Vallejo Ferry Terminal Reconfiguration Project

Draft Initial Study/Mitigated Negative Declaration

May 2024

Prepared for

WETA

San Francisco Bay Area
Water Emergency Transportation Authority
Pier 9, Suite 111, The Embarcadero
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1.0 INTRODUCTION & PURPOSE

1.1 Purpose and Scope of the Initial Study

This IS/MND has been prepared in accordance with the California Environmental Quality Act (CEQA) (California Public Resources Code [PRC] Section (§) 21000 et seq.) and its Guidelines (California Code of Regulations [CCR], Title 14, §15000 et seq.), to evaluate the potential environmental effects associated with the construction and operation of the San Francisco Bay Area Water Emergency Transportation Authority's (WETA) Vallejo Ferry Terminal Reconfiguration project (proposed project). Pursuant to Section 15367 of the State CEQA Guidelines, WETA is the lead agency for the proposed project. The lead agency has the principal responsibility for carrying out or approving a project.

As set forth in the State CEQA Guidelines Section 15070, a mitigated negative declaration can be prepared when the Initial Study has identified potentially significant environmental impacts, but revisions have been made to a project, prior to public review of the Initial Study, that would avoid or mitigate the impacts to a level considered less than significant, and there is no substantial evidence in light of the whole record before WETA that the project, as revised, may have a significant effect on the environment.

1.2 Summary of Findings

Section 4.0 of this document contains the Environmental Checklist that was prepared for the proposed project pursuant to CEQA requirements. The Environmental Checklist helps WETA determine whether the proposed project would result in no impact, less than significant impacts, less than significant impacts with the implementation of mitigation measures, or potentially significant impacts. The impacts analysis is identified and discussed within each subsequent resource area throughout this document.

Based on the environmental checklist (Section 4.0) completed for the proposed project and supporting environmental analyses, the project would primarily result in no impact or a less than significant impact to environmental issue areas identified below. The project's impacts on the following issue areas would be less than significant with mitigation incorporated: Biological Resources, Cultural Resources, Geology and Soils, Noise, Transportation, and Tribal Cultural Resources.

As set forth in the State CEQA Guidelines Section 15070 (Decision to Prepare a Negative or Mitigated Negative Declaration), a public agency shall prepare or have prepared a proposed negative declaration or mitigated negative declaration for a project subject to CEQA when:

(a) The initial study shows that there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment, or

(b) The initial study identifies potentially significant effects, but:

  (1) Revisions in the project plans or proposals made by, or agreed to by the applicant before a proposed mitigated negative declaration and initial study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and

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

This IS/MND contains and constitutes substantial evidence supporting the conclusion that preparation of an EIR, or other more involved environmental document is not required prior to approval of the project.

1.3 Initial Study Public Review Process

A Notice of Intent (NOI) to adopt the MND based on State CEQA Guidelines § 15072, was prepared and submitted to the State Clearinghouse for filing and circulation. The document was made available for a 30-day public review period. During this time the public, interested parties, stakeholders, and any state or local agency could provide comment on the document. The IS/MND may be viewed at WETA's website at the following link: https://weta.sanfranciscobayferry.com/current-projects/vallejo-ferry-terminal-reconfiguration-project, on the State Clearinghouse website, or at the Water Emergency Transportation Authority office, located at:

Pier 9, Suite 111, The Embarcadero
San Francisco, CA 94111

Written comments on the IS/MND should reference the "WETA Vallejo Ferry Terminal Reconfiguration Project," and be addressed to:

San Francisco Bay Area Water Emergency Transportation Authority
Pier 9, Suite 111, The Embarcadero
San Francisco, CA 94111
Contact: Chad Mason
Email: mason@watertransit.org

WETA, as the Lead Agency for this project, will consider comments received and in accordance with (State CEQA Guidelines § 15074(b)), decide whether to adopt the IS/MND prior to taking action to approve the project. If the IS/MND is adopted and the proposed project is approved, WETA will adopt the MMRP, which will detail the mitigation measures, timing of mitigation implementation, and list the responsible parties.

WETA will serve as the custodian of record for this Initial Study and Environmental Checklist and related technical studies. These studies are available for public review at the following address:

San Francisco Bay Area Water Emergency Transportation Authority
Pier 9, Suite 111, The Embarcadero
San Francisco, CA 94111
Contact: Chad Mason

1.4 Report Organization

This document has been organized into the following sections:

Section 1.0 – Introduction. This section provides an introduction and overview describing the conclusions of the Initial Study.

Section 2.0 – Project Description. This section identifies key project characteristics and includes a list of anticipated discretionary actions.

Section 3.0 – Initial Study Checklist. The Environmental Checklist Form provides an overview of the potential impacts that may or may not result from project implementation.

Section 4.0 – Environmental Evaluation. This section contains an analysis of environmental impacts identified in the environmental checklist.

Section 5.0 – References. The section identifies resources used to prepare the Initial Study.

2.0 DESCRIPTION OF PROPOSED PROJECT

2.1 Project Overview

The San Francisco Bay Area Water Emergency Transportation Authority (WETA) proposes to reconfigure the existing ferry terminal in Vallejo to reduce or eliminate maintenance dredging and increase operational safety in support of continued ferry service between the cities of San Francisco and Vallejo. The City of Vallejo is collaborating in this effort and WETA is the local lead agency under CEQA. WETA is responsible for implementation of the Vallejo Ferry Terminal Reconfiguration Project (proposed project). The Federal Transit Administration (FTA) is the federal lead agency under the National Environmental Policy Act (NEPA) and will provide funding for to the project. FTA, in coordination with WETA, will prepare a separate NEPA document for the proposed project.

The proposed project includes reconfiguration of an existing ferry terminal, including the relocation and expansion of an existing bridge and gangway, and installation of a new passenger float. The proposed terminal in Vallejo would be constructed at the existing site on the eastern shore of Mare Island Strait, adjacent to the tourism information center. The existing fixed pier, gangway, and passenger float are accessible by a gate on the walkway that surrounds the terminal basin area, a paved portion of the San Francisco Bay Trail. The existing components are currently used for standard WETA ferry operations that transport passengers to San Francisco Bay ferry terminals. As described later in this section, the existing fixed pier, gangway, and passenger float would be removed during project construction.

2.2 Project Location

Regional Vicinity

The project is in the City of Vallejo (City) in Solano County, California (See **Figure 1: Regional Map**). The City occupies approximately 48.78 square miles of land area east of the San Pablo Bay, south of Napa County, and north and east of the San Francisco Bay. The mainland city area makes up approximately 90 percent of the City's land area, with the remainder on Mare Island across Mare Island Strait (See **Figure 2: Project Vicinity**). Regional access to the City is provided by various transportation modes. Interstate 80 (I-80) through San Francisco and Oakland provides regional access for automobiles and transit from the south, while I-780 provides access through Benicia from the east. Regional traffic accesses the project site via State Route 29 (SR 29) through the Curtola Parkway exit, which turns into Mare Island Way.

Local Vicinity

The project site is located at 289 Mare Island Way (Assessor Parcel Numbers 0055-170-050 and 0055-170-400) and includes the existing Vallejo Ferry Terminal, which consists of a steel float structure, fixed pier, steel gangway, and covering (See **Figure 3: Existing Setting**). The surrounding site area is designated under the Parks, Recreation, and Open Space land use, and is zoned Waterfront Mixed-Use. The project site is accessible by vehicle via Mare Island Way, and by ferry from the existing ferry terminal. See **Figure 4: Existing Site Photos**.

Additional uses in this area along Mare Island Strait include the Vallejo Tourism Information Center, Mare Island Brewing Company Taproom and Panama Coffee (both located within the Tourism Information Center Building), Bay Hibachi Express, The Wharf restaurant, Independence Park, Barbara Kondylis Waterfront Green, a currently vacant office building, and parking. Parking is currently provided in waterfront parking lots on the eastern side of Mare Island Way, across the street from terminal site. The

existing lots and garages adjacent to the proposed project site accommodate Vallejo Ferry Terminal and Transit Center passengers and employees, guests and employees of the Tourism Information Center building and surrounding restaurants, and public users. Waterfront parking, including the existing parking garage and surrounding lots (Lots A1, A2, and B), is all paid parking. Additionally, three hour timed free parking is available adjacent to the terminal site to the northwest and southeast in Lot A and Lot E.

2.3 Environmental Setting

Setting

Solano County encompasses seven jurisdictions including the City of Vallejo. The proposed project site is located in the southwestern portion of Solano County. The Western portion of Solano County, including the proposed project site, is located within the Bay Area Air Quality Management District (BAAQMD).

General Plan and Zoning

The proposed project site is subject to the provisions of the adopted Vallejo General Plan and the Vallejo Municipal Code. The site is primarily designated for Parks, Recreation, and Open Space by the Vallejo General Plan and is zoned as Waterfront Mixed-Use. Currently, the fixed pier access point is located within APN 0055170060.

2.4 Project Details

Purpose and Need

The project is proposed with the goals of reducing dredging events, improving queueing, and adjusting berthing to be more safe and more efficient, to effectively reduce costs and materials while upholding WETA standards in practice. The proposed project would facilitate a reduction in the need for regular maintenance dredging at the Vallejo Ferry Terminal. Currently, the ferry terminal basin requires regular dredging (every 2-3 years) to remove built-up siltation caused by river currents from Mare Island Strait. Reconfiguring and extending the ferry terminal to a position located out of the basin and closer to the main channel of the river would significantly reduce the siltation around the terminal and reduce the frequency for regular dredging. The duration between dredge events will likely increase to at least 20 years, thus reducing the need for scheduled disrupting activities. This reconfiguration would not only improve the efficiency of ferry landings but also support WETA standards for safety and resiliency. The benefits of the proposed project are as follows:

- The proposed project will minimize or avoid the need for regular dredging of the existing basin; resulting in a significant reduction in maintenance costs and impacts to the terminal basin.
- The proposed project will result in increased operational safety as there will be less risk of ferries running aground when siltation builds up within the existing terminal basin.
- The proposed project will result in increased operational safety as the proposed dock layout will allow ferries to dock and undock parallel to the river current of Mare Island Strait instead of perpendicular to the river current.
- The proposed project will result in reduced commute times because of reduced time required for docking and undocking.
- The proposed project will remove existing dolphin fenders that are no longer needed and return those areas to natural channel bottom.

- The proposed project will remove the existing float and replace with a new WETA standard size float that makes loading and unloading operations consistent with other WETA terminals.

The proposed project would be located on the eastern shore of Mare Island Strait, within the footprint of the existing ferry terminal and basin area. The proposed project would remove and replace 5,322 sf of existing fixed pier, gangway, passenger float, and piles with a new reconfigured fixed pier, gangway, passenger float, and piles. The new WETA Standard float would be approximately 134.5 feet by 42 feet and would accommodate both sides of the float for passenger loading and unloading. All project features would be compliant with Americans with Disabilities Act (ADA) standards. Passengers would pay for their fares with Clipper cards, on board the vessels, or through mobile ticketing system or online. Passenger queuing would be located on the new fixed pier and along an existing portion of the San Francisco Bay Trail adjacent to the proposed fixed pier entry gate. Restroom access would be provided at existing restrooms in the Tourism Center building.

Project Layout

There is minor variability in how WETA can configure the Project. As explained below, WETA considered site-specific factors like currents within the Mare Island Straight, overwater coverage, mudline impacts, and public preference for layout configuration. WETA considered three layouts (Figures 5A through 5C: Project Site Plans) for the relocation of the existing ferry terminal, each requiring the same sized-float and intensity of use after construction. The layouts are as follows:

- Preferred Configuration (Figure 5A) : This layout extends the existing ferry terminal outside of the basin and further offshore and adds extra length to the passenger access gangway leading to the terminal. The access point would remain in its current location.
- Configuration Option 1 (Figure 5B): This layout also relocates the existing ferry terminal outside of the basin, with an access point at the southwest corner of the basin.
- Configuration Option 2 (Figure 5C): This layout also relocates the existing ferry terminal outside of the basin with an access point at the northwest corner of the basin.

These three configurations were presented to ferry captains from Blue & Gold Fleet and also to the public to gather their feedback on a preferred configuration. The captains were identified as key stakeholders due to their daily operational insights. See Appendix A1: Blue & Gold Ferry Captains Feedback for the Captains feedback on the three configuration options. Public input was collected through extensive outreach efforts, both in-person and online, ensuring that ferry riders and the community had the opportunity to contribute to WETA's decision-making process. Feedback indicated that extending the existing ferry terminal was the preferred configuration (Figure 5A). See Appendix A2: Public Outreach Report for details regarding public engagement feedback. This preferred configuration also is referred to as the "proposed project" in this document, with the other two configurations labeled as " Configuration Option 1" and " Configuration Option 2".

The analysis in this document is focused on the preferred configuration (proposed project), which has a relatively larger footprint (9,630 sf) than either Configuration Option 1 or 2 (8,013 sf each). While the three configurations are substantially similar, the preferred configuration (proposed project) has the largest footprint. In the discussion below (please see Tables 1 through 6), Configuration Options 1 and 2 have nearly identical impacts and would not result in any more dredging or in-water work than the proposed project. Because neither Configuration Option 1 or 2 involve any substantially different or more severe impact than those analyzed for the preferred configuration, the impacts analysis focuses on the

preferred configuration as that analysis also encompasses any impacts related to both Configuration Options 1 and 2.

As mentioned above, the selection of the preferred configuration was the result of stakeholder input based on preferences to keep the existing terminal entry location in the same location as it exists today. Other factors such as minimizing impacts to the San Francisco Bay Trail and preferred queuing locations for passengers were also considered in selecting the preferred configuration as the proposed project.

The proposed project proposes a four- section fixed pier and gangway extending from the existing ferry terminal access point. The proposed project adds additional length to the passenger access gangways and fixed pier leading to the terminal. This action will provide more passenger queuing area than the existing configuration, which will help to manage and organize lines during passenger loading and unloading. The proposed project will provide vessel berthing on both sides of the ferry landing float. The float will provide berthing in a direction parallel to the current of Mare Island Strait for quicker docking procedures and greater efficiency overall.

Figure 6: Project Configurations depicts the layout of the preferred configuration alongside the other configuration options of the ferry terminal. Configuration Options 1 and 2 propose access from outside of the basin in the southwest and northwest corners respectively and feature a three-section fixed pier and gangway "dog-leg" design to situate pedestrian access to the ferry; All three configurations were configured to use both sides of the float for loading and unloading during regular activities. The construction of any configuration would result in overwater coverage of Mare Island Strait, which hosts estuarine habitat. WETA is planning on using materials and components which have been reviewed and approved by the relevant environmental agencies for past WETA projects. These components may include but are not limited to, fixed pier and gangway surfaces designed with grating to allow sunlight penetration, navigation lights, and a new WETA standard size float.

As previously mentioned, construction would also result in the existing Vallejo ferry terminal to be removed, with ferry service continuing with the use a temporary terminal that would be installed prior to demolition. The proposed project is anticipated to be similar to the temporary terminal utilized during regular dredge events that disrupt existing terminal use. The temporary terminal would be located within approximately 50 to 175 feet from the south bank of the basin (Refer to **Figures 5A** through **5C**). Construction and use of temporary float use would cause minimal to no ferry schedule delays or changes. An additional dredge event is proposed before removal of the existing terminal for the proposed project, to ensure adequate room for the temporary terminal to be installed along the shore wall and to fulfill the biennial dredging around the existing terminal prior to its demolition.

Fixed Pier, Gangway and Passenger Float

As depicted in **Figure 5A** through **5C**, the project would include an entry gate on the east edge of the basin along the San Francisco Bay Trail, pile-supported dolphins, berthing monopiles, a new float, and a fixed pier and gangway leading to the passenger float. These components would extend out of the Vallejo Ferry Terminal basin area to the west, towards Mare Island Strait. The gangway would connect the entry gate and fixed pier to the new passenger float. The portion of the gangway connecting the float to a dolphin would be fixed on the dolphin side and free to move with the tide on the float side. To account for the side slope associated with dredging of the federal channel, as standard practice, the distance from a

federal navigation channel in where a structure may be located is typically a horizontal distance three (3) times the authorized project depth. The federal navigation channel in Mare Island Strait is authorized to a depth of 30' MLLW, which requires a minimum of 90-foot offset from the edge of the federal channel. Each configuration would place the new ferry passenger float at least 300 feet from the edge of the federal channel. The proposed new WETA standard ferry passenger float would be approximately 134.5 feet by 42 feet, with an area of approximately 5,650 sf. The preferred reconfiguration and additions would remove approximately 5,322 sf of material. The total overwater area impacted by the configuration options is listed below in Table 1: Overwater Coverage Areas.

Table 1: Overwater Coverage Areas

	OVERWATER COVERAGE AREA (square feet)	NET DIFFERENCE
Existing Structure	4,990	-
CONFIGURATIONS		
Preferred Configuration (Proposed Project)	9,645	+ 4,655
Configuration Option 1	8,013	+ 3,023
Configuration Option 2	8,014	+ 3,024

Passenger Queuing and Waiting Area

As explained above, the entry gate to the proposed terminal would be placed along a portion of the San Francisco Bay Trail similar to its current placement. Queuing at the ferry gate is currently located along the paved walkway between the tourism center building and the terminal access point. There's currently a fixed pier and gangway spanning 90 feet between the entry gate and the float. Pedestrian access to the terminal would be provided from an existing section of the San Francisco Bay Trail. To avoid conflicts between trail users (especially faster moving users, such as cyclists) and ferry passengers, the segment of the trail near the terminal entrance would be marked with paint and signage to indicate the pedestrian crossing and queuing. These features would be designed in coordination with BCDC and San Francisco Bay Trail staff. Queuing for the existing ferry terminal currently extends to the north from the terminal access point, wrapping around the ferry terminal basin as shown in **Figure 7: Existing Ferry Terminal Queuing.** Queuing for the proposed project is shown in **Figure 8: Project Queuing**. The fenced railing surrounding the ferry terminal basin would require reconfiguration for implementation of Configuration Option 1 or 2, as new access points for entrance to the terminal would need to be created in place of the existing railing. Clipper card readers would be installed on the float or on a waterside pile-supported corner dolphin near the gangway, with additional signage surrounding the terminal entrance. Queuing may also impact the placement of existing trash receptacles; WETA would coordinate with the City of Vallejo about signage and relocation of trash receptacles.

Parking and Circulation

The proposed project would utilize existing automobile and bicycle parking for ferry passengers in the existing parking lots and garages adjacent to the terminal. The existing lots and garages currently accommodate Vallejo Ferry Terminal passengers and employees, guests and employees of the Tourism Information Center building and surrounding restaurants, and public users. Parking for ferry passengers and employees would continue to be located in the existing lots and garages. No improvements or modifications are proposed at these existing lots with implementation of the proposed project. As shown in **Figure 3**, the existing surrounding parking lots all allow access to the ferry terminal and would continue

to serve the proposed project. Parking use for workers related to the proposed project's construction are detailed in the Construction section of this document.

The proposed project site is accessible from Mare Island Way and would continue to be the primary road that the ferry terminal is accessible from.

Other Area Improvements

The proposed project would also include modifications to the portion of the San Francisco Bay Trail in the vicinity of the project, to provide access to the project site. Currently, the San Francisco Bay Trail travels along the eastern perimeter of the Vallejo ferry terminal basin area, in a northwest/southeast direction along the eastern side of Mare Island Strait. The proposed project would continue to provide an access point to the ferry terminal along the San Francisco Bay Trail. This access point would continue to include a gate system.

Ferry Route

The existing ferry route provides service between the Downtown San Francisco Ferry Terminal and the Vallejo Ferry Terminal, as depicted in **Figure 9: Existing Ferry Route**. The Downtown San Francisco Ferry Terminal is located on the Embarcadero in downtown San Francisco and serves other WETA ferry routes travelling from Oakland, Alameda, and Richmond. Other ferry services using the Downtown San Francisco Ferry Terminal include Golden Gate Ferry and Blue & Gold Fleet. No alterations or expansions of the Downtown San Francisco Ferry Terminal are proposed as part of the project. The duration of the trip between San Francisco and Vallejo may be reduced with more efficient vessel landings as a result of docking and undocking parallel to the current of Mare Island Strait. The existing ferry route from Downtown San Francisco to Vallejo travels through established navigational channels in inner San Francisco Bay, and would turn east upon reaching the entrance of the San Pablo Bay at Point San Pablo. After travelling through San Pablo Bay, the vessel would turn north just west of the Carquinez Bridge, travelling through Mare Island Strait until reaching the Vallejo Ferry Terminal. The service route would be reversed in the opposite direction but would remain essentially the same, with slight modifications for currents and other navigational constraints. The Vallejo Ferry Terminal also provides service to Oracle Park depending on the day and time of San Francisco Giants home games. Direct ferry service for evening home games is provided between Vallejo and Oracle Park for pre- and post-game service on weekends, and post-game only on weekdays.

The U.S. Coast Guard (USCG) Regulated Navigation Areas that enhance navigational safety by organizing traffic flow patterns on San Francisco Bay pertain to large cargo vessels but not ferries. USCG maintains the Office of Vessel Traffic Safety (VTS) that applies to all vessels 40 meters or greater in length, all vessels certified to carry 50 or more passengers, and all commercial vessels 8 meters or more that are towing another vessel. The VTS issues direction to enhance vessel safety during conditions of vessel congestion, restricted visibility, adverse weather, or other dangerous conditions. Impacts to the overall route would be minor with the implementation of the temporary terminal, and schedule timing changes would be minimal to none. There would be no route or schedule changes with implementation of the proposed project.

2.5 Project Construction and Operations

Construction

Construction of the project is expected to occur over a period of approximately 4-6 weeks, beginning in Summer 2026 with an anticipated completion date of late Fall 2026. It is estimated that project construction would require 4-8 daily construction crew members, with the possibility for up to 15 onsite construction workers during major operations. Fabrication of the float, fixed pier, gangway, and piles would require approximately five to six months and would be completed off site. Generally, site preparation, and ground improvements would occur over one month and could overlap with waterside work; construction of landside improvements would require approximately one month; in-water work (demolition/removal of existing components and installation of proposed terminal components) would be completed in approximately two weeks; and the overwater work would occur over three weeks. The in-water work window is limited to August 1 through November 30, and would include the installation of piles as well as the float. Overwater construction would include the installation of all the approach sections, concrete dolphins, and utility installation.

Demolition of the existing ferry terminal would be required prior to installation of any new waterside terminal components. The demolition work includes removal of the existing piles, fixed pier, gangway, and float. This work would be conducted from barges, one for materials storage and one outfitted with demolition equipment (crane and clamshell bucket, vibratory pile driver, or impact hammer for pulling of piles and a crane for fixed pier and gangway removal). Diesel power tugboats would bring the barges to the project site, where the barges would be anchored.

Piles would be removed by pulling the pile. The in-water demolition work would also be limited to the in-water work window from August 1 to November 30, and would include the removal of the existing piles, pile dolphins, and floats. The demolition waste from these activities would be disposed of at the nearest waste and recycling facility. Disposal of all materials will follow regulatory requirements.

Landside construction activities include site preparation, and utility installation or reconfiguration. Construction equipment would include a small backhoe and bulldozer/bobcat, haul trucks, material delivery trucks, a crane, and delivery and support trucks. All equipment would be powered by diesel or gasoline. Where feasible and available, diesel construction equipment would be powered by Tier 3 or Tier 4 engines as designated by the California Air Resources Board (CARB) and U.S. Environmental Protection Agency. In addition, if available for on-site delivery, diesel construction equipment would be powered with renewable diesel fuel that is compliant with California's Low Carbon Fuel Standards and certified as renewable by the CARB executive officer.

The project would require Bay fill removal (existing piles) and placement for installation of pilings for the new float and donut fenders, and fixed pier support. It is estimated that approximately 17 to 18 pilings would be installed, totaling 126 to 130 sf. Further, the existing steel dolphins within the basin and terminal area would be removed (See **Figure 10: Components To Be Removed**). See Table 2: Components to be Removed and Table 3: Components to be Added, below for details of existing and proposed ferry terminal components . The project proposes 9,515 sf of components in addition to 130 sf of pilings, including 3,735 sf of fixed pier, gangway, and dolphins, 5,650 sf of new WETA Standard float, and 130 sf of fender donuts (Table 4: Proposed Project Footprint).

