Pacific region 2011 Standard Criteria, which was adopted by City Council on October 28, 2014. The plan provides a comprehensive description of Vallejo's water system including supplies, demands, conservation BMPs, and shortage contingency plan. The majority of Vallejo's Solano Project water entitlement is delivered to the Fleming Hill Water Treatment Plant from the USBR terminal reservoir via the Cordelia reservoir.

City of Vallejo Municipal Code

The Vallejo Municipal Code includes various directives pertaining to water supply and conservation issues:

- **Chapter 12.41 – Stormwater Management and Discharge Control.** This regulation is intended to protect and enhance the water quality within Vallejo's watercourses, water bodies, and wetlands and carry out the conditions specified in the MRP that requires appropriate source control measures, site design measures, and stormwater treatment measures for new development and redevelopment projects within the city.

- **Chapter 16.71 – Water Efficient Landscaping Requirements.** This regulation meets the requirements of the State’s WELO and requires submittal of a landscape documentation package for new or rehabilitated landscapes ranging in size from 1,500 to 5,000 square feet (depending on the project). The landscape documentation package must include a water efficient landscape worksheet, soil management report, landscape design plan, irrigation design plan, and a grading design plan with the goal of minimizing water irrigation rates and maximizing water irrigation efficiency.
- **SChapter 16.74 – Energy and Water Conservation Regulations.** Section 16.74.030 - Water conservation guidelines, specifies all vegetation and landscaping required by the zoning regulations shall employ drought resistant species.

Environmental Setting

Water Service

Solano County Water Agency (SCWA) is a wholesale water supply agency providing untreated water to cities and agricultural districts in Solano County. SCWA is also responsible for operations and maintenance of the Ulatis Flood Control Project and the Green Valley Flood Control Project, as well as all flood control matters within the SCWA’s jurisdiction.

Solid Waste

Recycling, yard waste collection, and solid waste services in Vallejo are provided by Recology Vallejo for residential and commercial uses.

Storm Drainage

The Vallejo Flood and Wastewater District (VFWD) provides wastewater, stormwater, and flood control protection services for Vallejo. VFWD’s treatment process is designed to eliminate pollutants such as motor oil, dirt, pesticides, and other contaminants from entering the storm drain system as mandated under the CWA. Such pollutants flow from landscaped areas and roadways in contaminated water, also referred to as urban runoff. Vallejo is a co-permittee under the MRP.

Electricity

PG&E provides grid electricity and natural gas services to both Solano and Napa counties. PG&E owns and maintains above- and below-ground networks of electric and natural gas transmission and distribution facilities throughout the majority of Northern and Central California. As discussed in **Section 2.6, Energy**, PG&E would supply electricity services to the project site.

Impact Discussion

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

Less than Significant. Because the project does not include uses that would increase demand for utility services, there would be no expanded services at the project site. During construction, existing overhead electric lines, communication lines, and utility poles may be relocated within the project site. Because these relocations would occur within the project footprint in areas already being used by these utilities, no additional environmental effects are anticipated. Similarly, the project would require removal and replacement and/or modification of existing stormwater drainage, but would not require the expansion of stormwater infrastructure. This impact would be less than significant.

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

Less than Significant. Project construction would temporarily require water for activities including dust management, but this water demand would end after the construction period and would be negligible in the context of regional water supply. Project operation would not require regular water use aside from landscape irrigation. If used, irrigation would be similar to what is required under existing conditions. This would not substantially increase water demand. This impact would be less than significant.

- c) **Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?**

Less than Significant. The project does not include residential, industrial, or commercial elements that would generate wastewater. Therefore, the project would not require new or expanded wastewater facilities. This impact would be less than significant.

- 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?**

AND

- e) **Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?**

Less than Significant. Project construction would require disposal of demolition debris generated by removal of the existing interchange structures. The materials accumulated from these activities would be disposed of in a landfill, consistent with local regulations. Considering the solid waste from construction of the project represents a small proportion of remaining landfill capacity at local landfills, there is adequate existing landfill capacity to dispose of construction waste. Operation of the project would not generate solid waste or otherwise require solid waste disposal. As an operational improvement project to an existing interchange, solid waste would not be generated during operation. This impact would be less than significant.

2.20 Wildfire

	Significant Impact	Less than Significant with Mitigation	Less-than-Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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"/>

Regulatory Setting

State

California Department of Forestry and Fire Protection (CAL FIRE)

CAL FIRE's Fire Hazard Severity Zone (FHSZ) Maps include proposed FHSZs for State Responsibility Area (SRA) lands and separate draft Very High Fire Hazard Severity Zones for Local Responsibility Area (LRA) lands. CAL FIRE defines SRAs as areas in which the State has financial responsibility for wildland fire protection, and LRAs as areas in which fire protection is provided by city and county fire departments, and by fire protection districts.