Table 2: Components to be Removed

SECTION	DESCRIPTION	MATERIAL	QTY	Mudline Impacts (SF)
FIXED PIER/GANGWAY				
Gangway Support Piles	Steel Pipe Piles for gangway support	Steel	2	6.28
Concrete Pad	64.69 SF' Concrete Pad	Concrete	1	-
Fixed Pier/Gangway	Existing Fixed Pier/Gangway	Steel	1	-
Float	**Float**			
Anchor Piles	W18x211 Anchor Piles	Steel	2	0.87
	W16x177 Anchor Piles	Steel	2	0.13
Float Anchor Chains	1 ¼" Stud Link Chain, 426 LF total	Steel	4	159.75
MONOPILES				
Cluster Piles	18" Diameter Cluster Piles	Steel	2	3.54
	16" Diameter Cluster Piles	Steel	4	5.56
Piles	HP 14x177 Piles	Steel	4	0.96

Table 3: Components to be Added

SECTION	DESCRIPTION	MATERIAL	QTY -- PROPOSED PROJECT	QTY – CONFIG OPTION 1	QTY – CONFIG OPTION 2
FIXED PIER/GANGWAY					
Steel pipe piles for gangway support	36” diameter x 0.75” wall thickness x 80’ long	Steel	6	4	4
Concrete Cap	17'x5'x5' Concrete Cap	Concrete	3	2	2
Fixed Pier/Gangways	11’X50’ Gangway - Steel Only	Steel	1	0	0
	11’x90’ Gangway - Steel Only	Steel	3	3	3
DOLPHIN					
Steel pipe piles for gangway support	36” diameter x 0.75” wall thickness x 80’ long	Steel	4	4	4
Concrete Cap	17' x 17'	Concrete	1	1	1
Float					
New Standard WETA Float	134’ x 42’ float	Various	1	1	1
Steel pipe piles for fixed pier support	36” diameter x 0.75” wall thickness x 80’ long	Steel	5	5	5
MONOPILES					
Steel pipe piles for fixed pier support	36” diameter x 0.75” wall thickness x 100’ long	Steel	3	4	4
Donut Fenders	Marine Donut Fender	Foam/Reinforced Polyurethane	3	4	4
Steel Marker Piles	12" Diameter x 0.5” wall thickness x 100’ long	Steel	4	8	8

Project components would be fabricated off-site and transferred to the project site via barge. Debris generated during construction and site clearing activities would consist of the existing steel float, steel guide piles, gangway, bridge structure, bridge structure steel support system (H-Pile and steel beams), anchor chains, concrete approach slab, and miscellaneous electrical/mechanical conduit attached to the existing elements to be removed. In accordance with Section 5.408 of the CALGreen Code, the project would implement a Construction Waste Management Plan (CWMP) for recycling and/or salvaging for reuse of a minimum of 65 percent of nonhazardous construction/demolition debris. Further, the City of Vallejo requires construction and demolition projects to comply with a construction and demolition (C&D) debris recycling ordinance to salvage and/or recycle 50% of debris and 75% of concrete and asphalt. Solid waste collected throughout the City is hauled by Recology or self-haul where it is taken to salvage or recycling facilities such as the Devlin Road Recycling and Transfer Facility, where it is then taken to Potrero

Hills Landfill in Suisun, in Solano County. Materials removed from the project site would be removed via a support barge in the Vallejo Ferry Terminal basin area.

Consistent with Section 16.502.10 D of the Vallejo Zoning Ordinance, noise-generating construction activities would be limited to occur between 7:00 a.m. and 6:00 p.m. It is anticipated that project construction would occur Monday through Friday, 7:00 a.m. to 3:30 p.m., with the potential for Saturday and Sunday work. In the event that weekend construction activities would be required, WETA would coordinate with the City of Vallejo to obtain necessary permits/approvals.

As shown in **Figure 11: Project Staging Area**, project construction staging would occur within the Vallejo Ferry Terminal basin and surrounding area, with most material being anchored offshore with limited land staging. Before construction activities begin on any project component, signage would be posted surrounding the project site notifying the public of temporary parking lot closure. Further, construction workers would park in existing Lot B on Mare Island Way, which currently has a capacity of 326 parking spaces in addition to 8 ADA-compliant spaces and 2 motorcycle spaces. A portion of Lot B may also be used as staging laydown area. No street closures are anticipated. The San Francisco Bay Trail, which traverses north/south through the Vallejo Ferry Terminal and project site, would remain open for pedestrian access with the potential for brief interruptions during certain construction activities, such as terminal access gate installation. Access and use of the San Francisco Bay Trail would return to its original condition upon project completion.

See Table 4: Proposed Project Footprint, Table 5: Footprint for Configuration Option 1, and Table 6: Footprint for Configuration Option 2, for a calculation of the project footprint both on the water surface and at the mudline within the river channel for all the configurations. Once the new Vallejo Ferry Terminal is operational, limited dredging may be required to accommodate vessels associated with the project.

Table 4: Proposed Project Footprint

ITEM	NUMBER	AREA	TOTAL	UNIT
Impact Below Mudline				
3' Diameter Piling	18	7.07	127.24	SF
1' Diameter Piling (sacrificial steel marker piles)	4	0.79	3.14	SF
Total			**130.38**	**SF**
Impact Above Mudline				
Fixed Pier and Gangway		3,735	3,735	SF
Float	1	5,650	5,650	SF
Donut Fenders	3	43.19	129.59	SF
Total			**9,514.59**	**SF**

Table 5: Footprint for Configuration Option 1

ITEM	NUMBER	AREA	TOTAL	UNIT
Impact Below Mudline				
3' Diameter Piling	17	7.07	120.17	SF
1' Diameter Piling (sacrificial)	8	0.79	6.28	SF
Total			**126.45**	**SF**
Impact Above Mudline				
Fixed Pier and Gangway		3,313.54	3,313.54	SF
Float		5,650	4,400.41	SF
Donut Fenders	4	43.19	172.79	SF
Total			**7,886.74**	**SF**

Table 6: Footprint for Configuration Option 2

ITEM	NUMBER	AREA	TOTAL	UNIT
Impact Below Mudline				
3' Diameter Piling	17	7.07	120.17	SF
1' Diameter Piling (sacrificial)	8	0.79	6.28	SF
Total			**126.453**	**SF**
Impact Above Mudline				
Fixed Pier and Gangway		3,313.93	3,313.93	SF
Float	1	5,650	4,400.41	SF
Donut Fenders	4	43.19	172.79	SF
Total			**7,887.13**	**SF**

Source: ESRI, 2023

Figure 1: Regional Map

WETA Vallejo Ferry Terminal Reconfiguration Project

Not to scale

Kimley»Horn

Source: Nearmap, 2023

Figure 2: Project Vicinity

WETA Vallejo Ferry Terminal Reconfiguration Project

Not to scale

Kimley»Horn

Source: Nearmap, 2023

Figure 3: Existing Setting

WETA Vallejo Ferry Terminal Reconfiguration Project

Not to scale

Kimley»Horn

View of existing Vallejo Ferry Terminal facing south.

Access point and entrance gate to existing Vallejo Ferry Terminal gangway.

Existing Vallejo Ferry Terminal gangway and float.

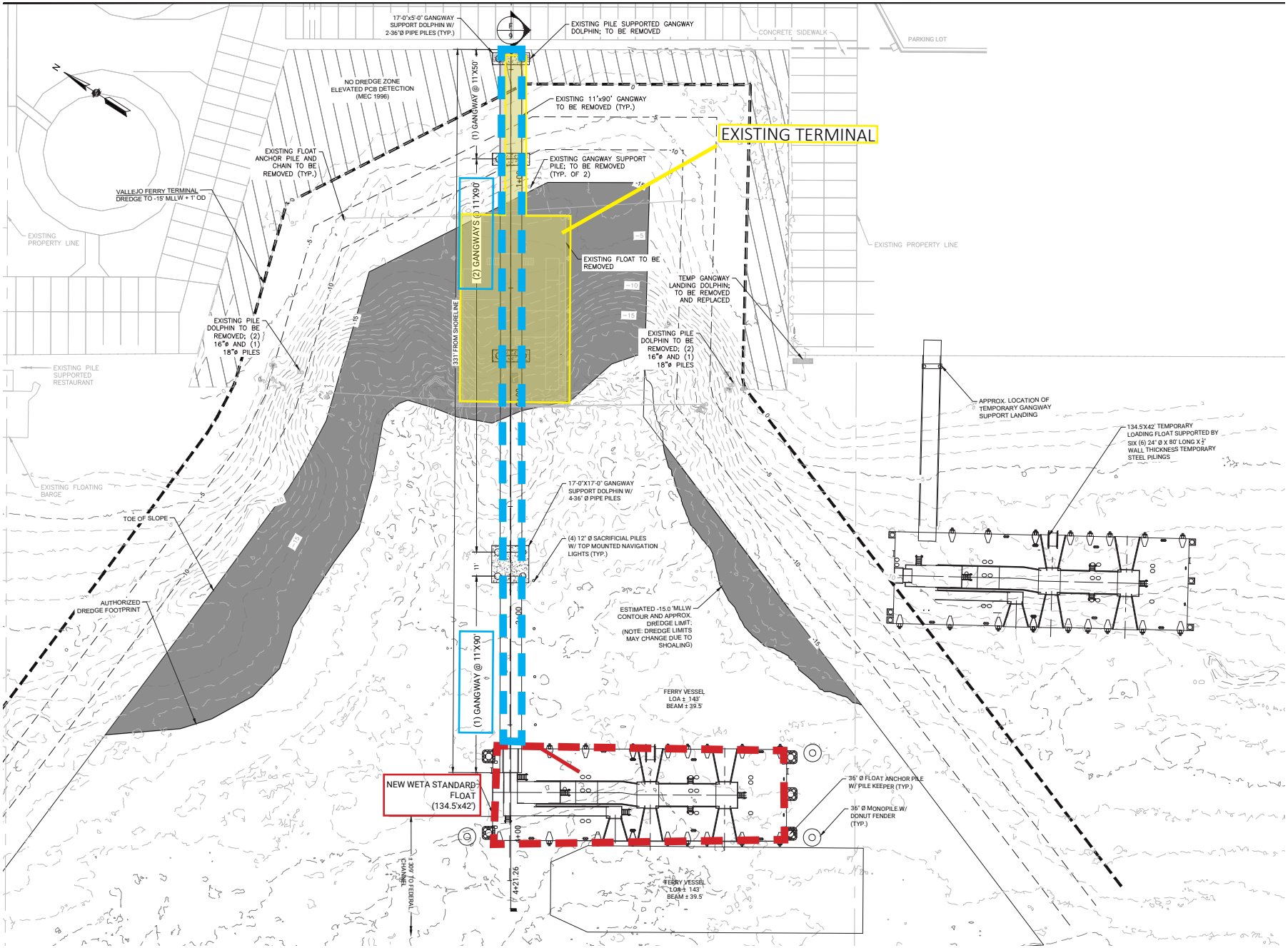
View of existing Vallejo Ferry Terminal facing north.

Source: Kimley-Horn, 2023

Figure 4: Existing Site Photos

WETA Vallejo Ferry Terminal Reconfiguration Project

Kimley»Horn



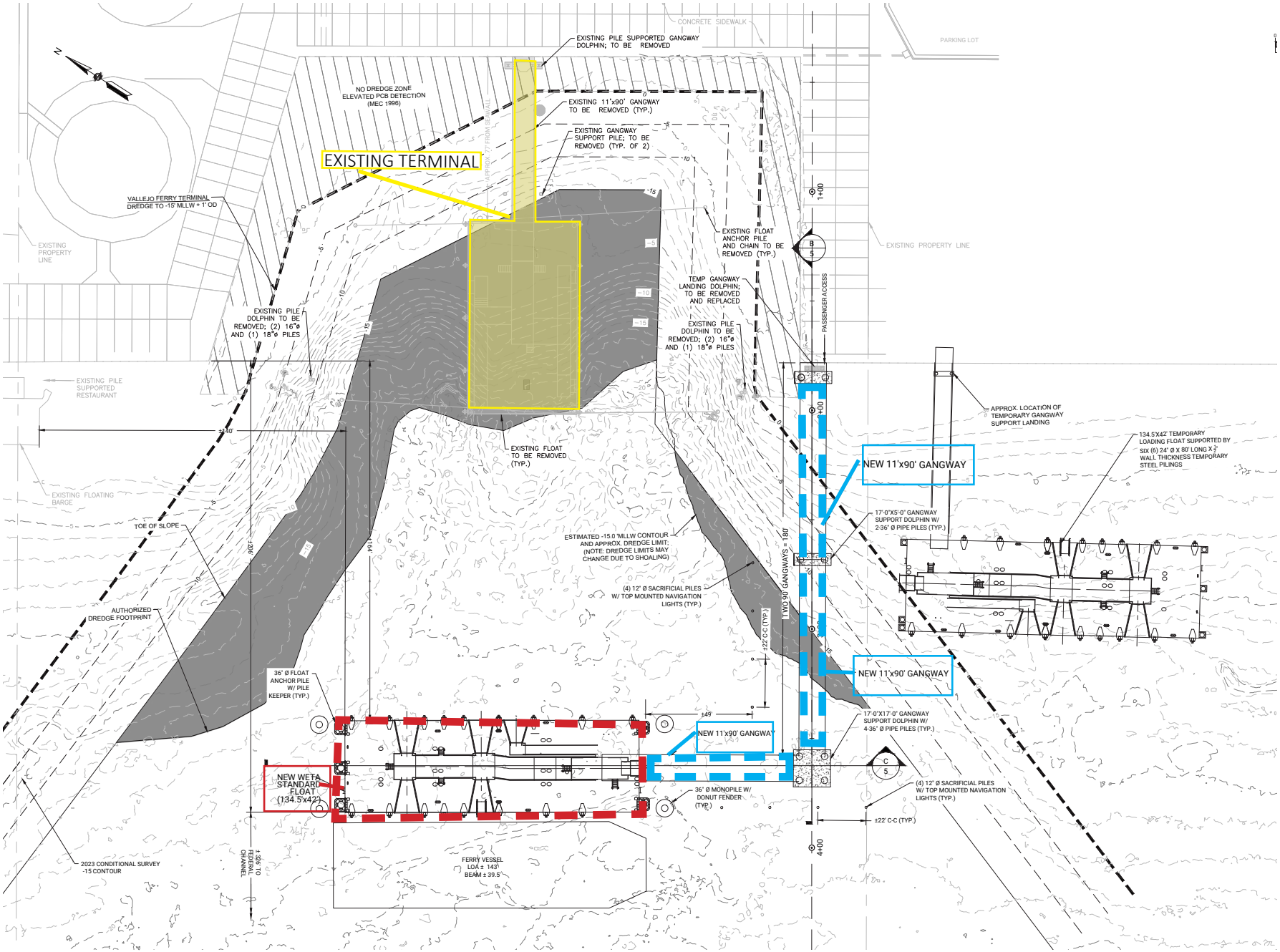
Source: Foth, 2023

Figure 5A: Project Site Plan -- Preferred Project

WETA Vallejo Ferry Terminal Reconfiguration Project

Not to scale

Kimley»Horn



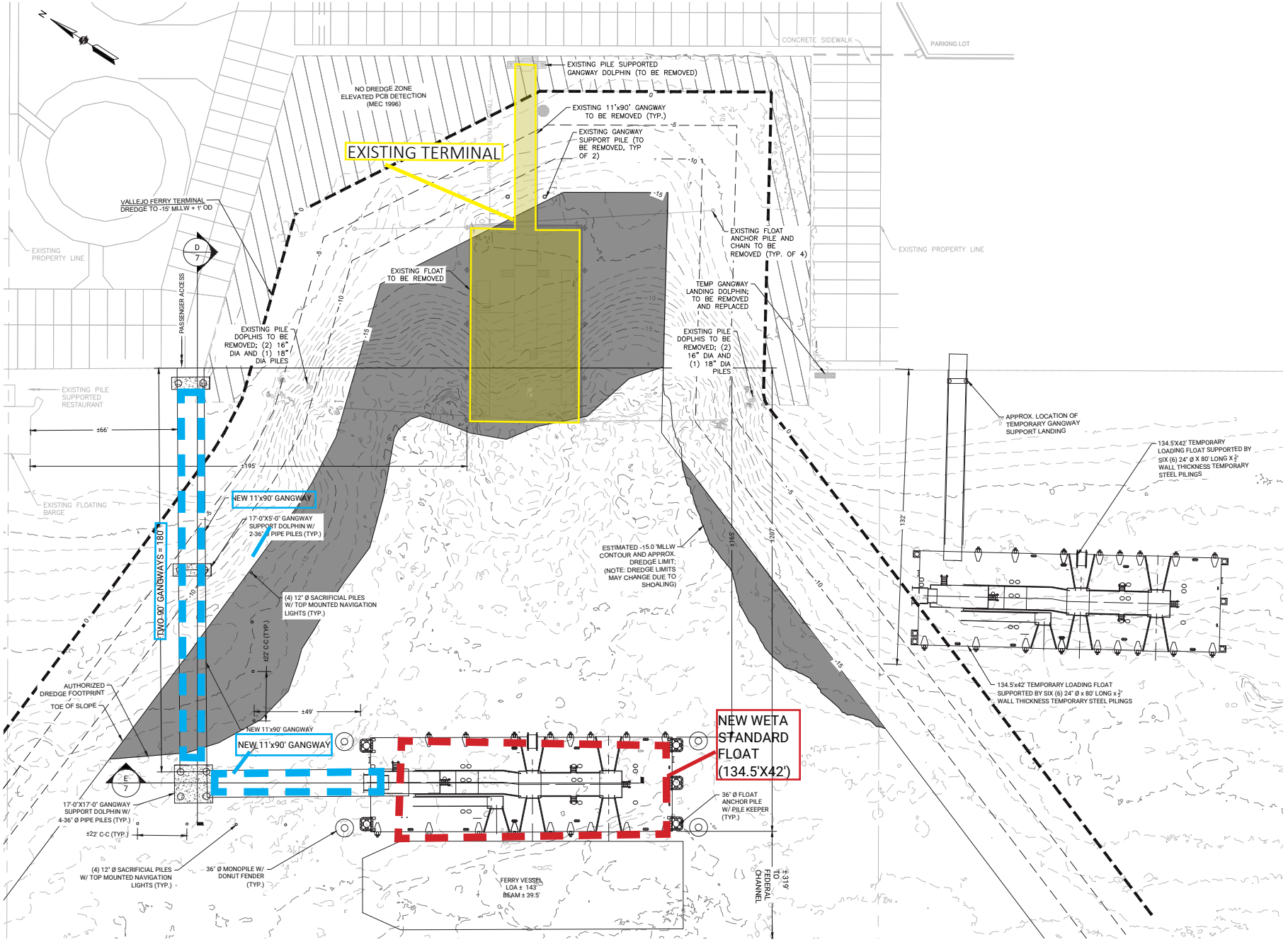
Source: Foth, 2023

Figure 5B: Project Site Plan -- Configuration Option 1

WETA Vallejo Ferry Terminal Reconfiguration Project

Not to scale

Kimley»Horn



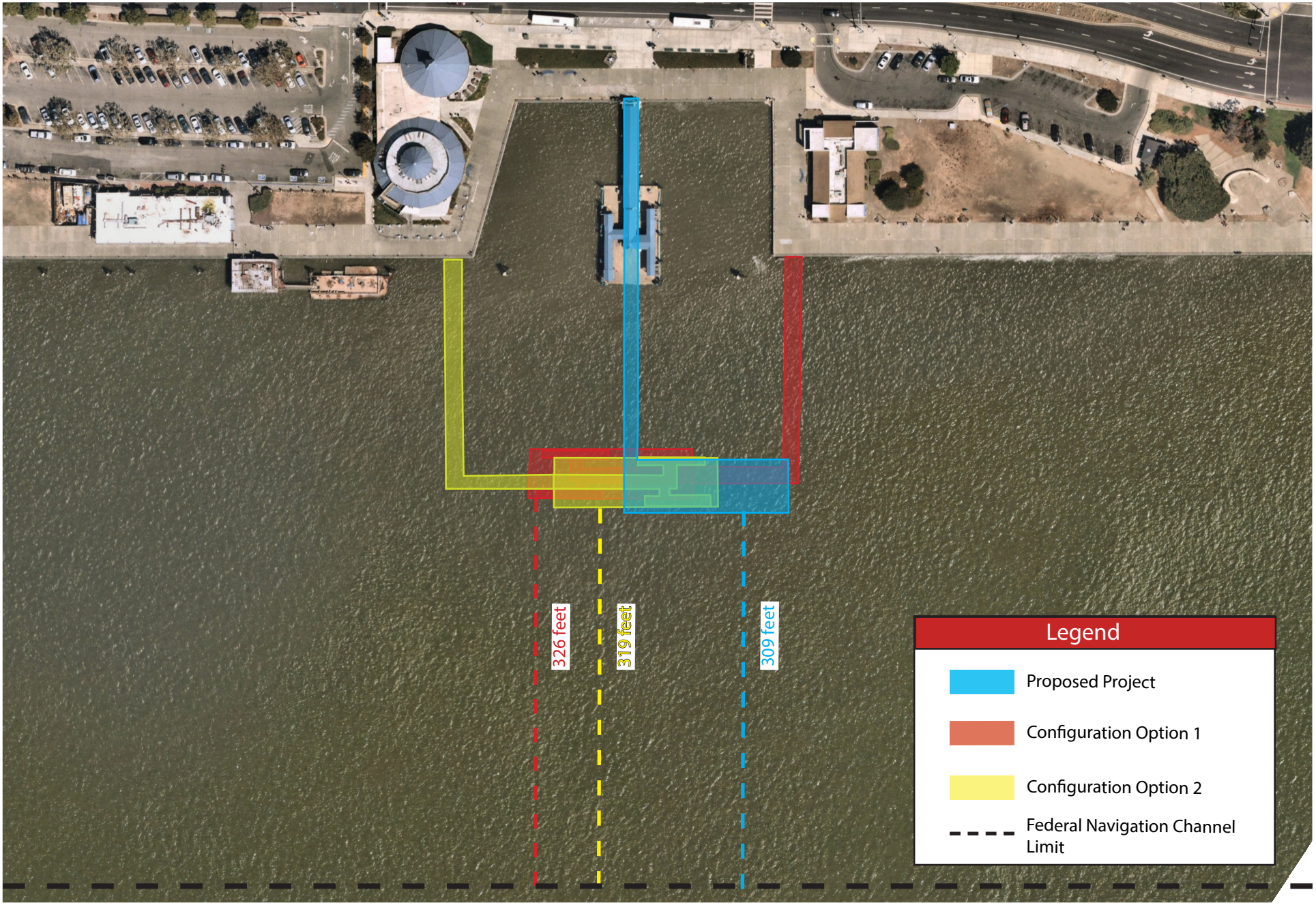
Source: Foth, 2023

Figure 5C: Project Site Plan -- Configuration Option 2

WETA Vallejo Ferry Terminal Reconfiguration Project

Not to scale

Kimley»Horn



Source: Nearmap, 2023

Figure 6: Project Configurations

WETA Vallejo Ferry Terminal Reconfiguration Project

Not to scale

Kimley»Horn

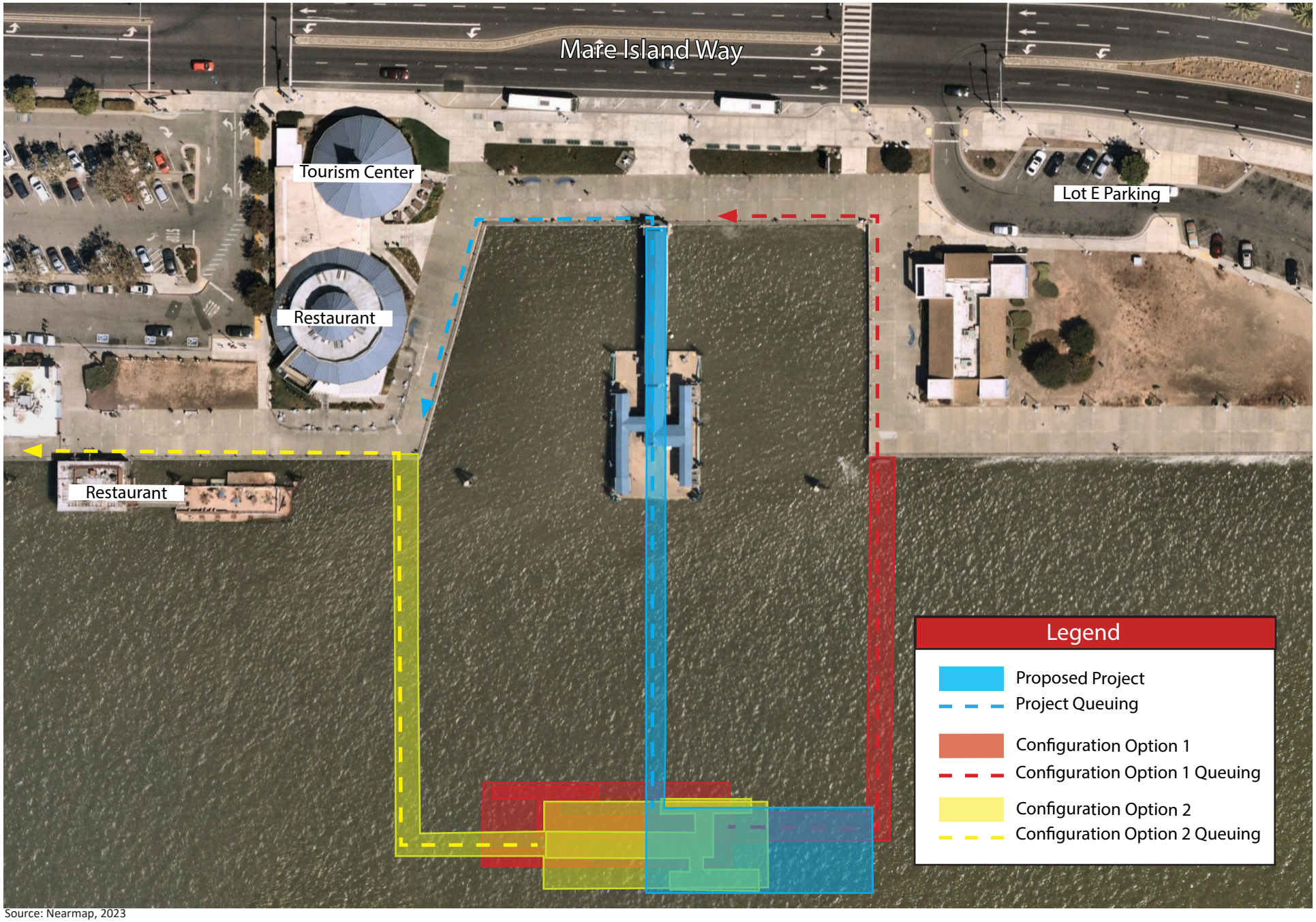
Source: Nearmap, 2023

Figure 7: Existing Ferry Terminal Queuing

WETA Vallejo Ferry Terminal Reconfiguration Project

Not to scale

Kimley»Horn



Source: Nearmap, 2023

Figure 8: Project Queuing

WETA Vallejo Ferry Terminal Reconfiguration Project

Not to scale

Kimley»Horn

Source: Google Earth Pro, 2023

Figure 9: Existing Ferry Route

WETA Vallejo Ferry Terminal Reconfiguration Project

Not to scale

Kimley»Horn

Steel dolphins in basin area on either side of terminal to be removed.

Existing temporary terminal support dolphin and piles to be removed pending Alternative chosen.

Existing Vallejo Ferry Terminal gangway and float will be removed.

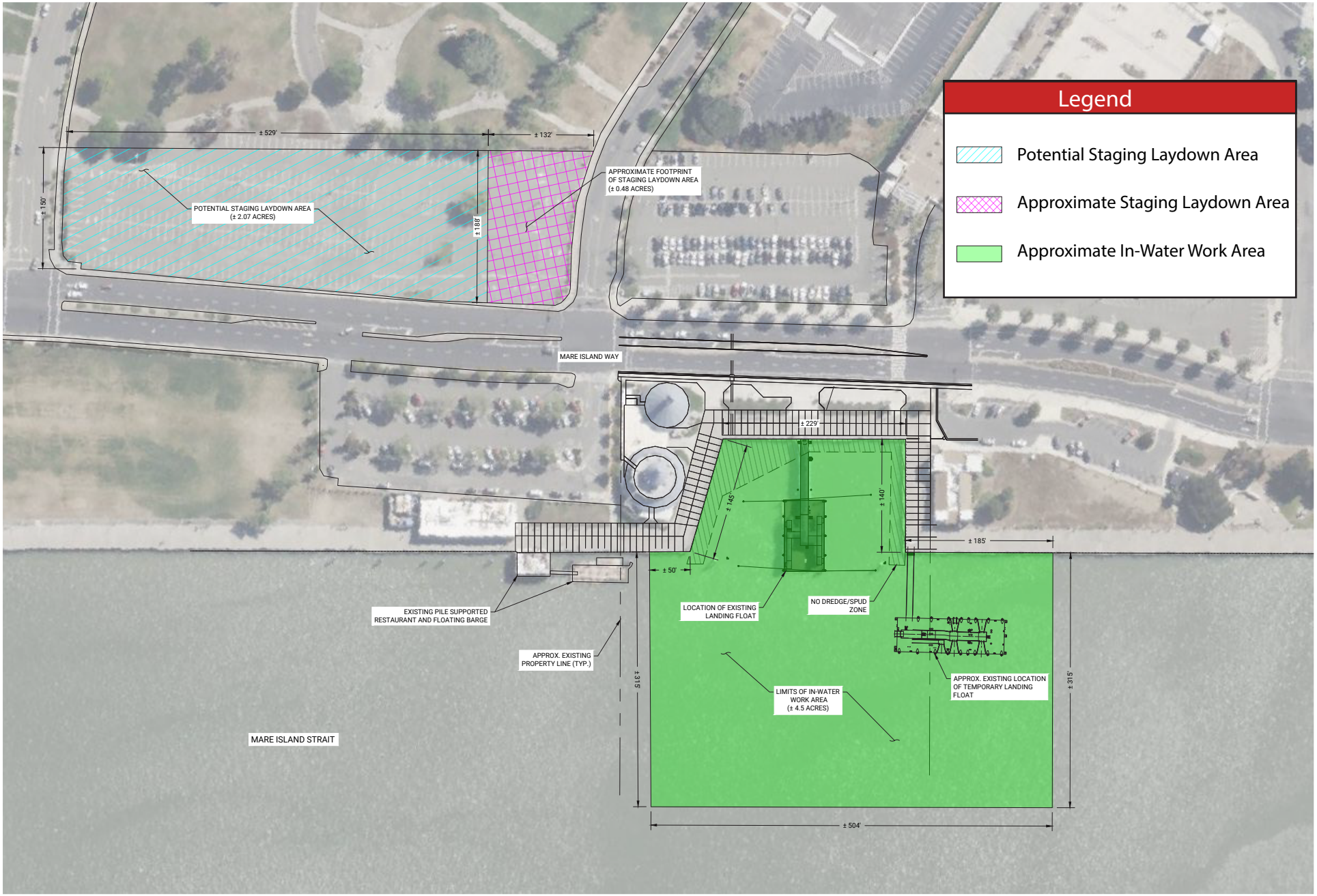
View facing south; See other steel solphin to be removed on northern side of float.

Source: Kimley-Horn, 2023

Figure 10: Components To Be Removed

WETA Vallejo Ferry Terminal Reconfiguration Project

Kimley»Horn



Source: Foth, 2023

Figure 11: Project Staging Area

WETA Vallejo Ferry Terminal Reconfiguration Project

Not to scale

Kimley»Horn

3.0 INITIAL STUDY CHECKLIST

NOTE: The following is a sample form that may be tailored to satisfy individual agencies' needs and project circumstances. It may be used to meet the requirements for an initial study when the criteria set forth in CEQA Guidelines have been met. Substantial evidence of potential impacts that are not listed on this form must also be considered. The sample questions in this form are intended to encourage thoughtful assessment of impacts, and do not necessarily represent thresholds of significance.

1. **Project title:**

Vallejo Ferry Terminal Reconfiguration Project

2. **Lead agency name and address:**

San Francisco Bay Area Water Emergency Transportation Authority (WETA)
Pier 9, Suite 111
The Embarcadero
San Francisco, CA 94111

3. **Contact person and phone number:**

Chad Mason, Project Manager/Senior Planner
415.364.1745

4. **Project location:**

289 Mare Island Way, on the east shore of Mare Island Strait in the City of Vallejo, California.

5. **Project sponsor's name and address:**

WETA
Pier 9, Suite 111
The Embarcadero
San Francisco, CA 94111

6. **General plan designation:**

Parks, Recreation, and Open Space

7. **Zoning:**

Waterfront Mixed-Use

8. **Description of project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)**

The proposed project seeks to reconfigure the existing Vallejo Ferry Terminal and replace the existing components along the eastern shore of Mare Island Strait. The proposed terminal would include landings, a new extended fixed pier and gangway to extend beyond the current basin, passenger float, ramping system, and piles, in a reformatted configuration. The new passenger float would be a WETA

standard float and would accommodate two vessels at a time for passenger loading and unloading. The float would be configured to run parallel with the flow of Mare Island Strait. A temporary terminal to assist with ferry operations during project construction will be utilized. See attached **Figure 1** through **Figure 11** for project location, plans, and details.

9. Surrounding land uses and setting: Briefly describe the project's surroundings:

The project site is located in an existing basin on the eastern shore of Mare Island Strait. The upland area surrounding the site consists of the Vallejo Tourism Information Center, surface parking, and various mixed use commercial operations. The Vallejo transit center is located directly across Mare Island Way. A concrete sidewalk runs parallel to the shoreline around the project site providing access to and along the waterfront.

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

- San Francisco Bay Conservation and Development Commission
- Regional Water Quality Control Board
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- National Marine Fisheries Service
- City of Vallejo
- California Department of Fish and Wildlife
- California State Lands Commission
- Metropolitan Transportation Commission (San Francisco Bay Trail)

A preliminary consultation meeting with the San Francisco Bay Conservation and Development Commission took place on January 26, 2024. On coordination between WETA and the City of Vallejo has taken place regarding the project as well. The City of Vallejo was contacted during the preparation of the historical resources report regarding building permits in the surrounding area.

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

The Confederated Villages of Lisjan Nation responded on February 29, 2024, requesting a copy of the Cultural Report. WETA provided the Confederated Villages of Lisjan Nation with a copy of the Report. No further correspondence from the Confederated Villages of Lisjan Nation was received. Updated AB 52 letters, with an updated project description were sent on March 21, 2024. A request for tribal consultation from the Yocha Dehe Wintun Nation on the project was received. Per request for a tribal consultation from the representatives of Yocha Dehe Wintun Nation, a consultation meeting between the Yocha Dehe Wintun Nation tribe and WETA took place on May 6, 2024. Tribal representatives requested the addition of Mitigation Measure MM TCR-1 regarding Tribal Cultural Resources Awareness Training to this document.

NOTE: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal

cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

4.0 ENVIRONMENTAL ANALYSIS

The environmental factors checked below would be potentially affected by this project, involving impacts identified as "Potentially Significant Unless Mitigation Incorporated" as indicated by the checklist on the following pages. No environmental factors were identified as “Potentially Significant Impact.”

At the time of publication of this document, there is no information suggesting the existence of any constraints for the proposed project. However, as the project progresses, if unforeseen conditions emerge, there are the other two configuration options (Configuration Option 1 and Configuration Option 2) available, which are not the preferred configurations. If either of these configurations are pursued, they would result in similar impacts as of the proposed project and would be mitigated by applying the same mitigation measures.

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

Determination on the basis of this initial evaluation:

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

Signature

May 22, 2024

Date

4.1 Aesthetics

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?			**X**	
a) Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?			**X**	
b) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			**X**	
c) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			**X**	

Setting

Local

The City of Vallejo provides an urban context within a coastal and mountainous backdrop that typifies many cities in the San Francisco Bay Area. Vallejo is oriented along the eastern edge of the San Francisco/San Pablo Bay and to the southwest of Lynch Canyon, a portion of Fairfield in Solano County. The City is relatively flat and low-lying, with gradual elevation increases occurring towards the eastern portions of the City. Vallejo is a predominately built-out environment, with the majority of natural open space areas limited to the City edges. The City's proximity to San Francisco Bay, combined with the gradual topographic changes from the coastal edge to the mountain ranges, provide a wide range of natural hillside and Bay views from various areas. Long-range views within the City are generally expansive because of the flat terrain throughout the City. However, due to the flat terrain, existing mature trees and buildings often block views.

Project Site

The project site is located along the eastern shore of Mare Island Strait, which connects the Napa River to the San Pablo Bay in the western part of the City. Over the past 50 years, the waterfront area along the Strait has undergone a transition from predominantly heavy industrial uses to a mix of residential, recreational, commercial, and light industrial uses. The project site is accessible via Mare Island Way and is bound by Mare Island way to the northeast and Mare Island Strait to the southwest. The site is also bordered to the north, east, and south by a portion of the San Francisco Bay Trail.

In general, the project site can be characterized by its surroundings, particularly by the Vallejo tourism center building to the northwest, Mare Island way to the northeast, an existing vacant commercial structure to the southeast, and Mare Island Strait to the southwest. Views of Mare Island Strait are expansive, as discussed in more detail below.

Visual Character

As shown in **Figure 4 – Existing Site Photos**, the project site consists of an existing ferry terminal (including a float, fixed pier, and gangway), as well as surrounding elements such as piles, signage, and railing. **Figures 5A** through **5C** show the proposed locations of the ferry terminal fixed pier, gangway, and passenger float in comparison to the footprint of the existing terminal. The existing terminal is accessible by a gate on the northeastern side of the ferry terminal basin, along a portion of the San Francisco Bay Trail. Berthed vessels are frequently visible in this location from the Bay Trail and Mare Island Way.

Views

Due to the relatively flat topography of the project site and limited development in the immediate vicinity, expansive background views are visible throughout the project site. The ferry terminal basin and surrounding Bay Trail offer expansive views of Mare Island Strait. The project site, along with public vantage points within the vicinity, include background views to the south, southeast, and northeast of Crockett Hills, Mare Island, and the Mayacamas Mountains.

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

Less than Significant Impact. Under CEQA, a scenic vista is defined as a viewpoint that provides expansive views of a highly valued landscape for the benefit of the public. A vista is a view from a particular location or combination of locations and a scenic vista combines an aesthetically pleasing aspect, often natural, to the vista. Examples of scenic vistas can include mountain ranges, valleys, ridgelines, water bodies, or visually important trees, rock outcroppings, or historic buildings. While a scenic vista may be formally designated, they can be informal public views. Changes in the viewshed are typically discussed in terms of foreground, middle ground, and background views. An adverse effect to a scenic vista may result from a degradation of an existing vista or the loss of access to an existing viewpoint.

The Vallejo General Plan does not designate official scenic view corridors or vistas. The project is not located on a highway or route that is designated or eligible for designation as a scenic highway. The project would introduce new visual elements to the project site, but the changes to the visual environment would be consistent with existing uses and roadway infrastructure in the project area and would not be considered a substantial alteration. The proposed project would not significantly impact any scenic vista. Several proposed project activities would include refurbishment or replacement, improving the overall character and quality of the existing ferry terminal.

The proposed project does not include any elements that would be elevated or would significantly block any views of Mare Island Strait. The current ferry terminal features a covered fixed pier and gangway as well as a float within the ferry terminal basin, while the proposed project will utilize a covered fixed pier and gangway that extends further into Mare Island Strait. These project features would not significantly alter the character of the surrounding landscape and would be consistent with the existing visual environment of Mare Island Strait and uses along the shore. Thus, the proposed project would not result in a substantial alteration to the existing visual character of the site or its surroundings. Impacts would be less than significant, and no mitigation is required.

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

Less than Significant Impact. The project site is not located within a scenic highway. There are two highway segments eligible for scenic highway designation in the City of Vallejo, a segment of Route 101 and a segment of Route 37. The project site is not visible from these segments.

Thus, there are no trees, rock outcroppings, or historical buildings on the project site that would alter the viewshed from the perspective of viewers from the freeway. Therefore, the proposed project would not substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway. Impacts would be less than significant, and no mitigation is required.

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

Less than Significant Impact. The project site is located within an urbanized area and is surrounded by a mix of commercial uses in the project vicinity. Project implementation would result in ferry terminal improvements such as reduced dredging events, more efficient passenger queuing and loading, and safer vessel docking and berthing. Improvements would occur within the existing right-of-way as well as within the Federal Navigation Channel limit and would not occur within adjacent parcels. The proposed terminal design is similar to the existing ferry terminal, and includes landings, a covered fixed pier and gangway, and a passenger float, which would lay close to the water. The proposed terminal would extend into Mare Island Strait as a linear visual element. The proposed project would pose a more prominent feature due to its placement further into the water channel, however these project features would not significantly alter the character of the surrounding landscape. Uses within Mare Island Strait and along the shoreline are primarily maritime or relevant to the boating uses of the channel, and the proposed project would be consistent with these uses and the existing visual environment. Therefore, the proposed project would not degrade existing visual character or existing views of Mare Island Strait and its environs.

Ferry vessels will be docked at the terminal for certain periods of time (five to seven minutes during most arrivals/departures) throughout the day, blocking a minor portion of views immediately adjacent to the project site. However, the presence of a vessel along the waterfront is consistent with other uses within the existing visual character of the project site. Numerous vessels are present in the Marina Bay Yacht Harbor to the east of the project site and large freight vessels frequently

enter and leave the harbor to the west of the project site. A WETA vessel would be consistent with these existing uses and would not substantially alter the visual character of the area.

The proposed uses of the project align with the existing uses of the ferry terminal in place. Thus, the proposed project would be consistent with the type of existing development in the project area. The project sponsor would also adhere to BCDC Public Access Design Guidelines and ABAG Bay Trail Plan Design Guidelines. The purpose of the BCDC Public Access Design Guidelines is to provide the San Francisco Bay region with a design resource for development projects along the shoreline of San Francisco Bay. These guidelines provide suggestions for site planning, as well as recommendations for designing and developing attractive and usable public access areas. In addition, the Bay Plan Design Guidelines include the minimum width, surface type, slope, and grading for proposed segments of the Bay Trail. The proposed project would comply with these guidelines to minimize visual impacts along the shoreline. For these reasons, the project would not conflict with applicable zoning and regulations governing scenic quality. Impacts would be less than significant, and no mitigation is required.

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

Less than Significant Impact. There is a potential for the implementation of the proposed project to introduce new sources of light and glare into the project area during construction and operation. Contributions to light and glare impacts would be temporary and short-term during construction and only occur during this period of time. The project would include reconfiguring an existing ferry terminal to alter direction of vessel berthing, which could introduce a new light source in the area for the life of the project. Ferry terminal access gate doors may include reflective elements such as glass; however, incorporation of such reflective materials would be minor and would not introduce a new impact. Glare could potentially be created when the vessel is docked due to on board lighting or the reflection of light off of vessel surfaces; however, this would be a temporary impact. In addition, only a portion of the vessel would be visible to motorists on Mare Island Way; therefore, most of the reflective surfaces would not create a major source of glare in this area. The light from the terminal and parking area would not significantly add to the nighttime lighting that is already present at the existing ferry terminal site. The proposed project would not add a substantial new lighting element. As such, any additional light from the ferry terminal would be consistent with the existing light sources and would not significantly increase lighting. The proposed project would conform to Vallejo standards for outdoor lighting that establish requirements for light illumination, the use of light shields, and lighting that is directed downward to minimize the effects of spillage, and potential for glare. Impacts would be less than significant, and no mitigation is required.

4.2 Agriculture and Forestry Resources

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. 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?				**X**
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				**X**
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				**X**
d) Result in the loss of forest land or conversion of forest land to non-forest use?				**X**
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				**X**

Setting

The project site is in an urbanized area characterized by commercial and industrial land uses. According to the Natural Resource Conservation Service Web Soil Survey, the soil type present at the project site is

Bay mud, silty clays, and Made land.[1] Further, the project site and surrounding area is situated atop urban land that does not support agricultural practices.

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. As described above, the project site is characterized by Bay mud, silty clays, and Made land, and there is no prime farmland or farmland of statewide importance. The proposed project would not change the existing land use at the project site and would result in limited ground disturbing activities. The majority of project activities would occur within Mare Island Strait and ferry terminal basin area. Therefore, the proposed project would not convert prime farmland or farmland of statewide importance to nonagricultural uses. There would be no impact, and no mitigation is required.

b) Conflict with existing zoning for agricultural use, or 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))?

No Impact. The project site is zoned as Waterfront Mixed-Use. The project site does not conflict with existing zoning for agriculture or contain a Williamson Act Contract. Further, the project site is not zoned for forest land, timberland, or timberland production, nor contain any of these uses. Therefore, the proposed project would not conflict with existing zoning for agriculture, forest land, or timberland or conflict with a Williamson Act contract. There would be no impact, and no mitigation is required.

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

Or,

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. As identified above, the project site is not zoned for forest land, timberland, or timberland production, nor contain any of these uses. Further, there is no Farmland on or adjacent to the project site that would have the potential to be converted to non-agricultural uses. Therefore, the proposed project would not result in the loss or conversion of forest land. There would be no impact, and no mitigation is required.

[1] United States Department of Agriculture Natural Resources Conservation Service. *Web Soil Survey*. Available at: https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx. Accessed November 27, 2023.

4.3 Air Quality

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?			**X**	
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?			**X**	
c) Expose sensitive receptors to substantial pollutant concentrations?			**X**	
d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?				**X**

Setting

This section describes effects on air quality conditions in the proposed Vallejo Ferry Terminal Reconfiguration project area. The current condition of air quality was used as the baseline against which to compare potential impacts of the project.

Climate and Meteorology

The California Air Resources Board (CARB) divides the State into 15 air basins that share similar meteorological and topographical features. The project is located within the San Francisco Bay Area Air Basin (Basin). This Basin comprises all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties, the southern portion of Sonoma County, and the southwestern portion of Solano County. Air quality in this area is determined by such natural factors as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions. These factors along with applicable regulations are discussed below. The Bay Area Air Quality Management District (BAAQMD) is responsible for local control and monitoring of criteria air pollutants throughout the Basin.

Climate, or the average weather condition, affects air quality in several ways. Wind patterns can remove or add air pollutants emitted by stationary or mobile sources. Inversion, a condition where warm air traps cooler air underneath it, can hold pollutants near the ground by limiting upward mixing (dilution). Topography also affects the local climate, as valleys often trap emissions by limiting lateral dispersal.

The inversions typical of winter, called radiation inversions, are formed as heat quickly radiates from the earth's surface after sunset, causing the air in contact with it to rapidly cool. Radiation inversions are strongest on clear, low-wind, cold winter nights, allowing the build-up of such pollutants as carbon monoxide and particulate matter. When wind speeds are low, there is little mechanical turbulence to mix the air, resulting in a layer of warm air over a layer of cooler air next to the ground. During radiation inversions downwind transport is slow, the mixing depths are shallow, and turbulence is minimal, all factors which contribute to ozone formation.

The frequency of hot, sunny days during the summer months in the Basin is another important factor that affects air pollution potential. It is at the higher temperatures that ozone is formed. In the presence of ultraviolet sunlight and warm temperatures, reactive organic gases and oxides of nitrogen react to form secondary photochemical pollutants, including ozone.

The climate is dominated by the location and strength of a semi-permanent, subtropical high-pressure cell. In the summer, the Pacific cell is centered over the northeastern Pacific Ocean, resulting in stable meteorological conditions and a steady northwesterly wind flow. Upwelling of cold ocean water from below the surface because of the northwesterly flow produces a band of cold water off the coast which results in condensation and the presence of fog and stratus clouds along the coast. In the winter, the high-pressure cell weakens and shifts southward, resulting in increased wind flow offshore, the absence of upwelling, and the occurrence of storms.

The Basin is characterized by moderately wet winters (November through March) and dry summers. The rainfall in the mountains reaches 40 inches while the valley sees less than 16 inches. Generally, coastal temperatures can be 35 degrees Fahrenheit cooler than temperatures 15 to 20 miles inland. At night, this contrast usually decreases to less than 10 degrees Fahrenheit. In the winter, the relationship of minimum and maximum temperatures is reversed.

The project site is located in the City of Vallejo and Solano County; on the northeastern perimeter of the San Francisco Bay. The City of Vallejo has a generally mild climate, with average temperature ranging from 48 degrees Fahrenheit and 70 degrees Fahrenheit. The annual rainfall is approximately 18 inches in the City, primarily between October and April. The regulatory section below discusses the various buffer zones around sources of air pollution sufficient to avoid adverse health and nuisance impacts on nearby receptors.

Air Pollutants of Primary Concern

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and state laws. These regulated air pollutants are known as “criteria air pollutants” and are categorized into primary and secondary pollutants. Primary air pollutants are those that are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxide (NO_X), sulfur dioxide (SO_2), coarse particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), and lead are primary air pollutants. Of these, CO, NO_X, SO_2, PM_{10}, and $PM_{2.5}$ are criteria pollutants. ROG and NO_X are criteria pollutant precursors and go on to form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. For example, the criteria pollutant ozone (O_3) is formed by a chemical reaction between ROG and NO_X in the presence of sunlight. O_3 and nitrogen dioxide (NO_2) are the principal secondary pollutants. Sources and health effects commonly associated with criteria pollutants are summarized in Table 7: Air Contaminants and Associated Public Health Concerns.