Regional

Solano County General Plan

The Public Health and Safety Element of the Solano County General Plan contains the following policy which pertains to reducing wildlife hazards:

Policy HS.P-21: Prohibit non-farm-related development and road construction for public use in areas of extreme wildfire risk.

Napa County General Plan

The Safety Element of the Napa County General Plan contains the following policy which pertains to reducing wildfire hazards:

Policy SAF-3: The County shall evaluate potential safety hazards when considering General Plan Amendments, rezonings, or other project approvals (including but not limited to new residential developments, roads or highways, and all structures proposed to be open to the public and serving 50 persons or more) in areas characterized by:

- 1) Slopes over 15 percent,
- 2) Identified landslides,
- 3) Floodplains,
- 4) Medium or high fire hazard severity,
- 5) Former marshlands, or
- 6) Fault zones.

Environmental Setting

The project site is in a rural area and consists of transportation and infrastructure uses and open space. The Hiddenbrooke Community located approximately 1.5 miles south-east of the project site is the nearest instance of urban development. There are overhead powerlines crossing the project site diagonally from the western side of the McGary Road/Hiddenbrooke Parkway interchange to northeast of American Canyon Road. There is minimal vegetation at the project site, with most trees and shrubs located along McGary Road near the intersection with Hiddenbrooke Parkway.

CAL FIRE identifies hazards based on relevant factors such as fuels, terrain, and weather. Due to the open space areas surrounding the project site, the risk for wildfire is considered high. The project site is not located in a LRA; however, it is located within a High FHSZ in a SRA.

Impact Discussion

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

Less than Significant. The project site is within jurisdiction of the Solano County EOP, which serves as an operational plan as well as a reference document that may be used for emergency planning and operations as described in **Section 2.9, Hazards and Hazardous Materials**. The project would not interfere with the Solano County EOP. Although no property owned or used by emergency service

providers would be acquired, construction activities would have the potential to temporarily disrupt roadway access along the project site, potentially affecting emergency access. Temporary detours or delays due to construction would be known to motorists, pedestrians, and emergency services beforehand to facilitate access in and out of the project site during construction. This impact would be less than significant.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

No Impact. This operational improvements project would not include residences and there are no residences within the project site or immediate vicinity. As discussed in **Section 2.17, Transportation/Traffic** and in **Appendix D**, the project would not increase traffic volumes compared to existing conditions. Therefore, it would not increase wildfire risk through exposing greater numbers of users to wildfire-prone areas. The project would not change existing topography in a notable way, and therefore would not exacerbate wildfire risk through changes in slope. No impact would occur.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

No Impact. The project would replace the I-80 ramps/American Canyon Road, I-80 ramps/Hiddenbrooke Parkway, and McGary Road/Hiddenbrooke Parkway intersections with roundabouts, as well as realign the existing I-80 on-and off- ramps at the intersection of American Canyon Road. The project would not require the installation of infrastructure or new facilities that would exacerbate wildfire risks. No impact would occur.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No Impact. Since the project is not in a flood zone or landslide area, the project would not create conditions that would expose people or structures, including the Hiddenbrooke Community, to significant risks from downslope or downstream flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes. No impact would occur.

2.21 Mandatory Findings of Significance

	Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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Does the project:

a) Have the potential to substantially degrade quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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b) Have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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a) Have the potential to substantially degrade quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less than Significant with Mitigation. As described in **Section 2.4, Biological Resources**, the project would impact habitat that may be utilized by wildlife. However, the quality of the habitat affected is low and the amount of habitat small and immediately adjacent to existing roadways. Further, **Mitigation Measures BIO-1** through **BIO-20** would reduce impacts to the quality of the environment and to habitat for fish and wildlife species. Thus, the project does not have the potential to create the conditions listed above for fish and wildlife species.

As described in **Section 2.5, Cultural Resources** and **Section 2.18, Tribal Cultural Resources**, implementation of **Mitigation Measures CUL-1** and **CUL-2** would reduce potential impacts to archeological resources, paleontological resources, human remains, and tribal cultural resources to a less-than-significant level.

b) Have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Less than Significant with Mitigation. The project would result in potentially significant project-level impacts related to air quality, biological resources, cultural resources, geology and soils, hazardous materials, and tribal cultural resources. With implementation of mitigation measures identified in this document, all impacts would be less-than-significant and would not have the potential to contribute to a cumulatively considerable impact. All other impacts of the project were determined either to have no impact or to be less than significant without the need for mitigation.

c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less than Significant. Implementation of project would improve existing I-80/Hiddenbrooke Parkway interchange with new transportation infrastructure. The project would not displace any businesses or residents. There are no noise sensitive land uses in the project vicinity and air quality emission from the project construction and operation would be well below established thresholds. Therefore, the project will not cause substantial adverse effects on human beings. This impact would be less than significant.

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