Ozone, or smog, is not emitted directly into the environment, but is formed in the atmosphere by complex chemical reactions between ROG and NO_X in the presence of sunlight. Ozone formation is greatest on warm, windless, sunny days. The main sources of NO_X and ROG, often referred to as ozone precursors, are combustion processes (including motor vehicle engines) the evaporation of solvents, paints, and fuels, and biogenic sources. Automobiles are the single largest source of ozone precursors in the Basin. Tailpipe emissions of ROG are highest during cold starts, hard acceleration, stop-and-go conditions, and slow speeds. They decline as speeds increase up to about 50 miles per hour (mph), then increase again at high speeds and high engine loads. ROG emissions associated with evaporation of unburned fuel depend on vehicle and ambient temperature cycles. Nitrogen oxide emissions exhibit a different curve; emissions decrease as the vehicle approaches 30 mph and then begin to increase with increasing speeds.

Ozone levels usually build up during the day and peak in the afternoon hours. Short-term exposure can irritate the eyes and cause constriction of the airways. Besides causing shortness of breath, it can aggravate existing respiratory diseases such as asthma, bronchitis and emphysema. Chronic exposure to high ozone levels can permanently damage lung tissue. Ozone can also damage plants and trees, and materials such as rubber and fabrics.

Table 7: Air Contaminants and Associated Public Health Concerns

Pollutant	Major Man-Made Sources	Human Health Effects
Particulate Matter (PM_{10} and $PM_{2.5}$)	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; asthma; chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility.
Ozone (O_3)	Formed by a chemical reaction between reactive organic gases/volatile organic compounds (ROG or VOC)[1] and nitrogen oxides (NO_X) in the presence of sunlight. Motor vehicle exhaust industrial emissions, gasoline storage and transport, solvents, paints and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
Sulfur Dioxide (SO_2)	A colorless gas formed when fuel containing sulfur is burned and when gasoline is extracted from oil. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain.
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO_2)	A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include motor vehicles, electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone. Contributes to global warming and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Lead (Pb)	Lead is a metal found naturally in the environment as well as in manufactured products. The major sources of lead	Exposure to lead occurs mainly through inhalation of air and ingestion of lead in food, water, soil, or dust. It accumulates in the blood, bones, and soft tissues

Pollutant	Major Man-Made Sources	Human Health Effects
	emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Due to the phase out of leaded gasoline, metals processing is the major source of lead emissions to the air today. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers.	and can adversely affect the kidneys, liver, nervous system, and other organs. Excessive exposure to lead may cause neurological impairments such as seizures, mental retardation, and behavioral disorders. Even at low doses, lead exposure is associated with damage to the nervous systems of fetuses and young children, resulting in learning deficits and lowered IQ.
[1] Volatile Organic Compounds (VOCs or Reactive Organic Gases [ROG]) are hydrocarbons/organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases including ROGs and VOCs. Both ROGs and VOCs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. The major sources of hydrocarbons are combustion engine exhaust, oil refineries, and oil-fueled power plants; other common sources are petroleum fuels, solvents, dry cleaning solutions, and paint (via evaporation).		
Source: California Air Pollution Control Officers Association (CAPCOA), *Health Effects*, capcoa.org/health-effects/, accessed December 2023.		

Toxic Air Contaminants

Toxic air contaminants (TACs) are airborne substances that can cause short-term (acute) or long-term (chronic or carcinogenic, i.e., cancer causing) adverse human health effects (i.e., injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. The current California list of TACs includes more than 200 compounds, including particulate emissions from diesel-fueled engines.

The California Air Resources Board (CARB) identified diesel particulate matter (DPM) as a toxic air contaminant. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Diesel exhaust is a complex mixture of particles and gases produced when an engine burns diesel fuel. DPM is a concern because it causes lung cancer; many compounds found in diesel exhaust are carcinogenic. DPM includes the particle-phase constituents in diesel exhaust. The chemical composition and particle sizes of DPM vary between different engine types (heavy-duty, light-duty), engine operating conditions (idle, accelerate, decelerate), fuel formulations (high/low sulfur fuel), and the year of the engine. Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause coughs, headaches, light-headedness, and nausea. DPM poses the greatest health risk among the TACs. Almost all diesel exhaust particle mass is 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

Ambient Air Quality

CARB monitors ambient air quality at approximately 250 air monitoring stations across the state. Air quality monitoring stations usually measure pollutant concentrations ten feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. Existing levels of ambient air quality, historical trends, and projections near the project site are documented by measurements made by the Bay Area Air Quality Management District (BAAAQMD)'s air pollution regulatory agency that maintains air quality monitoring stations, which process ambient air quality measurements.

Ozone (O_3) and particulate matter (PM_{10} and $PM_{2.5}$) are pollutants of concern in the BAAQMD. The closest air monitoring station to the project site that monitors ambient concentrations of these pollutants is the Vallejo Monitoring Station (located approximately 1.4 miles northeast of the project site). Local air quality data from 2020 to 2022 is provided in Table 8: Ambient Air Quality Data lists the monitored maximum concentrations and number of exceedances of federal or state air quality standards for each year. Particulate matter ($PM_{2.5}$) was exceeded in 2020 at the closest monitoring station.

Table 8: Ambient Air Quality Data

Pollutant	Vallejo [1]		
	2020	2021	2022
Ozone (O_3)			
1-hour Maximum Concentration (ppm)	0.096	0.099	0.066
8-hour Maximum Concentration (ppm)	0.077	0.072	0.058
Number of Days Standard Exceeded			
CAAQS 1-hour (>0.09 ppm)	1	1	0
NAAQS 8-hour (>0.070 ppm)	1	1	0
Nitrogen Dioxide (NO_2)			
1-hour Maximum Concentration (ppm)	48.5	40.5	44.2
Number of Days Standard Exceeded			
NAAQS 1-hour (>100 ppm)	0	0	0
CAAQS 1-hour (>0.18 ppm)	0	0	0
Particulate Matter Less Than 2.5 Microns ($PM_{2.5}$)			
National 24-hour Maximum Concentration	152.7	32.0	31.0
State 24-hour Maximum Concentration	153.2	32.0	31.0
Number of Days Standard Exceeded			
NAAQS 24-hour (>150 µg/m³)	12	0	0
CAAQS 24-hour (>50 µg/m³)	12	0	0
Particulate Matter Less Than 10 Microns (PM_{10})			
National 24-hour Maximum Concentration	--	--	--
State 24-hour Maximum Concentration	--	--	--
Number of Days Standard Exceeded			
NAAQS 24-hour (>150 µg/m³)	--	--	--
CAAQS 24-hour (>50 µg/m³)	--	--	--
NAAQS = National Ambient Air Quality Standards; CAAQS = California Ambient Air Quality Standards; ppm = parts per million; µg/m³ = micrograms per cubic meter; NM = not measured [1] Measurements taken at the Vallejo Monitoring Station located at 304 Tuolumne Street, Vallejo, California 94590 (CARB# 43380).			
Source: All pollutant measurements are from the CARB Aerometric Data Analysis and Management system database (arb.ca.gov/adam).			

Sensitive Receptors

Sensitive populations are more susceptible to the effects of air pollution than the general population. Sensitive receptors in proximity to localized sources of toxics are of particular concern. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. As shown in **Figure 12: Sensitive Receptors**, sensitive receptors near the project site include a multi-family residential community approximately 545 feet southeast and the Vallejo John F. Kennedy Library approximately 615 feet east. Table 9: Sensitive Receptors, lists the distances and locations of nearby sensitive receptors.

Table 9: Sensitive Receptors

Receptor Description	Distance and Direction from the Project Site
Multi-family residential community	545 feet southeast
Vallejo John F. Kennedy Library	615 feet east
Pathways Charter School	2,155 feet east
1. Distances are measured from the project site boundary to the property line. Source: Google Earth, 2023.	

Source: ESRI, 2023

Figure 12: Sensitive Receptors

WETA Vallejo Ferry Terminal Reconfiguration Project

Not to scale

Kimley»Horn

Regulatory Framework

Federal

Federal Clean Air Act

Air quality is federally protected by the Federal Clean Air Act (FCAA) and its amendments. Under the FCAA, the U.S. Environmental Protection Agency (EPA) developed the primary and secondary National Ambient Air Quality Standards (NAAQS) for the criteria air pollutants including ozone, NO_2, CO, SO_2, PM_{10}, $PM_{2.5}$, and lead. Depending on whether the standards are met or exceeded, the local air basin is classified as in "attainment" or "nonattainment." Some areas are unclassified, which means no monitoring data are available. Unclassified areas are considered to be in attainment. Proposed projects in or near nonattainment areas could be subject to more stringent air-permitting requirements. The FCAA requires that each state prepare a State Implementation Plan (SIP) to demonstrate how it will attain the NAAQS within the federally imposed deadlines.

The EPA has designated enforcement of air pollution control regulations to the individual states. Applicable federal standards are summarized in Table 10: State and Federal Ambient Air Quality Standards.

California Air Resources Board

CARB administers California's air quality policy. The California Ambient Air Quality Standards (CAAQS) were established in 1969 pursuant to the Mulford-Carrell Act. These standards, included with the NAAQS in Table 10, are generally more stringent and apply to more pollutants than the NAAQS. In addition to the criteria pollutants, CAAQS have been established for visibility reducing particulates, hydrogen sulfide, and sulfates. In general, the Bay Area experiences low concentrations of most pollutants when compared to federal standards, except for O_3 and PM, for which standards are exceeded periodically. With respect to federal standards, the Bay Area's attainment status for 8-hour ozone is classified as "marginal nonattainment" and "nonattainment" for $PM_{2.5.}$ The region is also considered to be in nonattainment with the CAAQS for PM_{10} and $PM_{2.5}$. Area sources generate the majority of these airborne particulate emissions. The Basin is considered in attainment or unclassified with respect to the CO, NO_2 and SO_2 NAAQS and CAAQS.

The California Clean Air Act (CCAA), which was approved in 1988, requires that each local air district prepare and maintain an Air Quality Management Plan (AQMP) to achieve compliance with CAAQS. These AQMPs also serve as the basis for the preparation of the SIP for meeting federal clean air standards for the State of California. Like the EPA, CARB also designates areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data shows that a state standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events such as wildfires, volcanoes, etc. are not considered violations of a State standard, and are not used as a basis for designating areas as nonattainment. The applicable State standards are summarized in Table 10.

Table 10: State and Federal Ambient Air Quality Standards

Pollutant	Averaging Time	State Standards[1]		Federal Standards[2]	
		Concentration	Attainment Status	Concentration[3]	Attainment Status
Ozone (O_3)	8 Hour	0.070 ppm (137 µg/m³)	N[9]	0.070 ppm	N[4]
	1 Hour	0.09 ppm (180 µg/m³)	N	NA	N/A[5]
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m³)	A	9 ppm (10 mg/m³)	A[6]
	1 Hour	20 ppm (23 mg/m³)	A	35 ppm (40 mg/m³)	A
Nitrogen Dioxide (NO_2)	1 Hour	0.18 ppm (339 µg/m³)	A	0.10 ppm[11]	U
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)	-	0.053 ppm (100 µg/m³)	A
Sulfur Dioxide[12] (SO_2)	24 Hour	0.04 ppm (105 µg/m³)	A	0.14 ppm (365 µg/m³)	A
	1 Hour	0.25 ppm (655 µg/m³)	A	0.075 ppm (196 µg/m³)	A
	Annual Arithmetic Mean	NA	-	0.03 ppm (80 µg/m³)	A
Particulate Matter (PM_{10})	24-Hour	50 µg/m³	N	150 µg/m³	U
	Annual Arithmetic Mean	20 µg/m³	N[7]	NA	-
Fine Particulate Matter ($PM_{2.5}$) [15]	24-Hour	NA	-	35 µg/m³	U/A
	Annual Arithmetic Mean	12 µg/m³	N[7]	12 µg/m³	N
Sulfates (SO_{4-2})	24 Hour	25 µg/m³	A	NA	-
Lead (Pb)[13, 14]	30-Day Average	1.5 µg/m³	-	NA	A
	Calendar Quarter	NA	-	1.5 µg/m³	A
	Rolling 3-Month Average	NA	-	0.15 µg/m³	-
Hydrogen Sulfide (H_2S)	1 Hour	0.03 ppm (0.15 µg/m³)	U	NA	-
Vinyl Chloride (C_2H_3Cl)	24 Hour	0.01 ppm (26 µg/m³)	-	NA	-
Visibility Reducing Particles[8]	8 Hour (10:00 to 18:00 PST)	-	U	-	-

A = attainment; N = nonattainment; U = unclassified; N/A = not applicable or no applicable standard; ppm = parts per million; µg/m³ = micrograms per cubic meter; mg/m³ = milligrams per cubic meter; – = not indicated or no information available.

1. California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, suspended particulate matter - PM_{10}, and visibility reducing particles are values that are not to be exceeded. The standards for sulfates, Lake Tahoe carbon monoxide, lead, hydrogen sulfide, and vinyl chloride are not to be equaled or exceeded. If the standard is for a 1-hour, 8-hour or 24-hour average (i.e., all standards except for lead and the PM_{10} annual standard), then some measurements may be excluded. In particular, measurements are excluded that CARB determines would occur less than once per year on the average. The Lake Tahoe CO standard is 6.0 ppm, a level one-half the national standard and two-thirds the state standard.
2. National standards shown are the "primary standards" designed to protect public health. National standards other than for ozone, particulates and those based on annual averages are not to be exceeded more than once a year. The 1-hour ozone standard is attained if, during the most recent three-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than one. The 8-hour ozone standard is attained when the 3-year average of the 4th highest daily concentrations is 0.070 ppm (70 ppb) or less. The 24-hour PM_{10} standard is attained when the 3-year average of the 99th percentile of monitored concentrations is less than 150 µg/m_3. The 24-hour $PM_{2.5}$ standard is attained when the 3-year average of 98th percentiles is less than 35 µg/m³.
   Except for the national particulate standards, annual standards are met if the annual average falls below the standard at every site. The national annual particulate standard for PM_{10} is met if the 3-year average falls below the standard at every site. The annual $PM_{2.5}$ standard is met if the 3-year average of annual averages spatially-averaged across officially designed clusters of sites falls below the standard.
3. National air quality standards are set by the EPA at levels determined to be protective of public health with an adequate margin of safety.

4. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm. An area will meet the standard if the fourth-highest maximum daily 8-hour ozone concentration per year, averaged over three years, is equal to or less than 0.070 ppm. EPA will make recommendations on attainment designations by October 1, 2016, and issue final designations October 1, 2017. Nonattainment areas will have until 2020 to late 2037 to meet the health standard, with attainment dates varying based on the ozone level in the area.
5. The national 1-hour ozone standard was revoked by U.S. EPA on June 15, 2005.
6. In April 1998, the Bay Area was redesignated to attainment for the national 8-hour carbon monoxide standard.
7 In June 2002, CARB established new annual standards for $PM_{2.5}$ and PM_{10}.
8 Statewide VRP Standard (except Lake Tahoe Air Basin): Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70 percent. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.
9. The 8-hour CA ozone standard was approved by the Air Resources Board on April 28, 2005 and became effective on May 17, 2006.
10. On January 9, 2013, EPA issued a final rule to determine that the Bay Area attains the 24-hour $PM_{2.5}$ national standard. This EPA rule suspends key SIP requirements as long as monitoring data continues to show that the Bay Area attains the standard. Despite this EPA action, the Bay Area will continue to be designated as "nonattainment" for the national 24-hour $PM_{2.5}$ standard until such time as the Air District submits a "redesignation request" and a "maintenance plan" to EPA, and EPA approves the proposed redesignation.
11. To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100ppm (effective January 22, 2010). The US Environmental Protection Agency (EPA) expects to make a designation for the Bay Area by the end of 2017.
12. On June 2, 2010, the U.S. EPA established a new 1-hour SO_2 standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. The existing 0.030 ppm annual and 0.14 ppm 24-hour SO_2 NAAQS however must continue to be used until one year following U.S. EPA initial designations of the new 1-hour SO_2 NAAQS.
13. CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure below which there are no adverse health effects determined.
14. National lead standard, rolling 3-month average: final rule signed October 15, 2008. Final designations effective December 31, 2011.
15. In December 2012, EPA strengthened the annual $PM_{2.5}$ National Ambient Air Quality Standards (NAAQS) from 15.0 to 12.0 micrograms per cubic meter ($\mu g/m^3$). In December 2014, EPA issued final area designations for the 2012 primary annual $PM_{2.5}$ NAAQS. Areas designated "unclassifiable/attainment" must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.

Source: Bay Area Air Quality Management District, *Air Quality Standards and Attainment Status*, 2017. http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status.

Regional

Bay Area Air Quality Management District

The BAAQMD is the regional agency with jurisdiction over the nine-county region located in the Basin. The Association of Bay Area Governments (ABAG), Metropolitan Transportation Commission (MTC), county transportation agencies, cities and counties, and various nongovernmental organizations also join in the efforts to improve air quality through a variety of programs. These programs include the adoption of regulations and policies, as well as implementation of extensive education and public outreach programs.

Clean Air Plan

Air quality plans developed to meet federal requirements are referred to as State Implementation Plans. The federal and state Clean Air Acts require plans to be developed for areas designated as nonattainment (with the exception of areas designated as nonattainment for the state PM_{10} standard). The BAAQMD is responsible for developing a Clean Air Plan, which guides the region's air quality planning efforts to attain the CAAQS. The BAAQMD adopted the *2017 Clean Air Plan: Spare the Air, Cool the Climate* (2017 Clean Air Plan) on April 19, 2019, by the BAAQMD.

BAAQMD periodically develops air quality plans that outline the regional strategy to improve air quality and protect the climate. The most recent plan, 2017 Clean Air Plan, includes a wide range of control measures designed to reduce emissions of air pollutants and greenhouse gases (GHGs), including the following examples that may be relevant to this project: reduce emissions of toxic air contaminants by adopting more stringent limits and methods for evaluating toxic risks; implement pricing measures to reduce travel demand; accelerate the widespread adoption of electric vehicles; promote the use of clean

fuels; promote energy efficiency in both new and existing buildings; and promote the switch from natural gas to electricity for space and water heating in Bay Area buildings.

The 2017 Clean Air Plan provides a regional strategy to protect public health and protect the climate. To protect public health, the plan describes how the BAAQMD will continue progress toward attaining all state and federal air quality standards and eliminating health risk disparities from exposure to air pollution among Bay Area communities. To protect the climate, the 2017 Clean Air Plan defines a vision for transitioning the region to a post-carbon economy needed to achieve ambitious GHG reduction targets for 2030 and 2050 and provides a regional climate protection strategy that will put the Bay Area on a pathway to achieve those GHG reduction targets. The 2017 Clean Air Plan contains district-wide control measures to reduce ozone precursor emissions (i.e., ROG and NO_X), particulate matter, TACs, and greenhouse gas emissions. The Bay Area 2017 Clean Air Plan updates the Bay Area 2010 Clean Air Plan in accordance with the requirements of the California Clean Air Act to implement "all feasible measures" to reduce ozone; provides a control strategy to reduce ozone, PM, TACs, and greenhouse gases in a single, integrated plan; reviews progress in improving air quality in recent years; and establishes emission control measures to be adopted or implemented in both the short term and through 2050.

The 2017 Clean Air Plan includes a wide range of control measures designed to decrease emissions of the air pollutants that are most harmful to Bay Area residents, such as particulate matter, ozone, and toxic air contaminants; to reduce emissions of methane and other "super-GHGs" that are potent climate pollutants in the near-term; and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.

The following BAAQMD rules would limit emissions of air pollutants from construction and operation of the project:

- Regulation 6, Rule 3 – Wood-Burning Devices. The purpose of this rule is to limit emissions of particulate matter and visible emissions from wood-burning devices used for primary heat, supplemental heat or ambiance.

- Regulation 8, Rule 3 – Architectural Coatings. This rule governs the manufacture, distribution, and sale of architectural coatings and limits the reactive organic gases content in paints and paint solvents. Although this rule does not directly apply to the project, it does dictate the ROG content of paint available for use during the construction.

- Regulation 8, Rule 15 – Emulsified and Liquid Asphalts. This rule dictates the reactive organic gases content of asphalt available for use during construction through regulating the sale and use of asphalt and limits the ROG content in asphalt. Although this rule does not directly apply to the project, it does dictate the ROG content of asphalt for use during the construction.

- Regulation 9, Rule 8 – Organic Compounds. This rule limits the emissions of nitrogen oxides and carbon monoxide from stationary internal combustion engines with an output rated by the manufacturer at more than 50 brake horsepower.

BAAQMD prepared an Ozone Attainment Demonstration Plan to satisfy the federal 1-hour ozone planning requirement because of the Air Basin's nonattainment for federal and State ozone standards. The U.S.

EPA revoked the 1-hour ozone standard and adopted an 8-hour ozone standard. The BAAQMD will address the new federal 8-hour ozone planning requirements once they are established.

Local

City of Vallejo Propel Vallejo General Plan 2040

The Vallejo General Plan includes the following policies intended to control or reduce air pollution impacts:

Policy CP – 1.12: Clean Air. Protect the community from harmful levels of air pollution.

- **Action CP-1.12A**: Convert the City fleet of street sweepers and other large-scale equipment from fossil fuel to alternative fuel types, and work with service providers to convert refuse and recycling trucks to alternative fuels, in conformance with Bay Area Air Quality Management District (BAAQMD) requirements for fleets.
- **Action CP-1.12B:** Update City regulations to set BAAQMD-recommended limits for particulate emissions from construction, demolition, debris hauling, and utility maintenance.
- **Action CP-1.12C:** Provide information regarding advances in air-quality protection measures to schools, homeowners, and operators of "sensitive receptors" such as senior and childcare facilities.
- **Action CP-1.12D:** Periodically review and update City regulations to comply with changes in State law and BAAQMD Guidelines pertaining to coal and wood-burning devices.
- **Action CP-1.12E:** Periodically review the Building Code for consistency with the latest California Green Building Standards Code, and assess the need for updates to require new construction and remodels to employ best practices and materials to reduce emissions, both during and after construction.
- **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.

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

Less than Significant Impact. BAAQMD's most recently adopted plan, the 2017 Clean Air Plan, in the Basin outlines how the San Francisco area will attain air quality standards, reduce population exposure and protect public health, and reduce GHG emissions. BAAQMD has not established a quantitative threshold of significance for project-level consistency with an air quality plan. However, per BAAQMD guidelines, if a project is consistent with Criterion 1 through Criterion 3 (see analysis below), the project would not conflict with or obstruct the implementation of the applicable air plan.[2]

[2] BAAQMD, *CEQA Air Quality Guidelines*, 2017.

Criterion 1: Does the Project support the primary goals of the Air Quality Plan?

As described below, construction air quality emissions generated by the proposed project would not exceed the BAAQMD's emissions thresholds. Operations of the project would not change from the existing use and would not add any new mobile or stationary emitters in the project vicinity. Since the proposed project would not exceed the BAAQMD construction thresholds and would not result in any new operational emissions, the proposed project would not be considered by the BAAQMD to be a substantial emitter of criteria air pollutants, and would not contribute to any non-attainment areas in the Basin.

A project would be consistent with the 2017 Clean Air Plan if it would not exceed the growth assumptions in the plan. The project would not generate additional population growth or jobs in the City. Therefore, the project would not conflict with the growth assumptions anticipated in the 2017 Clean Air Plan.

As discussed in the Vallejo Ferry Terminal Reconfiguration Project Greenhouse Gas Emissions Assessment (Kimley-Horn 2023), the project would be consistent with the City's Climate Action Plan (CAP) and would not increase GHG emissions. Therefore, the project would not conflict with the third goal of reducing GHG emissions and protecting the climate.

Criterion 2: Does the Project include applicable control measures from the Air Quality Plan?

The project is consistent with the 2017 Clean Air Plan policies that are applicable to the project site. As shown below, projects are considered consistent with the 2017 Clean Air Plan if they incorporate all applicable and feasible control measures from the 2017 Clean Air Plan and would not disrupt or hinder implementation of any 2017 Clean Air Plan control measures.

As discussed in Table 11: Project Consistency with Applicable Clean Air Plan Control Measures, the project would comply with City, State, and regional requirements.

Table 11: Project Consistency with Applicable Clean Air Plan Control Measures

Control Measure	Project Consistency
Stationary Source Control Measures	
SS21: New Source Review of Toxic Air Contaminants	**Not Applicable**. The project would not include uses that would generate new sources of TACs.
SS25: Coatings, Solvents, Lubricants, Sealants and Adhesives	**Consistent**. The project would comply with Regulation 8, Rule 3: Architectural Coatings, which would dictate the ROG content of paint available for use during construction.
SS26: Surface Prep and Cleaning Solvent	
SS31: General Particulate Matter Emissions Limitation	**Consistent**. This control measure is implemented by the BAAQMD through Regulation 6, Rule 1. This Rule Limits the quantity of particulate matter in the atmosphere by controlling emission rates, concentration, visible emissions and opacity. The project would be required to comply with applicable BAAQMD rules.
SS36: Particulate Matter from Trackout	**Consistent**. Mud and dirt that may be tracked out onto the nearby public roads during construction activities would be removed promptly by the contractor based on BAAQMD's requirements.
SS38: Fugitive Dust	**Consistent**. Material stockpiling and track out during site preparation activities would be required to utilize best management practices, such as watering

Control Measure	Project Consistency
	exposed surfaces twice a day, covering haul trucks, keeping vehicle speeds on unpaved roads under 15 mph, to minimize the creation of fugitive dust.
SS40: Odors	**Consistent**. The project would comply with BAAQMD Regulation 7 to strengthen odor standards and enhance enforceability.
Transportation Control Measures	
TR21: Commercial Harbor Craft	**Consistent**. The project would comply with the CARB harbor craft air toxic control measure and the CARB commercial harbor craft regulations.
TR22: Construction, Freight and Farming Equipment	**Consistent**. The project would comply through implementation of the BAAQMD standard condition, which requires construction equipment to be properly maintained.
Waste Management Control Measures	
WA1: Landfills	**Consistent**. The waste service provider for the project would be required to meet the AB 341 and SB 939, 1374, and 1383 requirements that require waste service providers to divert and recycle waste. Per Cal Green requirements the project would recycle construction waste.
WA3: Green Waste Diversion	
WA4: Recycling and Waste Reduction	
Source: BAAQMD, Clean Air Plan, 2017 and Kimley-Horn & Associates, 2023.	

As discussed above, the project would not exceed the assumptions in the Clean Air Plan and impacts would be less than significant.

Criterion 3: Does the Project hinder or disrupt the implementation of any Air Quality Control Measures?

The project proposes to construct an extended ferry terminal with a new reconfigured fixed pier, gangway, passenger float, and piles. The project would not increase the regional population growth or generate any additional permanent jobs. Further, Table 11 outlines the project's consistency with the applicable 2017 Clean Air Plan policies. Therefore, the project would not hinder or disrupt the implementation of any 2017 Clean Air Plan Control Measures. Impacts would be less than significant, and no mitigation is required.

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

Less than Significant Impact.

Construction Emissions

Project construction activities would generate short-term emissions of criteria air pollutants. The criteria pollutants of primary concern within the project area include ozone-precursor pollutants (i.e., ROG and NO_x) and PM_{10} and $PM_{2.5}$. Construction-generated emissions are short term and temporary, lasting only while construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the BAAQMD's thresholds of significance.

Construction results in the temporary generation of emissions during demolition, motor vehicle exhaust associated with construction equipment and worker trips, and the movement of construction equipment. Emissions of airborne particulate matter are largely dependent on the

amount of ground disturbance associated with site preparation activities, as well as weather conditions and the appropriate application of water for dust suppression.

The duration of construction activities associated with the project are estimated to last approximately five months, beginning in August 2026 and concluding in December 2026 The project's construction-related emissions were calculated using the BAAQMD-approved CalEEMod computer program, which is designed to model emissions for land use development projects, based on typical construction requirements. Project demolition is anticipated to begin in Summer 2026 and last approximately two and a half months. Project construction is anticipated to begin in October 2026 and last approximately two and a half months. To be conservative, earlier dates were utilized in modeling and use the construction year 2025. Both demolition and construction phases include additional equipment (cranes, pile driver, and tugboats) to account for waterside demolition and construction. Construction equipment would not differ based on any configuration. Thus, construction emissions shown below are representative of the proposed project. See Appendix B: Air Quality Assessment for additional information regarding the construction assumptions used in this analysis. The project's predicted maximum daily construction-related emissions are summarized in Table 12: Construction-Related Emissions.

Table 12: Construction-Related Emissions

Construction Year	Pollutant (maximum pounds per day)[1]					
	Reactive Organic Gases (ROG)	Nitrogen Oxide (NO_x)	Exhaust		Fugitive Dust	
			Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
2025	3.17	37.68	1.11	1.04	0.28	0.06
Maximum Daily Construction	**3.17**	**37.68**	**1.11**	**1.04**	**0.28**	**0.06**
BAAQMD Significance Threshold[2,3]	*54*	*54*	*82*	*54*	*N/A*	*N/A*
Exceed BAAQMD Threshold?	**No**	**No**	**No**	**No**	**N/A**	**N/A**

1. Emissions were calculated using CalEEMod and EMFAC. Emissions include compliance with the BAAQMD's Basic Construction Mitigation Measures Recommended for All Projects. These measures include the following: water exposed surfaces two times daily; cover haul trucks; clean track outs with wet powered vacuum street sweepers; limit speeds on unpaved roads to 15 miles per hour; limit idle times to 5 minutes; properly maintain mobile and other construction equipment; and post a publicly visible sign with contact information to register dust complaints and take corrective action within 48 hours.
2. Bay Area Air Quality Management District, California Environmental Quality Act Air Quality Guidelines, updated April 2023.
3. BMPs = Best Management Practices. The BAAQMD recommends the implementation of all Basic Construction Mitigation Measures, whether or not construction-related emissions exceed applicable significance thresholds. Implementation of Basic Construction Mitigation measures are considered to mitigate fugitive dust emissions to be less than significant.

Source: Refer to the CalEEMod outputs provided in Appendix B, *Air Quality Assessment*.

Fugitive Dust Emissions. Fugitive dust emissions are associated with land clearing, ground excavation, demolition, and truck travel on unpaved roadways. Dust emissions also vary substantially from day to day, depending on the level of activity, the specific operations, and weather conditions. Fugitive dust emissions may have a substantial, temporary impact on local air quality. In addition, fugitive dust may be a nuisance to those living and working in the project

vicinity. Uncontrolled dust from construction can become a nuisance and potential health hazard to those living and working nearby. The BAAQMD recommends the implementation of all Basic Construction Control Measures, whether or not construction-related emissions exceed applicable significance. The project would implement the BAAQMD Basic Construction Control Measures to control dust at the project site during all phases of construction.

*Construction Equipment and Worker Vehicle Exhaust***.** Exhaust emission factors for typical diesel-powered heavy equipment are based on the CalEEMod program defaults. Variables factored into estimating the total construction emissions include: level of activity, length of construction period, number of pieces/types of equipment in use, site characteristics, weather conditions, number of construction personnel, and the amount of materials to be transported onsite or offsite. Exhaust emissions from construction activities include emissions associated with the transport of machinery and supplies to and from the project site, emissions produced on site as the equipment is used, and emissions from trucks transporting materials and workers to and from the site. Emitted pollutants would include ROG, NO_X, PM_{10}, and $PM_{2.5}$. The BAAQMD recommends the implementation of all Basic Construction Control Measures, whether or not construction-related emissions exceed applicable significance thresholds. As detailed in Table 12, project construction emissions would implement the BAAQMD Basic Control Measures and would be below BAAQMD thresholds. Thus, construction emissions would result in a less than significant impact.

*ROG Emissions***.** In addition to gaseous and particulate emissions, construction equipment and construction worker trips would result in ROG emissions, which are O_3 precursors. In accordance with the methodology prescribed by the BAAQMD, the ROG emissions associated with paving have been quantified with CalEEMod. The highest concentration of ROG emissions would be generated from demolition beginning in Summer 2026 and lasting approximately two months.

Summary. As shown in Table 12, all criteria pollutant emissions would remain below their respective thresholds. BAAQMD considers fugitive dust emissions to be potentially significant without implementation of the Construction Control Measures which help control fugitive dust. NOX emissions are primarily generated by engine combustion in construction equipment, haul trucks, and employee commuting, requiring the use of newer construction equipment with better emissions controls would reduce construction-related NOX emissions. With implementation of BAAQMD's Basic Construction Control Measures, the proposed project's construction would not worsen ambient air quality, create additional violations of federal and state standards, or delay the Basin's goal for meeting attainment standards. Impacts would be less than significant, and no mitigation is required.

Operational Emissions

As mentioned previously, the project would construct an extended ferry terminal with a new reconfigured fixed pier, gangway, passenger float, and piles. The project does not propose any new sources of air pollutants and would provide improved terminal operations and reduced dredging impacts. The project would not generate any additional traffic or population growth. Therefore, the operation of the project would not generate any new criteria pollutant emissions. There would be no impact, and no mitigation is required.

FTA NEPA Conformity Analysis

As shown in Table 13: Project General Conformity Emissions, the project's emissions would not exceed the General Conformity de minimis thresholds in the SFBAAB. As mentioned previously, the project's operational emissions are not included as the project would not generate any new operational emissions.

Table 13: Project General Conformity Emissions

Construction Year	Pollutant (tons per year)[1]					
	Reactive Organic Gases (ROG)	Nitrogen Oxide (NO_x)	Carbon Monoxide (CO)	Coarse Particles ($PM_{2.5}$)	Fine Particles (PM_{10})	Sulfur Dioxide (SO_2)
2025	0.15	1.90	1.00	0.05	0.06	0.00
General Conformity Threshold[2]	*100*	*100*	*100*	*N/A*	*100*	*100*
Exceed BAAQMD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

1. Emissions were calculated using CalEEMod and EMFAC. Emissions include compliance with the BAAQMD's Basic Construction Mitigation Measures Recommended for All Projects. These measures include the following: water exposed surfaces two times daily; cover haul trucks; clean track outs with wet powered vacuum street sweepers; limit speeds on unpaved roads to 15 miles per hour; limit idle times to 5 minutes; properly maintain mobile and other construction equipment; and post a publicly visible sign with contact information to register dust complaints and take corrective action within 48 hours.
2. United States Environmental Protection Agency, *De Minimis Tables*, 2023.

Source: Refer to the CalEEMod outputs provided in Appendix B, *Air Quality Assessment*.

Cumulative Short-Term Emissions

The SFBAAB is designated nonattainment for O_3, PM_{10}, and $PM_{2.5}$ for State standards and nonattainment for O_3 and $PM_{2.5}$ for Federal standards. As discussed above, the project's construction-related emissions by themselves would not have the potential to exceed the BAAQMD significance thresholds for criteria pollutants.

Since these thresholds indicate whether an individual project's emissions have the potential to affect cumulative regional air quality, it can be expected that the project-related construction emissions would not be cumulatively considerable. The BAAQMD recommends Basic Construction Control Measures for all projects whether or not construction-related emissions exceed the thresholds of significance. Compliance with BAAQMD construction-related mitigation requirements is considered to reduce cumulative impacts at a Basin-wide level. As a result, construction emissions associated with the project would not result in a cumulatively considerable contribution to significant cumulative air quality impacts. Impacts would be less than significant, and no mitigation is required.

Cumulative Long-Term Impacts

The BAAQMD has not established separate significance thresholds for cumulative operational emissions. The nature of air emissions is largely a cumulative impact. As a result, no single project

is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. The BAAQMD developed the operational thresholds of significance based on the level above which a project's individual emissions would result in a cumulatively considerable contribution to the Basin's existing air quality conditions. Therefore, a project that exceeds the BAAQMD operational thresholds would also be a cumulatively considerable contribution to a significant cumulative impact.

As described above, the project would not generate any new operational emissions. As a result, operational emissions associated with the project would not result in a cumulatively considerable contribution to significant cumulative air quality impacts. Impacts would be less than significant, and no mitigation is required.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less than Significant Impact. Sensitive land uses are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. Sensitive receptors in the area include residential uses along Mare Island Way.

Toxic Air Contaminants

Construction equipment and associated heavy-duty truck traffic generate diesel exhaust, which is a known toxic air contaminant (TACs). Diesel exhaust from construction equipment operating at the site can pose a health risk to nearby sensitive receptors. The closest sensitive receptors to the project site are the residences along Mare Island Way, to the southeast of the project site. The BAAQMD provides guidance for evaluating impacts from TACs in its CEQA Air Quality Guidelines document. As noted therein, an incremental cancer risk of greater than 10 cases per million at the Maximally Exposed Individual (MEI) will result in a significant impact. The BAAQMD considers exposure to annual $PM_{2.5}$ concentrations that exceed 0.3 $\mu g/m^3$ from a single source to be significant. The BAAQMD significance threshold for non-cancer hazards is 1.0.

Stationary sources within a 1,000-foot radius of the project site were identified using BAAQMD's Stationary Source Screening Analysis Tools and consultation with the BAAQMD. There were no other stationary sources located within 1,000 feet of the proposed project site.

Construction-Related Diesel Particulate Matter

Project construction would generate diesel particulate matter (DPM) emissions from the use of off-road diesel equipment required for construction activities. For construction activity, DPM is the primary toxic air contaminant of concern. On-road diesel-powered haul trucks traveling to and from the construction area to deliver materials and equipment are less of a concern because they would not stay on the site for long durations. Diesel exhaust from construction equipment operating at the site poses a health risk to nearby sensitive receptors.

The amount to which the receptors are exposed (a function of concentration and duration of exposure) is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). On-road diesel-powered haul trucks traveling to

and from the construction area to deliver materials and equipment are less of a concern because they would not stay on the site for long durations.

Health-related risks associated with diesel-exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer. The use of diesel-powered construction equipment would be episodic and would occur in various phases throughout the project site. Additionally, construction activities would limit idling to no more than five minutes (per State standards), which would further reduce nearby sensitive receptors' exposure to temporary and variable DPM emissions. Furthermore, even during the most intense year of construction, emissions of DPM would be generated from different locations on the project site rather than in a single location because different types of construction activities (e.g., demolition and building construction) would not occur at the same place at the same time.

$PM_{2.5}$ construction emissions rates in grams per second were calculated from the total annual mitigated on-site exhaust emissions reported in CalEEMod total during construction. It should be noted that although construction would span over several years, the modeling conservatively uses the year with the highest emission for each phase. Annual emissions were converted to grams per second and these emissions rates were input into AERMOD.

As noted above, maximum (worst case) $PM_{2.5}$ exhaust construction emissions over the entire construction period were used in AERMOD to approximate construction DPM emissions. Risk levels were calculated based on the California Office of Environmental Health Hazard Assessment (OEHHA) guidance document, Air Toxics Hot Spots Program Risk Assessment Guidelines (February 2015). Results of this assessment are summarized in Table 14: Construction Risk.

Table 14: Construction Risk

Exposure Scenario	Pollutant Concentration ($\mu g/m^3$)	Maximum Cancer Risk (Risk per Million)	Chronic Noncancer Hazard
Construction (Worker)	0.148	4.62	0.592
Construction (Resident)	0.032	9.94	0.120
Threshold	*0.3*	*10 in one million*	*1.0*
Threshold Exceeded	**No**	**No**	**No**
Refer to Appendix B: Air Quality Assessment.			

Results of this assessment indicate that the maximum unmitigated concentration of $PM_{2.5}$ during construction would be 0.032 $\mu g/m^3$ for residences, which would not exceed the BAAQMD threshold of 0.3 $\mu g/m^3$. The pollutant concentrations for workers would be 0.148 $\mu g/m^3$ which is also below the BAAQMD threshold. The highest calculated carcinogenic risk from project construction, would be 9.94 per million for residences and 4.62 per one million for workers, which would not exceed the BAAQMD threshold of 10 in one million. Non-cancer hazards for DPM would be below BAAQMD threshold, with a chronic hazard index computed at 0.592. Chronic hazards would be below the BAAQMD significance threshold of 1.0. As described above, worst-case construction risk levels based on AERMOD and conservative assumptions would be below the BAAQMD's thresholds. Therefore, impacts would be less than significant, and no mitigation is required.

Mobile Sources

The project would not place sensitive receptors within 1,000-feet of a major roadway (mobile TAC source). A major roadway is defined by BAAQMD as any road that has more than 10,000 daily trips. Additionally, the project would not affect existing vehicle distribution and travel speeds or generate any additional trips. Thus, the project does not involve the increase of transit trips or routes and would not generate increased emissions from expanded service. Impacts would be less than significant, and no mitigation is required.

Carbon Monoxide Hotspots

The primary mobile-source criteria pollutant of local concern is carbon monoxide. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. Transport of this criteria pollutant is extremely limited; CO disperses rapidly with distance from the source under normal meteorological conditions. Under certain meteorological conditions, however, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. Areas of high CO concentrations, or "hot spots," are typically associated with intersections that are projected to operate at unacceptable levels of service during the peak commute hours. CO concentration modeling is therefore typically conducted for intersections that are projected to operate at unacceptable levels of service during peak commute hours.

The SFBAAB is designated as in attainment for carbon monoxide (CO). Emissions and ambient concentrations of CO have decreased dramatically in the SFBAAB with the introduction of the catalytic converter in 1975. No exceedances of the CAAQS or NAAQS for CO have been recorded at nearby monitoring stations since 1991. As a result, the BAAQMD screening criteria notes that CO impacts may be determined to be less than significant if a project would not increase traffic volumes at local intersections to more than 44,000 vehicles per hour, or 24,000 vehicles per hour for locations in heavily urban areas, where "urban canyons" formed by buildings tend to reduce air circulation.

As mentioned previously, the project would not generate any additional trips or impact existing vehicle distribution. Therefore, the project would not involve intersections with more than 24,000 or 44,000 vehicles per hour. As a result, the project would not have the potential to create a CO hotspot. Impacts would be less than significant, and no mitigation is required.

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

No Impact.

Construction

Construction activities associated with the project may generate detectable odors from heavy duty equipment (i.e., diesel exhaust), as well as from architectural coatings and asphalt off-gassing. Odors generated from the referenced sources are common in the man-made environment and are not known to be substantially offensive to adjacent receptors. Any construction-related odors would be short-term in nature and cease upon project completion. As a result, impacts to existing adjacent land uses from construction-related odors would be short-term in duration. There would be no impact, and no mitigation is required.

Operational

BAAQMD has established odor screening thresholds for land uses that have the potential to generate substantial odor complaints, including wastewater treatment plants, landfills or transfer stations, composting facilities, confined animal facilities, food manufacturing, and chemical plants. BAAQMD's thresholds for odors are qualitative based on BAAQMD's Regulation 7, Odorous Substances. This rule places general limitations on odorous substances and specific emission limitations on certain odorous compounds. The project would not include any land use that has the potential to generate substantial odor nor add any additional sources of odorous substances. There would be no impact, and no mitigation is required.

4.4 Biological Resources

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		**X**		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?			**X**	
c) Have a substantial adverse effect on state or federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?		**X**		
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?		**X**		
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				**X**

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				**X**

Setting

A Biological Resources Technical Report (BRTR) (Appendix C) was prepared by WRA in February 2024. The BRTR describes the existing conditions related to biological resources within the vicinity of the project site, provides regulatory and environmental setting for the project, and discusses potential biological resource impacts that could result under implementation of the proposed project. Mitigation measures are also provided where potentially significant impacts were identified.

A WRA biologist visited the project area to map vegetation, aquatic features, and other land cover types; document plant and wildlife species present; and evaluate on-site habitat for the potential to support special-status species as defined by CEQA.[3]

Terrestrial and Aquatic Resources

In most instances, communities are characterized and mapped based on distinct shifts in plant assemblage (vegetation) and follow the California Natural Community List and A Manual of California Vegetation, Online Edition. These resources cannot anticipate every component of every potential vegetation assemblage in California, and so in some cases, it is necessary to identify other appropriate vegetative classifications based on best professional judgment of WRA biologists. When undescribed variants are used, it is noted in the description. Vegetation alliances (natural communities) with a CDFW Rank of 1 through 3 (globally critically imperiled [S1/G1], imperiled [S2/G2], or vulnerable [S3/G3]), were evaluated as sensitive as part of this evaluation.

The project area largely consists of developed infrastructure such as gangways, paved walkways, and roads associated with the current ferry system and adjacent segment of the Bay Trail. Vegetation within the developed areas consists of maintained lawns and ornamental plantings. This community is not considered sensitive by Solano County, CDFW, or any other regulatory entity.

All waters within the project area are subtidal or intertidal and are part of Mare Island Strait of the Napa River. Open water comprises the majority of the project area and is mapped as all areas below the mean high water (MHW) elevation. Open waters potentially support several habitat types for special-status species, discussed further below. Open waters are considered sensitive under CEQA.

[3] WRA, *WETA Vallejo Ferry Terminal Reconfiguration Project Biological Resources Technical Report*, 2023.

Special Status Species

Special Status Plants

Based upon a review of the resource databases listed in Section 3.0, 71 special-status plant species have been documented in the vicinity of the proposed project area. All these species have no potential or are unlikely to occur within the proposed project area for one or more of the following:

- Hydrologic conditions (e.g., tidal, riverine) necessary to support the special-status plant species are not present in the proposed project area;
- Edaphic (soil) conditions (e.g., volcanic tuff, serpentine) necessary to support the special-status plant species are not present in the proposed project area;
- Topographic conditions (e.g., north-facing slope, montane) necessary to support the special-status plant species are not present in the proposed project area;
- Unique pH conditions (e.g., alkali scalds, acidic bogs) necessary to support the special-status plant species are not present in the proposed project area;
- Associated natural communities (e.g., interior chaparral, tidal marsh) necessary to support the special-status plant species are not present in the proposed project area;
- The proposed project area is geographically isolated (e.g., below elevation, coastal environ) from the documented range of the special-status plant species;
- The historical landscape and/or habitat(s) of the proposed project area were not suitable habitat prior to land/type conversion (e.g., reclaimed shoreline) to support the special-status plant species;
- Land use history and contemporary management (e.g., grading, development) has degraded the localized habitat necessary to support the special-status plant species.

The entirety of the proposed project area is either developed land, subject to substantial historic soil disturbance, or is open water. Within the open water areas, the presence of a vertical seawall prevents suitable intertidal and transition zone habitats from forming to support wetland plant species. These conditions are not suitable for special-status plant species.

Special Status Wildlife

Based upon a review of the resource databases listed in Section 3.0, 65 special-status wildlife species have been documented in the vicinity of the proposed project area. Of these, most have no potential or are unlikely to occur in the proposed project area based on a lack of habitat features. The following formally listed species were determined to have a moderate or high potential to occur within the project vicinity based on habitat present and previous known locations in the CNDDB and IpaC records: California Central Valley steelhead DPS, Central Coast Steelhead DPS, southern DPS of North American green sturgeon, Sacramento River winter-run Chinook Salmon ESU, Central Valley spring-run Chinook Salmon ESU, longfin smelt (Spirinchus thaleichthys), and Delta smelt (Hypomesus transpacificus). Other special status wildlife with moderate to high potential to occur in the project area include: Central Valley fall/late fall-run Chinook Salmon ESU, White sturgeon (Acipenser transmontanus), Pacific lamprey (Entosphenus tridentatus), River lamprey (Lampetra ayres), Sacramento splittail (Pogonichthys macrolepidotus), and marine mammals.

Critical Habitat and Essential Fish Habitat

Critical Habitat

"Critical habitat" is defined in Section 3(5)(A) of the federal Endangered Species Act, and designated by USFWS and NMFS, as habitat (lands or waters) that contain physical or biological features considered essential to the species' conservation within the species' range, as well as habitat determined to be essential to the species conservation outside of the current range of that species. A review of the background literature showed that the project site is located within or adjacent to critical habitat for two special-status fish species:

- Central California Coast DPS Steelhead
- Southern DPS green sturgeon
- SRWR Critical Habitat

Because the project is within a bay or estuary, the extent of critical habitat is defined up to the high tide line (HTL). In addition, Delta smelt critical habitat is present near the project vicinity but ends at the Carquinez Bridge approximately 3 miles southeast of the project site.

Essential Fish Habitat

A review of the background literature revealed that the project site is located within EFH for three fisheries management plans: Coastal Pelagic, Pacific Groundfish and Pacific Salmon.

- The Coastal Pelagic Fisheries Management Plan (PFMC 2021) is designed to protect habitat for migratory pelagic species such as Pacific sardine (Sardinops sagax), Pacific mackerel (Scomber japonicus), northern anchovy (Engraulis mordax), market squid (Doryteuthis opalescens), jack mackerel (Trachurus symmetricus) and various species of krill or euphausiids.
- The Groundfish Fisheries Management Plan is designed to protect habitat for approximately 80 species of fish, including various species of flatfish, rockfish, groundfish, and several species of sharks and skates.
- The Pacific Salmon Fisheries Management Plan is designed to protect habitat for commercially important salmonid species specifically Chinook and Coho salmon occur within the project area. While Coho salmon are extirpated from San Francisco Bay and its tributaries, Chinook Salmon would be seasonally present within waters surrounding the project site.

Similar to critical habitat discussed above, waters of the project vicinity would be considered EFH up to the high tide line.

Jurisdictional Waters

The project area was evaluated for the presence of wetlands and other aquatic resources according to literature review. Areas meeting these indicators were mapped as aquatic resources and categorized using the vegetation community classification methods described above.

In tidal areas, the upper extent of the U.S. Army Corps of Engineers (Corps)/Regional Water Quality Control Board (RWQCB) jurisdiction is mapped up to the high tide line (HTL). The high tide line in the project vicinity was determined based on the elevation of the highest predicted tides at the closest National Oceanic and Atmospheric Administration (NOAA) tide station (Davis Point, 9415141).

BCDC's jurisdictional boundaries include (a) BCDC's "Bay Jurisdiction", which in this location includes all tidally influenced areas below the elevation of mean high water (MHW), and (b) BCDC's "Shoreline Band" jurisdiction, which includes areas of the shoreline within 100 feet of MHW. The Davis Point NOAA tide station is used to determine the locations of these limits.

Wildlife Corridors and Habitat Linkages

Wildlife movement between suitable habitat areas can occur via open space areas lacking substantial barriers. The terms "landscape linkage" and "wildlife corridor" are often used when referring to these areas. Above all, wildlife corridors must link two areas of core habitat and should not direct wildlife to developed areas or areas that are otherwise void of core habitat.

The aquatic portions of the project area function as a movement corridor for fish, including for the various special-status species discussed above. Salmonids for example will migrate through waters of the project area typically in late-spring or early summer when migrating to the Pacific Ocean as smolts/juveniles. Adults then migrate through the project area when returning to natal streams in late-fall or early winter. In the case of more regional species such as Delta or longfin smelt, they spawn in the Sacramento Delta and Suisun Bay, but make localized seasonal migrations to areas within San Francisco Bay. As such, the project area is situated between two core habitat areas (i.e., the Bay/ocean and freshwater spawning grounds) making it a migratory corridor. The project area does not provide a migratory corridor for species other than fish, because it does not provide for substantial connectivity between two core habitat areas for other classes of plants or wildlife.

No eelgrass beds have been mapped within the project area. Additionally, the project area is routinely dredged so any plants that have a chance to establish would be destroyed in this effort. The entire shoreline of the project area is hardened by a seawall. As such, the project area does not function as a nursery site for fish species. The upland areas of the site are highly developed and do not contain rookery habitats for other species such as egrets, herons, or marine mammals.

Regulatory Framework

Federal

Waters of the United States, Including Wetlands

The Corps regulates "Waters of the United States" under Section 404 of the Clean Water Act (CWA). Waters of the United States are defined in the Code of Federal Regulations (CFR) as including the territorial seas, and waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, such as tributaries, lakes and ponds, impoundments of waters of the U.S., and wetlands that are hydrologically connected with these navigable features (33 CFR 328.3). Potential wetland areas, according to the three criteria used to delineate wetlands as defined in the *U.S. Army Corps of Engineers Wetlands Delineation Manual* (Corps Manual; Environmental Laboratory 1987), are identified by the presence of (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. Unvegetated waters including lakes, rivers, and streams may also be subject to Section 404 jurisdiction and are characterized by an ordinary high water mark (OHWM) identified based on field indicators such as the lack of vegetation, sorting of sediments, and other indicators of flowing or standing water. The placement of fill material into Waters of the United States generally requires a permit from the Corps under Section 404 of the CWA.

The Corps also regulates construction in navigable waterways of the U.S. through Section 10 of the Rivers and Harbors Act (RHA) of 1899 (33 U.S. Code [USC] 403). Section 10 of the RHA requires Corps approval

and a permit for excavation or fill, or alteration or modification of the course, location, condition, or capacity of, any port, roadstead, haven, harbor, canal, lake, harbor or refuge, or enclosure within the limits of any breakwater, or of the channel of any navigable water of the United States. Section 10 requirements apply only to navigable waters themselves, and are not applicable to tributaries, adjacent wetlands, and similar aquatic features not capable of supporting interstate commerce.

Special Protections for Nesting Birds and Bats

The Federal Bald and Golden Eagle Protection Act provides relatively broad protections to both of North America's eagle species (bald eagle [*Haliaeetus leucocephalus*] and golden eagle [*Aquila chrysaetos*]) that in some regards are similar to those provided by the ESA. In addition to regulations for special-status species, most native birds in the United States, including non-status species, have baseline legal protections under the Migratory Bird Treaty Act of 1918 and CFGC, i.e., sections 3503, 3503.5 and 3513. Under these laws/codes, the intentional harm or collection of adult birds as well as the intentional collection or destruction of active nests, eggs, and young is illegal. For bat species, the Western Bat Working Group (WBWG) designates conservation status for species of bats, and those with a high or medium-high priority are typically given special consideration under CEQA.

Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act provides for conservation and management of fishery resources in the U.S., administered by NMFS. This Act establishes a national program intended to prevent overfishing, rebuild overfished stocks, ensure conservation, and facilitate long-term protection through the establishment of Essential Fish Habitat (EFH). EFH consists of aquatic areas that contain habitat essential to the long-term survival and health of fisheries, which may include the water column, certain bottom types, vegetation (e.g., eelgrass (*Zostera* spp.)), or complex structures such as oyster beds. Any federal agency that authorizes, funds, or undertakes action that may adversely affect EFH is required to consult with NMFS.

Marine Mammal Protection Act

The Marine Mammal Protection Act (MMPA) was enacted in 1972 and protects all marine mammals within the territorial boundaries of the United States from take. The definition of "take" in the MMPA is the same as that under the FESA. The law is administered by the NMFS, who may issue permits for incidental take and importation of marine mammals in certain circumstances.

Endangered Species Act

Specific species of plants, fish, and wildlife species may be designated as threatened or endangered by the federal Endangered Species Act (ESA). The ESA (16 USC 1531 et seq.) is implemented by the USFWS and the National Marine Fisheries Service (NMFS). The USFWS and NMFS maintain lists of endangered and threatened plant and animal species (referred to as "listed species"). "Proposed" or "candidate" species are those that are being considered for listing and are not protected until they are formally listed as threatened or endangered. Under the ESA, authorization must be obtained from the USFWS or NMFS prior to take of any listed species. "Take" under the ESA is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Take under the ESA includes direct injury or mortality to individuals, disruptions in normal behavioral patterns resulting from factors such as noise and visual disturbance and impacts to habitat for listed species. Actions that may result in take of an ESA-listed species may obtain a permit under ESA Section 10, or via the interagency consultation described in ESA Section 7. Federal-listed plant species are only protected when take occurs on federal land.

The ESA also provides for designation of critical habitat, which are specific geographic areas containing physical or biological features "essential to the conservation of the species." Protections afforded to designated critical habitat apply only to actions that are funded, permitted, or carried out by federal agencies. Critical habitat designations do not affect activities by private landowners if there is no other federal agency involvement.

State

Sensitive Natural Communities

Sensitive natural communities include habitats that fulfill special functions or have special values. Natural communities considered sensitive are those identified in local or regional plans, policies, regulations, or by the CDFW. CDFW ranks sensitive communities as "threatened" or "very threatened" (CDFW 2023a) and keeps records of their occurrences in its California Natural Diversity Database (CNDDB; CDFW 2023b). Natural communities are ranked 1 through 5 in the CNDDB based on NatureServe's (2020) methodology, with those communities ranked globally (G) or statewide (S) as 1 through 3 considered sensitive. Impacts to sensitive natural communities identified in local or regional plans, policies, or regulations or those identified by the CDFW or U.S. Fish and Wildlife Service (USFWS) must be considered and evaluated under CEQA (California Code of Regulations [CCR] Title 14, Div. 6, Chap. 3, Appendix G). In addition, this general class includes oak woodlands that are protected by local ordinances under the Oak Woodlands Protection Act and Section 21083.4 of California Public Resources Code (CPRC).

Waters of the State, Including Wetlands

The term "Waters of the State" is defined by the Porter-Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." The SWRCB and nine RWQCB protect waters within this broad regulatory scope through many different regulatory programs. Waters of the State in the context of a CEQA Biological Resources evaluation include wetlands and other surface waters protected by the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (SWRCB 2019). The SWRCB and RWQCB issue permits for the discharge of fill material into surface waters through the State Water Quality Certification Program, which fulfills requirements of Section 401 of the CWA and the Porter-Cologne Water Quality Control Act. Projects that require a Clean Water Act permit are also required to obtain a Water Quality Certification. If a project does not require a federal permit but does involve discharge of dredge or fill material into surface waters of the State, the SWRCB and RWQCB may issue a permit in the form of Waste Discharge Requirements.

Sections 1600-1616 of California Fish and Game Code

Streams and lakes, as habitat for fish and wildlife species, are regulated by CDFW under Sections 1600-1616 of California Fish and Game Code (CFGC). Alterations to or work within or adjacent to streambeds or lakes generally require a 1602 Lake and Streambed Alteration Agreement. The term "stream," which includes creeks and rivers, is defined in the CCR as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life [including] watercourses having a surface or subsurface flow that supports or has supported riparian vegetation" (14 CCR 1.72). The term "stream" can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife (CDFG 1994). Riparian vegetation has been defined as "vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself" (CDFG 1994). Removal of riparian vegetation also requires a Section 1602 Lake and Streambed Alteration Agreement from CDFW.

San Francisco Bay and Shoreline

Enacted in 1965, the McAteer-Petris Act (California Government Code Section 66600 *et seq*.) established the San Francisco Bay Conservation and Development Commission (BCDC) as a state agency charged with preparing a plan for the long-term use of the Bay. BCDC has several areas of jurisdiction, including San Francisco Bay (including sloughs and marshlands lying between mean high tide and 5 feet above mean sea level) and a shoreline band consisting of all territory located between the shoreline of the Bay and a line 100 feet landward of and parallel with the shoreline (California Government Code 66610). Any person or governmental agency wishing to place fill, to extract materials, or to make any substantial change in use of any water, land, or structure within BCDC jurisdiction must secure a permit from BCDC.

California Endangered Species Act

The California endangered Species Act (CESA) (CFGC 2050 et seq.) prohibits the take of any plant and animal species that the CFGC determines to be an endangered or threatened species in California. CESA regulations include take protection for threatened and endangered plants on private lands, as well as extending this protection to candidate species that are proposed for listing as threatened or endangered under CESA. The definition of a "take" under CESA ("hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill") only applies to direct impact to individuals, and does not extend to habitat impacts or harassment. CDFW may issue an Incidental Take Permit under CESA to authorize take if it is incidental to otherwise lawful activity and if specific criteria are met. Take of these species is also authorized if the geographic area is covered by a Natural Community Conservation Plan (NCCP), as long as the NCCP covers that activity.

Fully Protected Species and Designated Rare Plant Species

This category includes specific plant and wildlife species that are designated in the CFGC as protected even if not listed under CESA or ESA. Fully Protected Species includes specific lists of birds, mammals, reptiles, amphibians, and fish designated in CFGC. Fully protected species may not be taken or possessed at any time. No licenses or permits may be issued for take of fully protected species, except for necessary scientific research and conservation purposes. The definition of "take" is the same under the California Fish and Game Code and the CESA. By law, CDFW may not issue an Incidental Take Permit for Fully Protected Species. Under the California Native Plant Protection Act (NPPA), CDFW has listed 64 "rare" or "endangered" plant species, and prevents "take", with few exceptions, of these species. CDFW may authorize take of species protected by the NPPA through the Incidental Take Permit process, or under a NCCP.

Species of Special Concern, Movement Corridors, and Other Special-status Species under CEQA

To address additional species protections afforded under CEQA, CDFW has developed a list of special species as "a general term that refers to all of the taxa the CNDDB is interested in tracking, regardless of their legal or protection status." This list includes lists developed by other organizations, including for example, the Audubon Watch List Species, the Bureau of Land Management Sensitive Species, and USFWS Birds of Special Concern. Plant species on the California Native Plant Society (CNPS) Rare Plant Inventory (Inventory; CNPS 2023a) with California Rare Plant Ranks (Rank) of 1 and 2, as well as some with a Rank of 3 or 4, are also considered special-status plant species and must be considered under CEQA. Some Rank 3 and Rank 4 species are typically only afforded protection under CEQA when such species are particularly unique to the locale (e.g., range limit, low abundance/low frequency, limited habitat) or are otherwise considered locally rare. Additionally, any species listed as sensitive within local plans, policies and

ordinances are likewise considered sensitive. Movement and migratory corridors for native wildlife (including aquatic corridors) as well as wildlife nursery sites are given special consideration under CEQA.

Local

City of Vallejo General Plan 2040

The General Plan contains policies and actions pertaining to the following biological resources categories that are relevant to the project area:

Policy NBE-1.1: Natural Resources. Protect and enhance hillsides, waterways, wetlands, occurrences of special-status species and sensitive natural communities, and aquatic and important wildlife habitat through land use decisions that avoid and mitigate potential environmental impacts on these resources to the extent feasible.

- **Action NBE-1.1B**: Continue participation in regional programs, including the Solano Multispecies HCP/NCCP.
- **Action NBE-1.1F**: Conduct surveys, assess project impacts, determine protective measures for sensitive resources.
- **Action NBE-1.1G**: No net loss in aquatic feature acreage or habitat value

Policy NBE-1.2: Sensitive Resources. Ensure that adverse impacts on sensitive biological resources, including special-status species, sensitive natural communities, and wetlands are avoided and mitigated to the greatest extent feasible as development takes place.

- **Action NBE-1.2C**: Nesting bird protection
- **Action NBE-1.2D**: Continue requiring environmental review for development project to achieve no net loss of sensitive habitat acreage, value, and functions.

Policy NBE-1.3: Interpretive Facilities. Encourage the development of facilities that provide education about local environmental resources and ecosystems.

Policy NBE-1.4: Waterway Restoration. Restore riparian corridors and waterways throughout the city.

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

Solano Multispecies Habitat Conservation Plan

The Solano Habitat Conservation Plan (HCP) establishes a framework for complying with State and Federal endangered species regulations while accommodating future urban growth, development of infrastructure, and ongoing operations and maintenance activities associated with flood control, irrigation facilities, and other public infrastructure undertaken by or under the permitting authority/control of the Plan Participants within Solano County. The project area for this proposed project is already developed and occurs within the Impaired Open Water Habitats projected for the Solano Multispecies HCP.

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

Potentially Significant Unless Mitigation Incorporated.

Construction

San Francisco Bay is one of the busiest ports in the world with more than 7,000 container ships per year entering the Bay. One consequence of such a robust trade network is the introduction of non-native species which are often carried in ballast water of vessels or on ship hulls. If introduced non-native species establish in a new environment and cause harm to native species and habitats, they are considered "invasive species". Introductions of invasive species to San Francisco Bay includes both fish and invertebrate species, which cause a variety of impacts to native fauna. Invasive species have a variety of deleterious effects from competing with or consuming native species, to decreasing pelagic productivity. As a result of this impact and considering the danger that invasive species pose to native species and ecosystems, the U.S. Court of Appeals for the Ninth Circuit ruled that the U.S. Environmental Protection Agency must regulate ship discharges, including ballast water discharges containing invasive species, that pollute U.S. waters under the Clean Water Act. Further, Congress passed the Vessel Incidental Discharge Act, combining laws that regulate vessel discharge to help prevent the introduction of harmful species.

Within aquatic environments, barges and boats used for construction are expected to be based in San Francisco Bay; therefore, vessels used to implement the project are not expected to introduce novel invasive species to San Francisco Bay. In addition, the reconfigured ferry terminal would be utilized by existing ferry vessels within WETA's fleet that operate exclusively within San Francisco Bay; however, the new structures installed by the project have potential to introduce novel invasive species to the area or contribute to the spread of existing invasive species within San Francisco Bay; therefore, the potential introduction of invasive species during construction and operations is a potentially significant impact to special-status fish and marine mammals. With implementation of **Mitigation Measure MM BIO-1**, potential impacts resulting from the introduction of invasive species would be less-than-significant.

In-water construction would require the use of specialized mechanical equipment including vibratory or impact pile driving hammers, tugboats, cranes, floating barges, and dredging equipment. These larger pieces of equipment require generators or compressors to run equipment, which use a variety of petroleum and plant-based fuels or lubricants. If spilled, these fuels and lubricants can be toxic to aquatic ecosystems. Similarly, debris from construction or demolition of in-water structures may itself be contaminated with toxic lubricants or preservatives. Introduction of such materials could cause degradation to the aquatic environment, including special-status fish and marine mammals, which is a potentially significant impact under CEQA.

In addition, some elements of the proposed project may also require cast-in-place concrete for above-water structures, such the caps to the dolphins which would connect the fixed pier and gangways. When implemented over water, cast-in-place concrete can result in unintentional spilling of concrete into the water column. The introduction of raw concrete into the water column can result in changes to pH levels that can adversely affect fish. At sufficiently high concentrations, raw concrete can lead to fish mortality; however, the amount of concrete that would be cast-in-place over the water within the project area is not anticipated to be sufficient to result in significant impacts to fish, particularly given the volume of water present in the work area. Further, no cast-in-place concrete is proposed within the water column.

With implementation of **Mitigation Measures MM BIO-2** through **MM BIO-5**, potential impacts from spills and debris would be less-than-significant.

Turbidity

Natural fluctuations in turbidity occur daily within the greater San Francisco Bay. The naturally occurring light weight sediments that dominate the Bay and Sacramento-San Joaquin Delta are easily mobilized during strong summer winds and storm related high flows, causing extreme spikes in turbidity, which can vary by several hundred nephelometric turbidity units (NTUs) even within a single day. Elevated turbidity can impair gill function in fish, reduce oxygen availability in the water column, decrease physiological capabilities, and increase stress in fish. While turbidity can impact sensitive life stages of fish (i.e., eggs or larval fish), elevated turbidity alone does not represent a uniform impact to fish species. Delta smelt distribution has been positively correlated with higher turbidity, which can help increase foraging efficiency and decrease predation threats. Species present within the Bay and Delta are tolerant of these naturally occurring frequent large fluctuations in turbidity.

In-water work necessary to implement the proposed project, such as pile removal, pile installation, and dredging, are expected to mobilize sediments which may contribute to increased water turbidity. Turbidity from pile removal and driving is likely to be limited to a small area (approximately 150 to 200 feet of each pile) and typically dissipates within one hour or is swept away and diluted by tidal exchange. Thus, turbidity from pile driving activities is expected to be less than significant; however, turbidity associated with mechanical dredging typically spreads further due to the volume of bottom substrates disturbed. Studies of turbidity in San Francisco Bay showed that turbidity may spreads up to 600 feet from the point of disturbance, but diminishes to background levels within one tidal cycle for singular events. The actual distance suspended sediment caused by the project would move is dependent upon multiple factors (i.e., tide, river outflows, wind condition, etc.) but the previous studies provide a guide under which we can determine potential effects.

Turbidity caused by the proposed project may result in areas such as the shallow water habitat between the existing ferry terminal and the seawall to be temporarily unsuitable for fish.

Recent sediment characterization sampling and analysis testing within the project area found no elevated levels of metal or chemicals known to be harmful to aquatic ecosystems with the exception of Arsenic, which slightly exceeded background levels for San Francisco Bay.[4] However, this recent testing did not assess any samples around the proposed temporary ferry terminal location where additional dredging may be required as part of project. Previous testing of nearshore sediments within the existing ferry terminal basin were found to contain elevated levels of polychlorinated biphenyls (PCBs); therefore, the sediments under the proposed temporary ferry terminal location have potential to contain excess levels of PCBs or other toxins. As such, dredging within this area has potential to expose aquatic species to toxins, which could result in significant impact. These impacts are considered potentially significant to special-status fish and marine mammals under CEQA. With implementation of **Mitigation Measure MM BIO-6**, below, impacts resulting from the release of toxic materials during dredging would be less-than-significant.

[4] FOTH, *Sediment Characterization Sampling and Analysis Results Vallejo Ferry Terminal* (2023).

Special-Status Fish

Seven formally listed species, as well as five other special-status fish species are known to occur within the Mare Island Strait of the Napa River. Formally listed species include Central California Coast steelhead, Central Valley steelhead, Spring-run Chinook, Winter-run Chinook, Southern Distinct Population Segment green sturgeon, longfin smelt, and Delta smelt. Special-status species which have not been formally listed include Fall/late-Fall run Chinook salmon, Pacific lamprey, river lamprey, Sacramento splittail and white sturgeon. All of these species make seasonal migrations through the project area and spend some portion of the year in the project area vicinity; however, no spawning habitats are known for any of these species within the project area.

The special-status fish species listed above have potential to occur in association with the open water portion of the project area. Many of the species are only present seasonally when salinity conditions are appropriate or during migration periods. Species that are expected to be seasonally present include all of the salmonids (all species of steelhead and Chinook salmon), lamprey, and smelts. Other species may forage within the waters of the project area year-round including green and white sturgeon, as well as Sacramento splittail.

Impacts to fish may occur in a variety of ways from a single construction related activity. For example, an impact or vibratory hammer would be needed to set and drive structural components such as piles to support project structures. Pile driving causes in-water sounds which can affect fish both physically and behaviorally. Construction equipment for such work may require the use of hydraulically operated mechanical equipment which has potential to introduce toxic substances (i.e., fuel or hydraulic fluid) to the aquatic environment. Construction operations in general also have the potential to introduce debris and refuse associated with work to surrounding waters. Equipment and materials for such work are also highly specialized and may need to be brought in from other locations. The relocation of equipment may introduce non-native species of fish, or invertebrates, to the work area if proper procedures are not followed for decontamination. Most of these potential impacts affect a variety of species and are therefore discussed above and mitigated to a level that is less than significant by **Mitigation Measures MM BIO-1** through **MM BIO-7**.

Underwater Noise and Pile Driving

Pile driving produces underwater noise, which manifests as pressure waves in the aquatic environment. The louder the noise, the more pressure is present in the waves. High pressure sound waves in the aquatic environment can result in damage to fishes' internal organs. There are two primary styles in pile driving, vibratory and impact hammer driving. These styles of pile driving have different potentials for effect and are described below.

Vibratory pile driving uses hydraulicly powered, oscillating counterbalance weights to vibrate an object (i.e., pile) at high speed. The vibration mobilizes the earth beneath and around the pile causing the surrounding earth to liquify. Once mobilized, the weight of the hammer pushes the pile downward. Vibratory hammers do not "strike" a pile and as such have lower peak sound pressure than impact hammers, but also require more prolonged use as they drive piles slower. Even with prolonged use, vibratory hammers do not approach the peak or cumulative sound exposure thresholds that would cause injury or death to fish. Because of the low level of effect, resource agencies generally agree that vibratory pile driving results in reduced adverse effects on fish and is

therefore the preferred driving methodology. This reduced level of effect is also why agencies have not identified any peak or cumulative injury thresholds for vibratory pile driving to fish. With the lower level of effect, use of a vibratory hammer is often employed as an avoidance and minimization measure (AMM) to reduce the overall number of strikes necessary to drive piles on a project. For this project, removing any existing piles, or initially placing and driving new piles will be preferentially performed with a vibratory hammer to decrease the proposed project's acoustic effect on the aquatic environment.

The limiting factors to driving with a vibratory hammer are seating depth and pile size. Small diameter piles (e.g., 18–24-inch steel pipe piles) or sheetpiles may be able to be fully driven using a vibratory hammer when substrates are soft (i.e., silty and low in clay); however, the presence of geotechnical conditions such as clay hardpans, especially when driving large diameter steel pipe piles to moderate depths, a vibratory hammer may not have sufficient energy to install the pile fully. Once a vibratory hammer reaches refusal, an impact hammer is often necessary to complete the installation to drive piles to specified depths for structural integrity. Additionally, vibratory pile driving is often not able to achieve engineering criteria required to support design structural loads, and impact driving is necessary in these cases for "final seating" of the pile.

An impact hammer operates by using a sliding hammer head to strike a pile, causing the downward force of the head to drive the pile, similarly to the way a handheld hammer strikes and drives a nail. This method creates a pulse of sound that propagates through the pile, spreading outward into the aquatic environment. Peak, cumulative and RMS sound pressure levels all have different thresholds and types of effect; the "peak" is the highest value of the measured sound and may cause injury to fish exposed to instantaneous peak levels at or above 206 dB. Driving piles requires multiple strikes from the hammer, therefore there is also a cumulative effect of all strikes. In this case, cumulative exposure can cause injuries to fish at slightly lower decibel levels depending on the size of the fish. For fish less than 2 grams, the cumulative sound exposure level is 183 dB, while fish over 2 grams have a threshold of 187 dB. The distance at which these thresholds are reached vary based on the size and type of pile, number of strikes required, as well as the depth of water, and hammer size.

The project expects to be able to perform all pile driving using a vibratory hammer; however, use of an impact hammer may be necessary to complete pile installation.

Because most fish species are likely to be absent except during migratory periods, working during the recommended in-water work window would reduce impacts to most species; however, adherence to this window alone would not be sufficient to reduce effects of pile driving to all special-status species of fish as some may occur year-round; therefore, pile driving may have significant impacts to fish unless mitigation measures are incorporated.

To reduce potential impacts to fish to a less-than-significant level, in addition to **Mitigation Measures MM BIO-1** through **MM BIO-6**, **Mitigation Measure MM BIO-7** would make impacts to fish from in water construction less than significant.

Shading

Overwater structures can alter underwater light conditions and result in a decrease in photosynthesis of diatoms, benthic algae, eelgrass, and other aquatic organisms. Light conditions under the existing passenger float and fixed pier and gangway system are such that no light can

penetrate the surface at any point. While the proposed project would expand shading over what are currently open waters, the benthic communities which would be shaded are also currently dredged and maintained to provide ferry terminal access and berthing. Both existing and proposed shaded areas are therefore already frequently disturbed to facilitate safe berthing of ferries. As such, no aquatic vegetation is present that would be affected by the change in shade conditions. The expansion of overwater shading that would result from the proposed project would not result in prolonged shading of any primary producers. In addition, the purpose of the proposed project is to reduce the frequency with which maintenance dredging is required in the area, which would reduce the rate of disturbance to the benthos, likely resulting in net benefits to primary producers within the project area over time. Therefore, overwater shading on primary producers and benthic communities would be less than significant.

The proposed project may dredge material from within the existing ferry terminal basin and adjacent to the proposed temporary ferry terminal location to ensure vessels required to implement the project are able to access the project area. Dredging has the potential to entrain fish during the process of collecting bottom sediments. Life stages which are immobile, such as eggs and larvae, are most susceptible to dredging and are more likely to be entrained due to their inability to self-relocate; however, as stated above, there are no spawning beds for any species present within the project area as it does not include freshwater streams or substrates required for any of the anadromous species. In addition, through implementation of Mitigation Measure BIO-2, in-water work would be limited to occur between August 1 and November 30 when most species are absent. If fish are present, they are fully mobile juveniles or adults which are able to avoid areas of disturbance associated with dredging. Further, dredging would be limited to using clamshell or mechanical dredging which is far less likely to entrain fish than suction or hopper dredging. Clamshell dredging is often used as the preferred alternative due to the lower likelihood of entrainment.

The combination of adherence to in-water work windows (**Mitigation Measure MM BIO-2**) and the use of mechanical dredging methods would reduce the potential for entrainment of special-status fish species during dredging to a level that is less than significant; therefore, implementation of **Mitigation Measures MM BIO-1** through **MM BIO-6** would reduce effects of dredging on fish to less than significant levels.

Critical Habitat

Critical habitat within this portion of San Pablo Bay is present for Sacramento River winter-run Chinook salmon, Central California Coast steelhead, and southern DPS green sturgeon. For all three species, the project area functions as an estuarine corridor, the primary function being to promote movement of species from freshwater spawning areas to the Pacific Ocean and back.

The project would not create an aquatic trap, or barrier that might impede fish movement. The project would be permeable to water and fish movement such that a fish may move around these objects easily, without risk of being trapped. As such, the new structures proposed by the project do not represent a significant barrier that would cause a cessation to movement or significant delay for migrating fish; therefore, impacts would be less than significant. Other potential impacts to critical habitat for these species are mitigated through the implementation of **Mitigation Measures MM BIO-1** through **MM BIO-7.**

Special Status Bird Species

The proposed project has the potential to impact native nesting birds. No special-status birds are likely to nest within the fully developed shoreline or on the existing ferry terminal due to the highly modified and developed nature of the active ferry terminal. These features do not contain specialized habitats such as salt marsh or sandy shoals which might support special-status nesting birds found in the vicinity; however, non-special-status nesting birds protected by the Migratory Bird treaty Act as well as the California Fish and Game Code may nest on or near these structures and be affected by construction related activities if construction occurs during the nesting season.

Non-special-status birds may nest on buildings, structures, or within limited landscaped vegetation within the project area between February 1 and August 31. Project activities during this time may directly remove or destroy active nests or may indirectly cause nest abandonment through audible, vibratory, and/or visual disturbances. Loss of active nests due to activities of the project would be considered a significant impact under CEQA. Implementation of **Mitigation Measure MM BIO-8** would reduce potential impacts to nesting birds to a less-than-significant level.

Marine Mammals

Similar to fish, marine mammals can be injured if sounds produced by construction-related activities surpass certain tolerances. Injury to marine mammals from noise relates primarily to hearing damage or loss, and the thresholds for injury differ from those established for fish. The NMFS thresholds for Post-Traumatic Stress (PTS) onset of pinnipeds vary by group and by the type of sound (peak vs cumulative; impulsive vs non-impulsive). The marine mammals most likely to occur in the project area are harbor seals and California sea lions. Based on the hydroacoustic analysis performed by Illingworth and Rodkin for the proposed project, even small steel piles have the potential to exceed onset PTS thresholds noted for these mammals at relatively short distances. Without incorporation of mitigation measures, sounds produced from pile driving would be expected to cause behavioral changes and could result in the onset of PTS for marine mammals. These impacts would be considered significant under CEQA. With implementation of **Mitigation Measure MM BIO-7** and **Mitigation Measure MM BIO-9**, impacts to marine mammals would be less than significant.

The proposed project occurs within the Mare Island Strait in an area that already supports existing ferry traffic as well as larger ships that utilize Mare Island Dry Docks on the opposite side of the river, adjacent to the project area.

The proposed project would not result in an overall increase in vessel traffic within the Napa River. WETA would continue to operate the new structure as a ferry terminal servicing its ferry route in a manner similar to the current operations with a similar number of ferries per day, thus maintaining baseline conditions. Therefore, implementation of the project would not result in significant impacts to marine mammals from ship traffic compared to the existing condition.

With implementation of **Mitigation Measures MM BIO-1** through **MM BIO-9**, impacts would be less than significant.

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

Less than Significant Impact. The proposed project is located within Essential Fish Habitat (EFH) for three fisheries management plans: Coastal Pelagic, Pacific Groundfish and Pacific Salmon. EFH consists of aquatic areas that contain habitat essential to the long-term survival and health of fisheries, which may include the water column, certain bottom types (e.g., rocky reefs), vegetation (e.g., eelgrass beds), or complex structures such as oyster beds. Most benthic substrates consist of silt and mudflat within the project vicinity. These areas are typically low-productivity areas which are more commonly traversed by migratory species. The absence of any reefs, freshwater streams, eelgrass beds, or similar complex habitat features make this area important primarily as a migratory corridor, allowing EFH species to move from place to place. The proposed project is not anticipated to have a significant impact on migratory corridors; no long-term impacts to this habitat (including habitat created by the presents of pilings- submerged vegetation or aquatic organisms can attach to pilings) is expected as a result of the project. Impacts would be less than significant and no mitigation is required.

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

Potentially Significant Unless Mitigation Incorporated. No federally or state-defined wetlands occur within the project site and thus no impacts to wetlands would occur. However, the nature of the project means that it will need to affect open waters of San Francisco Bay. As described above, the project would expand overwater cover by approximately 2,565 to 3,780 square feet. However, as discussed above, shading effects resulting from the proposed project are expected to be less-than-significant.

In addition, installation of piles in aquatic areas does not have a substantial adverse effect on the continued water resources function of a water body, as demonstrated by the fact that the Corps does not regulate piles as fill under the Clean Water Act (see 33CFR328.3); therefore, the installation of piles themselves is a less-than-significant impact. Potential impacts to aquatic resources from the installation of piles are associated with the overwater structures that they support. Therefore, with implementation of **Mitigation Measures MM BIO-1** through **MM BIO-6**, impacts to aquatic resources would be less-than-significant.

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?

Potentially Significant Unless Mitigation Incorporated. During construction activities, temporary disturbance to local species may occur, but would not substantially degrade the quality or use of the marine communities in the vicinity. As noted above, special-status fish are known to migrate through the waters of the project vicinity when making seasonal movements between core habitat areas (e.g., natal streams or the Pacific Ocean). Maintaining the ability of these species to migrate between core habitat areas is necessary for the continuation of these species and maintenance of the wildlife corridor which connects them.

The project vicinity does not support rookery sites, or colonial nesting sites for species such as monarch butterflies, egrets, herons, or marine mammals therefore no such nursery sites will be

affected. No eelgrass beds occur within the project vicinity which could have functioned as a nursery site for fish species which can spawn and rear within eelgrass. The proposed project lies along the migratory route for salmonids when moving from natal streams in the Central Valley, and the Pacific Ocean, as such it also functions as a migratory corridor for fish. If construction were to occur at times of year when larval fish were present, or when migratory events for fish were occurring, construction activities may have the potential to impact such events, which would be considered a significant impact under CEQA. However, **Mitigation Measure MM BIO-2** will restrict any in water work to a period between August 1 and November 30, which is outside the period when salmonids or other anadromous species typically migrate to the ocean, or when they return to natal streams. Thus, implementation of **Mitigation Measure MM BIO-2** reduces impacts to migratory corridors to less-than-significant levels. Further, by timing in-water construction activities later in the summer and fall, this is outside of the time when larval or fry life-stages of fish are present; therefore, with implementation of **Mitigation Measure MM BIO-2**, all in-water construction would occur outside of the times when sensitive life stages are present. Implementing additional **Mitigation Measures MM BIO-1** through **MM BIO-9** (excluding **Mitigation Measure MM BIO-8** for nesting Birds) also reduces the potential impacts to fish during critical periods by maintaining habitat quality such that, when fish do return, there are not toxic conditions present that might deleteriously affect them.

Additionally, the proposed project would not create an aquatic net, trap, or barrier that might impede fish movement. The proposed project would be permeable to water and fish movement such that a fish may move around these objects easily, without risk of being trapped behind an impermeable barrier. As such the new structures do not represent a significant barrier that would cause a cessation to movement, disorientation, or significant delay for migrating fish. Any immediate effects to migration or natal sites from construction are largely avoided through the use of the in-water work window, while all remaining mitigation measures reduce potential indirect effects that might alter habitat suitability later in time. As such, with implementation of **Mitigation Measures MM BIO-1** through **MM BIO-7** and **MM BIO 9**, impacts to aquatic resources would be less-than-significant.

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

No Impact. The proposed project is located in the City of Vallejo. City of Vallejo General Plan Policies NBE-1.1, NBE-1.2, NBE-1.3, NBE-1.4, and NBE-1.6 are directly and indirectly related to biological resources in the project area. The project is consistent with these local policies and ordinances both through design and through mitigation measures to protect environmental resources described above and required as part of the project. Therefore, the function of any local policies or ordinances would not be affected. There would be no impact, and no mitigation is required.

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. Currently the only Habitat Conservation Plan (HCP) which overlaps with the project area is the Solano Multispecies HCP. This HCP is overseen by the Solano County Water Agency. The project area for this proposed project is already developed and occurs within the Impaired Open Water Habitats projected for the Solano Multispecies HCP. Napa River is also not one of the proposed aquatic areas or drainages ranked as a priority for conservation. Lastly, the majority of

the Solano HCP focuses on uplands and streams, less so than open waters of the Bay; therefore, the project occurs in an area that is projected as part of the urban expansion boundary and does not conflict with the provisions of the Solano HCP as it largely covers developed open waters which are not marked for conservation within the project area. Therefore, there would be no conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. There would be no impact, and no mitigation is required.

Mitigation Measures

MM BIO-1 **Invasive Species Management.**

- Any in-water fill materials shall be new and not salvaged from areas outside of San Francisco Bay.
- Any pumps that may be needed during construction shall be cleaned and dried for at least 72 hours prior to being used on the project.

MM BIO-2 **In-Water Work Window.** All in-water work, including dredging, pile driving, and similar activities which require placing materials below the water's surface, shall be completed between August 1 and November 30. Work may occur above the waterline year-round, including use of necessary in-water support vessels, so long as spill prevention measures are employed as described below. This in-water work window may be modified and extended if regulatory agencies determine during the permitting process that work outside of this window may occur without significant risk to fish.

MM BIO-3 **Spill Prevention and Control.** A spill prevention and control plan shall be developed and implemented for the proposed project throughout all phases of construction. This plan shall, at minimum, include the following parameters to reduce potential effects from spills to less than significant levels:

- Identification of any hazardous materials used by the project.
- Storage locations and procedures for such materials.
- Spill prevention practices as well as BMPs employed for various activities.
- Requirements to inspect equipment daily such that it is maintained free of leaks.
- Spill kit location, cleanup, and notification procedures.

MM BIO-4 **Environmental Awareness Training.** A project-specific environmental awareness training for construction personnel shall be conducted by a qualified biologist before commencement of construction activities and as needed when new personnel begin work on the proposed project. The training shall inform all construction personnel about the presence of sensitive habitat types; potential for occurrence of special-status fish and wildlife species; the need to avoid damage to suitable habitat and species harm, injury, or mortality; measures to avoid and minimize impacts to species and associated habitats; the conditions of relevant regulatory permits, and the possible penalties for not complying with these requirements. The training may consist of a pre-recorded presentation to be played for new personnel, a script prepared by the biologist and given by construction personnel trained by the biologist, or training administered by on-site biological monitors. The training shall include:

- Applicable State and federal laws, environmental regulations, permit conditions, and penalties for non-compliance.

- A physical description of special-status species with potential to occur on or in the vicinity of the proposed project site, avoidance and mitigation measures, and protocol for encountering such species including communication chain.
- BMPs enacted for habitat protection and their location within the project area, including the implementation of any Spill or Leak Prevention Programs.
- Contractors shall be required to sign documentation stating that they have read, agree to, and understand the required avoidance measures. If they do not understand, they shall withhold their signature until the designated biologist addresses their question. The contractor may not begin work until they have signed the documentation.
- Field identification of any project area boundaries, egress points and routes to be used for work. Work shall not be conducted outside of the project area.

A record of this training shall be maintained on the site during all project work and shall be made available to agencies upon request.

MM BIO-5 **Debris.** The project shall employ debris, dust, and garbage control measures to ensure disturbances to any upland areas and overwater work does not result in significant increases in turbidity or the placement of debris within tidal waters. These control measures shall include the following:

- A work skiff or similar craft may be used to corral any debris which accidentally falls into waters during demolition. Debris shall be retrieved immediately and shall not be allowed to drift away from the worksite.
- Where cast-in-place concrete is required in over-water areas, the contractor shall use water-tight forms and catchments that shall prevent concrete from falling into the water. Cast-in-place forms shall remain in place until concrete has completely cured and shall be removed using means that minimize dust and freshly cured concrete from falling into the water.
- Within upland areas, any disturbed soils shall be managed to prevent dust or silt laden runoff from becoming airborne or otherwise introduced to the aquatic environment.
- All personal construction-related refuse shall be collected in sealed containers and removed regularly.

MM BIO-6 **Dredging.**

- Prior to the dredge event, WETA will apply for a Tier 1 Testing Exclusion Request from the Dredge Material Management Office (DMMO) based on the results of the 2023 Sampling Analysis Results (SAR). Per the previous suitability determination issued by the DMMO, it is anticipated that the material would be suitable for upland placement at Cullinan Ranch Restoration Project or the Montezuma Wetlands Reuse Project sites.
  - Materials shall only be dredged and disposed of in accordance with procedures approved by the DMMO.
  - If concentrations are too high for beneficial reuse in upland restoration, or other standard dredge material disposal method, materials may be hauled to an approved hazardous waste disposal facility.
- Dredging shall be limited to the specified areas, depths, and quantities.

- No overflow or decant water shall be discharged from any barge at any time.
- During transportation from the dredging site to the disposal site, no dredged material shall be permitted to overflow, leak, or spill from barges, bins or dump scows.

MM BIO-7 **Pile Driving.** Prior to initiation of construction, WETA shall consult with regulatory agencies with jurisdiction over the project activities, such as CDFW, NMFS, BCDC, and USFWS to obtain any necessary permits and shall follow all requirements of those permits. If permit requirements conflict with requirements below, the permit requirements shall take precedence.

The following measures shall be implemented during the driving of all piles to reduce any effects from pile driving to less than significant levels:

- In water work shall be limited August 1 – November 30 as indicated in Mitigation Measure MM BIO-2 unless otherwise approved by regulatory agencies.
- Any wildlife encountered within the work area shall be allowed to leave the area unharmed.

The following measures shall also be included for times when work involves driving steel piles.

- To the extent possible, pile driving of steel piles shall be conducted with a vibratory hammer.
- If use of an impact hammer is necessary, the following additional measures shall be employed:
  - A bubble curtain shall be deployed around each steel pile during installation.
  - Use of a slow start (gradually increasing energy and frequency) at the start of driving, or after a cessation of driving for more than 1 hour.
  - Underwater sound monitoring shall be performed during pile driving activities. Sound monitoring shall be completed for a minimum of 5% of each pile size and type utilized during construction to verify consistency with sound measurements of similar pile types and sizes documented for other projects. If sound measurements exceed those taken from similar pile types and sizes for other projects, additional sound attenuation measures, enhanced bubble curtains, or limiting pile strikes shall be implemented, and sound measurements shall be tested again to achieve sound levels similar to other projects.

MM BIO-8 **Nesting Birds.** If construction is initiated outside of the nesting season, between September 1 and January 31, birds are unlikely to be nesting and work would not result in significant impacts to nesting birds; however, should work be initiated during the nesting season (February 1 to August 31), a pre-construction nesting bird survey shall be conducted by a qualified biologist no more than 14 days prior to the start of construction activities. The survey shall cover all areas within 500 feet of planned construction activities. Should an active nest be identified, a high visibility “No disturbance” buffer shall be established by the qualified biologist within the upland areas. Work within aquatic areas shall be provided a map outlining the buffer but due to the need to maintain an

open, navigable waterway, buoys, signs, or similar temporary structures shall not be placed in the water to denote the buffer. The buffer distance shall be based upon the species and location of the nest, potential for construction noise, vibration, visual disturbance, or other disruptive metrics to reach and affect nesting.

The buffer shall be maintained until it can be verified by a qualified biologist that the nestlings have fledged, or the nest has failed. Should construction activities cease for 14 or more consecutive days during the nesting season (February 1 – August 31), an additional nesting bird survey shall be conducted prior to resuming construction.

MM BIO-9 **Marine Mammals.** In addition to implementation of Mitigation Measure MM BIO-7: Pile Driving, the project shall implement the following measures to reduce impacts to marine mammals from in-water construction.

- During all construction work where materials are being actively placed below the water line, a marine mammal monitor shall be present to observe and document marine mammal presence.
- During pile driving, if a marine mammal is within the buffer distance identified in by the hydroacoustic analysis performed by Illingworth and Rodkin for the proposed project, or within distances approved by NMFS based on future updated construction drawings and contractor input, the marine mammal monitor shall inform the construction crew and work shall temporarily halt until the animal has passed outside of the disturbance buffer.

4.5 Cultural Resources

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to in § 15064.5?			**X**	
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?			**X**	
c) Disturb any human remains, including those interred outside of dedicated cemeteries?			**X**	

Setting

A Cultural Report (Appendix D) was prepared by ESA in December 2023. The Report describes the existing conditions related to cultural and tribal resources within the vicinity of the project site, provides regulatory and environmental setting for the project, and discusses potential resource impacts that could result under implementation of the proposed project.

Prehistoric and Ethnographic Setting

Well before the arrival of European settlers, the area where the City of Vallejo currently stands was inhabited by the Coast Miwok and several Patwin tribes, including the Suisun and Karkin. The Patwin tribes comprised a band of Southern Wintun people who have inhabited portions of Northern California for centuries.[5] The Coast Miwok are one of four linguistically related indigenous groups who spoke one of the Miwok languages within the Utian linguistic family. The Miwok typically subsisted through hunting and gathering and lived in relatively small, interconnected bands without centralized political authority. During the warmer months, Coast Miwok traveled to the Northern California coasts to hunt salmon and other seafood.[6] Archaeological evidence indicates that the Wintun people arrived in the Northern California region by the year 500. Like the Coast Miwok, the southern Patwin tribes were hunting and gathering groups that inhabited territory along the northeast portion of the San Pablo Bay in what is present-day Solano County.[7] Three confirmed Native American sites are located on Sulphur Springs Mountain, near

[5] James J. Rawls and Walton Bean, *California: An Interpretive History,* 9th ed (San Francisco: McGraw Hill, 2008), 18; "Time to Learn About Vallejo." Available at: https://www.visitvallejo.com/about-vallejo/history. Accessed August 25, 2023.
[6] Alfred L. Kroeber, *Handbook of the Indians of California* (Washington, DC: Bureau of Ethnology Bulletin, no 78), Available at: http://www.yosemite.ca.us/library/kroeber/miwok.html; "Coast Miwok at Point Reyes," National Park Service. Available at: Coast Miwok at Point Reyes - Point Reyes National Seashore (U.S. National Park Service) (nps.gov). Accessed August 25, 2023.
[7] Victor Golla, *California Indian Languages* (Berkeley: University of California Press, 2011), 205; "California Indians and Their Reservations: P," San Diego State University Library and Information Access. Accessed August 25, 2023, https://web.archive.org/web/20100726212453/http://infodome.sdsu.edu/research/guides/calindians/calinddictty.shtml#w.

Vallejo's Blue Rock Springs Park.[8]

Historic Setting

The arrival of Spanish settlers to the region irrevocably disrupted indigenous communities throughout California. The cumulative impact of Spanish colonization by the mid-1800s decimated tribal unity and destroyed many natural resources essential for indigenous people's survival. The Spanish colony of Mexico declared war against Spain in 1810, and Mexico won its independence in 1821. By the end of April 1822, all of California had come under Mexican governance. In 1835, General Mariano Guadalupe Vallejo traveled to the east San Francisco Bay region to establish land grants on behalf of the Mexican government. When Alta California became an American territory after the Treaty of Guadalupe-Hidalgo in 1848, General Vallejo lobbied to ensure that one of his land parcels become a new state capitol. After a state-wide referendum was held in late 1850, the California State Legislature accepted his proposal, but instead determined that the new city would be called Vallejo in honor of the Mexican general.[9] In 1852, Vallejo became the first permanent seat of California's state government. After only eleven days in town, the new state legislature decamped to Sacramento to finish out the session and eventually permanently move. One Vallejo resident, John B. Frisbie, was instrumental in the development of the town. Frisbie was the son-in-law of General Vallejo and had been granted power of attorney for the former land grant. Frisbie helped establish Vallejo's first city government and lobbied diligently in Washington, D.C., which resulted in the city's incorporation in 1867.[10]

Vallejo Waterfront and Ferry Service

The shoreline along Mare Island Strait at the mouth of the Napa River has played an important role in the local history of water transportation and recreation as well as the nation's maritime history. On the west side of the strait (outside the APE) is Mare Island, and it was purchased by the United States Navy in 1853 to establish the first naval installation on the West Coast.[11] A ferry service between the City of Vallejo to the east and Mare Island was established shortly thereafter.[12] Dr. Robert Semple created a ferry service from Vallejo across the Carquinez Strait to Martinez to serve the influx of settlers who arrived in the region during the Gold Rush. In 1867, the California Pacific Railroad was established to build a fast and reliable route from San Francisco to the state capitol. Subsequently, passengers could travel by steamboat from San Francisco to a ferry terminal in South Vallejo, where they would then travel by rail to Sacramento. During the peak of ferry transportation, riders for the Pony Express also used the ferries at Vallejo to travel between Sacramento and Benicia. The Southern Pacific Golden Gate Ferries bought out several existing steamship lines and oversaw the operation of most ferry services between Vallejo and San Francisco until about 1937.

A passenger ferry service between the Vallejo mainland and Mare Island was first established in 1854 to transport laborers to the shipyard. In 1973, the Mare Island Ferry Company and the U.S. Navy entered into a contract under which the Navy was "responsible for maintaining the [channel and] floating docks the ferry uses on each side of the strait[, including both] the ferry's private docks and the docks owned by the shipyards. In exchange, the ferry provided regular service for shipyard employees as well as 24-hour-

[8] "History," City of Vallejo." Available at: https://www.cityofvallejo.net/our_city/about_vallejo/history. Accessed August 25, 2023.
[9] "Vallejo—Our History," Vallejo Naval & Historical Museum. Available at: https://vallejomuseum.net/vallejo-history/. Accessed August 25, 2023.
[10] Visit Vallejo, "Time to Learn About Vallejo." Available at: https://www.visitvallejo.com/about-vallejo/history. Accessed August 25, 2023.
[11] "Mare Island Naval Shipyard," Naval History and Heritage Command. Available at: https://www.history.navy.mil/browse-by-topic/organization-and-administration/historic-bases/mare-island.html. Accessed August 28, 2023,
[12] Richard Abrams, "Ferry Slips into History," *Sacramento Bee,* August 30, 1936, B1–B2.

a-day availability during emergencies."[13] In 1986, the Navy terminated the contract, removed two of the floating docks, and did not repair the third,[14] which, along with all of the steel dolphins, is extant and currently serves as an outdoor dining area for the Bay Hibachi Express adjacent to the proposed project site.

In 1986, intercity/intercounty ferry service returned to the Vallejo waterfront after a 34-year hiatus. That year, the privately owned tour boat operator, Red & White Fleet, launched a commute ferry service to bring commuters from Vallejo into San Francisco and visitors from San Francisco to Vallejo. Additionally, the City of Vallejo began construction on a $1.2 million ferry terminal with state and local redevelopment funds to support the growing ferry service. In 1988, Red & White Fleet suspended its service, and the City of Vallejo took over public ferry transit to San Francisco. In 1989, Crowley Maritime completed construction on the 4,500-square-foot terminal and ferry dock.

Known Resources

A cultural resources literature search was conducted in June 2023 at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS) at California State University, Sonoma. The records search was conducted to determine if prehistoric or historic cultural resources had been previously recorded on the project site, the extent to which the project site had been previously surveyed, and the number and type of cultural resources within a 0.5-mile radius of the project area.

The results of the records search indicated that no previously recorded archaeological resources are in the immediate vicinity of the proposed project. Two pre-contact Native American shell mounds (CA-SOL-17 and CA-SOL-248) are within the records search radius. These resources are located on Mare Island, on the opposite bank of the Mare Island Channel from the proposed project site, and would not be impacted by the project. In addition, several historic-era archaeological features have been identified on Mare Island, including red brick manholes (P-48-000440); a subterranean, vaulted red brick tunnel (P-49-000807); a foundation (P-48-000833); and a historic-era artifact concentration (P-48-000889). None of these resources would be impacted by the project.

There are three previously recorded architectural resources located within and in the immediate vicinity of the proposed project site that are not on file at CHRIS. These are the vacant building at 285 Mare Island Way (adjacent to the project site) and the two restaurant buildings at 295 and 295A Mare Island Way. All three buildings were evaluated under California Register criteria only to support the 2005 Vallejo Station Project and the Waterfront Project Environmental Impact Report.[15]

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

Less than Significant Impact. As described above, implementation of the proposed project would include reconfiguration of the existing Vallejo Ferry Terminal and would be limited to the project site. Additionally, the vacant building at 285 Mare Island Way and the two restaurant buildings at

[13] Richard Abrams, "Ferry Slips into History."
[14] Harry Jupiter, "After a Million Rides, the Mare Island Ferry Leaves Anger in Wake," *San Francisco Examiner,* August 30, 1986, 2.
[15] The environmental impact report identified 285 Mare Island Way as "Building 3, Marina Vista Dental Building," 295 Mare Island Way as "Building 1, Wharf Restaurant," and 295A Mare Island Way as "Building 2, Accessory Building." EIP Associates, *The Vallejo Station Project and the Waterfront Project Revised Draft Environmental Impact Report (SCH No. 2000052073),* prepared for the City of Vallejo and Redevelopment Agency of the City of Vallejo, June 2005, on file at the City of Vallejo.

295 and 295A Mare Island Way are architectural resources within the vicinity of the project site, but are not on file at CHRIS and are recommended not eligible for individual listing.

Construction and operation activities would not extend beyond the identified project boundaries and would not result in any changes and/or alterations to any of the individual buildings within the proposed project vicinity. As such, project implementation would not result in any changes in the significance of a historical resource. Impacts would be less than significant, and no mitigation is required.

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

Potentially Significant Unless Mitigation Incorporated. The results of the NWIC records search, conducted in August 2022, did not yield any information regarding known archaeological sites within the immediate vicinity of project site. Two pre-contact Native American shellmounds (CA-SOL-17 and CA-SOL-248) were found within the records search radius, as well as historic-era archaeological features including red brick manholes (P-48-000440); a subterranean, vaulted red brick tunnel (P-49-000807); a foundation (P-48-000833); and a historic-era artifact concentration (P-48-000889).These resources and features are all located on Mare Island, on the opposite bank of the Mare Island Channel from the proposed project site, and would not be impacted by the project.

Project construction activities would involve disturbance associated with new and replacement terminal structures, including the terminal bridge, fixed pier, gangway, and terminal float. Though no known resources have been identified within the project site and surrounding area, the possibility remains that archaeological materials could be encountered during construction-related ground disturbing activities. As such, the project could result in a potentially significant impact. Nonetheless, implementation of **Mitigation Measure MM CUL-1,** impacts would be less than significant.

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

Potentially Significant Unless Mitigation Incorporated. Based on documentary research, no evidence suggests that any prehistoric or historic-era marked or unmarked human interments are present within or in the immediate vicinity of the project site. However, the location of grave sites and Native American remains can occur outside of identified cemeteries or burial sites. Therefore, there is a possibility that unmarked, previously unknown Native American or other graves could be present within the project site and could be uncovered by project-related construction activities.

California law recognizes the need to protect Native American human burials, skeletal remains, and items associated with Native American burials from vandalism and inadvertent destruction. The procedures for the treatment of Native American human remains are contained in California Health and Safety Code Sections 7050.5 and PRC Section 5097. These statutes require that, if human remains are discovered during any construction activities, potentially damaging ground-disturbing activities in the area of the remains shall be halted immediately, and the Alameda County coroner and Native American Heritage Commission (NAHC) shall be notified immediately, in accordance with to PRC Section 5097.98 and Section 7050.5 of California's Health and Safety Code. If the remains are determined by NAHC to be Native American, the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains.

Following the coroner's findings, the archaeologist, the NAHC-designated Most Likely Descendant, and the landowner shall determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed. The responsibilities for acting upon notification of a discovery of Native American human remains are identified in PRC Section 5097.94.

Compliance with California Health and Safety Code Sections 7050.5 and PRC Section 5097 would provide an opportunity to avoid or minimize the disturbance of human remains, and to appropriately treat any remains that are discovered. Nonetheless, future ground disturbing activities during grading and construction activities could encounter buried human remains that were not identified during the cultural resource report conducted for the proposed project. This could result in damage to unknown, buried human remains and mitigation would be required. With implementation of **Mitigation Measure MM CUL-2**, impacts would be less than significant.

Mitigation Measures

MM CUL-1 Mitigate Potential Disturbance for Significant Archeological Resources Identified During Construction. In the event that unanticipated cultural or tribal cultural resources are encountered during the course of grading or construction, the project operator/contractor shall cease any ground disturbing activities within 100 feet of the find. Cultural and/or tribal cultural resources may include prehistoric archaeological materials such as flaked and ground stone tools and debris, shell, bone, ceramics, and fire-affected rock, as well as historic materials such as glass, metal, wood, brick, or structural remnants. A qualified archeologist approved by WETA shall first determine whether a previously unidentified archeological resource uncovered during construction is a "unique archaeological resource" under 36 CFR 800, CEQA Guideline 15064.5, and Public Resources Code Section 21083.2. If the archeological resource is determined to be a "unique archaeological resource," the archaeologist shall formulate a mitigation plan that satisfies the requirements of 36 CFR 800, CEQA Section 15064.5, and/or Public Resources Code Section 21083.2. Work in the vicinity of the find may resume at the completion of a mitigation plan or recovery of the resource.

If the archeologist determines that the archaeological resource is not a unique archaeological resource, work will resume, and the archaeologist may record the site and submit the recordation form to the California Historic Resources Information System Northwest Information Center.

The archeologist shall prepare a report of the results of any study prepared as part of a mitigation plan, following accepted professional practice. Copies of the report shall be submitted to the City and to the California Historic Resources Information System Northwest Information Center.

MM CUL-2 Mitigate Potential Disturbance for Human Remains Identified During Construction. If human remains are uncovered during ground disturbing activities, the project proponent shall immediately halt work and contact the Solano County Coroner to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.5 (e)(1) of the CEQA Guidelines. The City of Vallejo Police Department and City of Vallejo Planning Department shall be contacted immediately after contact or attempted contact with the County Coroner. All construction activities on the project site shall cease. If the County coroner determines that the remains are Native American, the Native American Heritage Commission shall be

notified, in accordance with Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 (as amended by AB 2641). No further construction activity shall occur until consultation is complete with the most likely descendent, the Coroner and the County Planning Department staff. Authorization to resume construction shall only be given by the County after concurrence with the most likely descendent and shall include implementation of all appropriate measures to protect any possible burial sites or human remains.

4.6 Energy

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

Setting

Applicable Plans, Policies, and Regulations

The following is a description of State and local environmental laws and policies that are relevant to the CEQA review process. See also Chapter 4.3 (Air Quality), Chapter 4.8 (Greenhouse Gas Emissions), and Chapter 4.17 (Transportation), for other policies related to energy use. See Chapter 4.19 (Utilities and Service Systems) for policies related to water consumption.

Federal

Federal Energy Policy and Conservation Act and Corporate Average Fuel Standards

In 1975, Congress enacted the Federal Energy Policy and Conservation Act, which established the first fuel economy standards, known as the Corporate Average Fuel Economy standards, for on-road motor vehicles in the United States. Fuel economy is determined based on each manufacturer's average fuel economy for the fleet of vehicles available for sale in the United States. Pursuant to the act, the National Highway Traffic Safety Administration (NHTSA) is responsible for establishing additional vehicle standards. In 2012, new Corporate Average Fuel Economy (CAFE) standards for passenger cars and light trucks were approved for model years 2017 through 2021 (77 FR 62624–63200). In 2020, NHTSA and the U.S. Environmental Protection Agency (EPA) finalized amendments to the CAFE standards for model years 2021 through 2026 under the Safer Affordable Fuel-Efficient Vehicles Rule. Those amendments reduced the requirement for annual increases in efficiency from approximately 5 percent (as established in 2012) to approximately 1.5 percent. The Safer Affordable Fuel-Efficient Vehicles Rule also revoked California's authority to set its own GHG emissions standards and set zero-emission vehicle mandates for the state. However, in December 2021, NHTSA and EPA again revised the CAFE standards and GHG emissions standards for passenger cars and light trucks for model years 2023–2026, and reinstated California's authority to set its own standards. The final standards will achieve significant reductions in energy consumption and GHG emissions within the transportation sector.

Energy Independence and Security Act of 2007

Signed into law in December 2007, the Energy Independence and Security Act was passed to increase the production of clean renewable fuels; increase the efficiency of products, buildings, and vehicles; improve the energy performance of the federal government; and increase U.S. energy security, develop renewable fuel production, and improve vehicle fuel economy. The Energy Independence and Security Act included the first increase in fuel economy standards for passenger cars since 1975, and also included a new energy grant program for use by local governments in implemented energy-efficiency initiatives, as well as a variety of green building incentives and programs.

State

California's Energy Efficiency Standards for Residential and Non-Residential Buildings (Title 24)

Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the California Energy Commission) in June 1977 and are updated every three years (Title 24, Part 6, of the California Code of Regulations). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods.

On August 11, 2021, the CEC adopted the 2022 Energy Code. In December, it was approved by the California Building Standards Commission for inclusion into the California Building Standards Code. Among other updates like strengthened ventilation standards for gas cooking appliances, the 2022 Energy Code includes updated standards in three major areas:

- New electric heat pump requirements for residential uses, schools, offices, banks, libraries, retail, and grocery stores.
- The promotion of electric-ready requirements for new homes including the addition of circuitry for electric appliances, battery storage panels, and dedicated infrastructure to allow for the conversion from natural gas to electricity.
- The expansion of solar photovoltaic and battery storage standards to additional land uses including high-rise multifamily residences, hotels and motels, tenant spaces, offices, (including medical offices and clinics), retail and grocery stores, restaurants, schools, and civic uses (including theaters auditoriums, and convention centers).

The California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as the CALGreen Code, is a statewide mandatory construction code that was developed and adopted by the California Building Standards Commission and the California Department of Housing and Community Development. CALGreen standards require new residential and commercial buildings to comply with mandatory measures under five topical areas: planning and design; energy efficiency; water efficiency and conservation; material conservation and resource efficiency; and environmental quality. CALGreen also provides voluntary measures (CALGreen Tier 1 and Tier 2) that local governments may adopt which encourage or require additional measures in the five green building topics. The most recent update to the CALGreen Code was adopted in 2022 and went into effect January 1, 2023. Projects whose permit applications are applied for on or after January 1, 2023, must comply with the 2022 Energy Code.[16]

[16] California Energy Commission, 2022 *Building Energy Efficiency Standards*, https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency, accessed June 2023

California Public Utilities Commission Energy Efficiency Strategic Plan

The California Public Utilities Commission (CPUC) prepared an Energy Efficiency Strategic Plan in 2011 with the goal of promoting energy efficiency and a reduction in greenhouse gases. AB 1109, adopted in 2007, also serves as a framework for lighting efficiency. This bill requires the State Energy Resources Conservation and Development Commission to adopt minimum energy efficiency standards as a means to reduce average Statewide electrical energy consumption by not less than 50 percent from the 2007 levels for indoor residential lighting and not less than 25 percent from the 2007 levels for indoor commercial and outdoor lighting by 2018. According to the Energy Efficiency Strategic Plan, lighting comprises approximately one-fourth of California's electricity use while non-residential sector exterior lighting (parking lot, area, walkway, and security lighting) usage comprises 1.4 percent of California's total electricity use, much of which occurs during limited occupancy periods.

California Energy Commission Integrated Energy Policy Report

In 2002, the State legislature adopted SB 1389, which requires the CEC to develop an Integrated Energy Policy Report (IEPR) every two years. SB 1389 requires the CEC to conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices, and use these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the State's economy, and protect public health and safety.

The CEC adopted the 2022 Integrated Energy Policy Report Update (2022 IEPR Update) in February 2023. The 2022 IEPR Update provides an update to the forecast developed in the 2021 Integrated Energy Policy Report, specifically the results of the CEC's assessments of a variety of energy issues facing California, many of which will require action if the State is to meet its climate, energy, air quality, and other environmental goals while maintaining reliability and controlling costs. The year of 2022 saw an increase in electricity consumption, fueled in part by California's efforts to decarbonize the transportation and building sectors by switching from fossil fuels to electricity. The year of 2022 was also unprecedented as the State continues to face the impacts and repercussions of challenging events, including the continued effects of extreme summer weather and drought conditions. In addition to these events, the 2022 IEPR Update covers a broad range of topics, including equity and environmental justice, the California Energy Planning Library, the California Energy Demand Forecast, energy reliability, western electricity integration, the role of hydrogen in California's clean energy future, high gasoline prices, and transitioning from fossil gas and advancing distributed energy resources. Overall, the 2022 IEPR Update identifies actions the State and others that would strengthen energy resiliency, reduce GHG emissions that cause climate change, improve air quality, and contribute to a more equitable future.

Renewable Portfolio Standard

In 2002, California established its Renewable Portfolio Standard program with the goal of increasing the annual percentage of renewable energy in the State's electricity mix by the equivalent of at least 1 percent of sales, with an aggregate total of 20 percent by 2017. The California Public Utilities Commission subsequently accelerated that goal to 2010 for retail sellers of electricity (Public Utilities Code Section 399.15(b)(1)). Then-Governor Schwarzenegger signed Executive Order S-14-08 in 2008, increasing the target to 33 percent renewable energy by 2020. In September 2009, then-Governor Schwarzenegger continued California's commitment to the Renewable Portfolio Standard by signing Executive Order S-21-09, which directs the California Air Resources Board under its AB 32 authority to enact regulations to help the State meet its Renewable Portfolio Standard goal of 33 percent renewable energy by 2020. In

September 2010, the California Air Resources Board adopted its Renewable Electricity Standard regulations, which require all of the State's load-serving entities to meet this target. In October 2015, then-Governor Brown signed into legislation Senate Bill 350, which requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from eligible renewable energy resources by 2030. Signed in 2018, SB 100 revised the goal of the program to achieve the 50 percent renewable resources target by December 31, 2026, and to achieve a 60 percent target by December 31, 2030. SB 100 also established a further goal to have an electric grid that is entirely powered by clean energy by 2045. Under the bill, the State cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

California Air Resources Board (CARB)

CARB's Advanced Clean Car Program

The Advanced Clean Cars emissions-control program was approved by CARB in 2012. The program requires a greater number of zero-emission vehicle models for years 2015 through 2025 to control smog, soot, and GHG emissions. This program includes the Low-Emissions Vehicle (LEV) regulations to reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles; and the Zero-Emissions Vehicle (ZEV) regulations to require manufactures to produce an increasing number of pure ZEV's (meaning battery and fuel cell electric vehicles) with the provision to produce plug-in hybrid electric vehicles (PHEV) between 2018 and 2025

Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling

In 2004, CARB adopted an Airborne Toxic Control Measure (ATCM) to Limit Diesel-Fueled Commercial Motor Vehicle Idling in order to reduce public exposure to diesel particulate matter emissions (Title 13 California Code of Regulations [CCR] Section 2485). The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than five minutes at any given location. While the goal of this measure is primarily to reduce public health impacts from diesel emissions, compliance with the regulation also results in energy savings in the form of reduced fuel consumption from unnecessary idling.

Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and other Criteria Pollutants, from In-Use Heavy-Duty Diesel-Fueled Vehicles

In addition to limiting exhaust from idling trucks, in 2008, CARB approved the Truck and Bus regulation to reduce nitrous oxides (NO_x) and particulate matter (PM) with diameters of 10 and 2.5 micrometers or less (PM_{10} and $PM_{2.5}$, respectively) emissions from existing diesel vehicles operating in California (13 CCR Section 2025). The phased regulation aims to reduce emissions by requiring installation of diesel soot filters and encouraging the retirement, replacement, or retrofit of older engines with newer emission-controlled models. The phasing of this regulation has full implementation by 2023.

CARB also promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower (hp) such as bulldozers, loaders, backhoes and forklifts, as well as many other self-propelled off-road diesel vehicles. The In-Use Off-Road Diesel-Fueled Fleets regulation adopted by CARB on July 26, 2007, aims to reduce emissions by installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission-controlled models (13 CCR Section 2449). The compliance schedule requires full implementation by 2023 in all equipment for large and medium fleets and by 2028 for small fleets.

While the goals of these measures are primarily to reduce public health impacts from diesel emissions, compliance with the regulation has shown an increase in energy savings in the form of reduced fuel consumption from more fuel-efficient engines.

Local

City of Vallejo General Plan 2040

The City of Vallejo General Plan lists the following goals and policies related to energy consumption:

Policy NBE-1.15: Energy Efficiency. Support measures to reduce energy consumption and increase energy efficiency in residential, commercial, industrial, and public buildings.

- **Action NBE-1.15A**: Connect businesses and residents with voluntary programs that provide free or low-cost energy efficiency audits, retrofit installations, rebates, financing and contractors.
- **Action NBE-1.15C**: Consider creating a Residential Energy Conservation Ordinance (RECO) and Commercial Energy Conservation Ordinance (CECO) to require point-of-sale energy audits and retrofits for all buildings that do not meet minimum energy efficiency requirements.

City of Vallejo Municipal Code

Municipal Code Section 12.32.010 adopts the 2022 California Building Standards Code California Code of Regulations Title 24.

City of Vallejo Climate Action Plan

The City of Vallejo Climate Action Plan lists the following goal related to energy consumption:

E-2 Building Standards: Require all new development to meet the minimum California Title 24 and California Green Building Standard Code requirements, as amended, and encourage new development to exceed the minimum requirements.

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

Less than Significant Impact.

Construction

The energy consumption associated with construction of the proposed project includes primarily diesel fuel consumption from on-road hauling trips and off-road construction diesel equipment, and gasoline consumption from on-road worker commute and vendor trips. Temporary electric power for as-necessary lighting and electronic equipment (such as computers inside temporary construction trailers, and heating, ventilation, and air conditioning) would be powered by a generator. The amount of electricity used during construction would be minimal; typical demand would stem from the use of electrically powered hand tools and several construction trailers by managerial staff during the hours of construction activities. The majority of the energy used during construction would be from diesel use.

There are no unusual project characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in the region or State. In addition, some incidental energy conservation would occur during construction through compliance with State requirements that equipment not in use for more than five minutes be

turned off. Project construction equipment would also be required to comply with the latest EPA and CARB engine emissions standards. These engines use highly efficient combustion engines to minimize unnecessary fuel consumption. Additionally, use of construction fuel would cease once the project is fully developed. As such, as shown in Table 15: Project Energy Consumption During Construction**,** project construction would have a nominal effect on the local and regional energy supplies. Therefore, it is expected that construction fuel consumption associated with the project would not be inefficient, wasteful, or unnecessary. The project would not substantially affect existing energy or fuel supplies, or resources and new capacity would not be required. Therefore, the impacts would be less than significant, and no mitigation is required.

Table 15: Project Energy Consumption During Construction

Source	Project Construction Usage	Solano County Annual Energy Consumption	Percentage Increase Countywide
Diesel Use	**Gallons**		
On-Road Construction Trips [1]	13,377	47,393,420	0.0282%
Off-Road Construction Equipment [2]	16,158	47,393,420	0.0341%
Construction Diesel Total	***29,535***	**47,393,420**	***0.0623%***
Gasoline	**Gallons**		
On-Road Construction Trips [1]	473	163,746,024	0.0003%

1. On-road mobile source fuel use based on vehicle miles traveled (VMT) from CalEEMod and fleet-average fuel consumption in gallons per mile from EMFAC2021 in Solano County for construction year 2025.
2. Off-road mobile source fuel usage based on a fuel usage rate of 0.05 gallons of diesel per horsepower (hp)-hour from USEPA.
Abbreviations:
CalEEMod: California Emission Estimation Model; EMFAC: Emission Factor Model 2021;
Sources: Energy Calculations in *Appendix E*

Operation

The operational energy usage from the proposed project would not be anticipated to change the current energy usage from the existing setting. The project would reconfigure the existing ferry terminal to reduce or eliminate maintenance dredging and increase operational safety in support of continued ferry service. Therefore, the project would not require additional energy usage or be wasteful, inefficient, or unnecessary in its energy usage. Thus, operational energy usage would have no impact, and no mitigation is required.

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

Less than Significant Impact. The project would be required to comply with existing regulations, including applicable measures from the City's General Plan, Climate Action Plan, and Municipal Code, or would be directly affected by the outcomes (any vehicle trips and energy consumption would be less carbon intensive due to statewide compliance with future low carbon fuel standard amendments and increasingly stringent Renewable Portfolio Standards). As mentioned previously, the project would not substantially impact energy consumption during construction and would not require any additional energy usage during operations. As such, the project would not conflict with any other state-level regulations pertaining to energy. The project would comply with existing State energy standards and would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Impacts would be less than significant, and no mitigation is required.

4.7 Geology and Soils

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
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.			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?				X
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X	

Setting

The City of Vallejo is within the San Francisco Bay Area, which is located within the Coast Ranges Geomorphic Province. The geology of the San Francisco Bay Area is dominated by the Franciscan Complex, a mixed assemblage of different bedrock types that are layered and have been deformed by tectonic activity. This tectonic activity, which occurred 65 to 165 million years ago during the Cretaceous and Jurassic geologic time periods, folded and faulted the bedrock, creating the regional topography characterized by northwest-trending ridges and valleys on each side of San Francisco Bay. The San Francisco Bay itself and shorelines occupy a basin bounded by faults in the hills and mountains to the east and west. Late Pleistocene and Holocene sediments (less than one million years old) were deposited in the basin as it subsided. The project site is underlain by made land, with sediment in the waters of Mare Island Strait consisting of silt and clays like soft mud.[17]

Seismicity

The San Francisco Bay Area is in a seismically active region near the boundary between two major tectonic plates, the Pacific Plate to the southwest and the North American Plate to the northeast. These two plates move relative to each other in a predominantly lateral manner, with the San Andreas Fault Zone at the junction. The Pacific Plate, on the west side of the fault zone, is moving north relative to the North American Plate on the east. Since approximately 23 million years ago, about 200 miles of right-lateral slip has occurred along the San Andreas Fault Zone to accommodate the relative movement between these two plates.

The major regional active (historic) faults considered likely to produce damaging earthquakes felt in San Francisco are the San Andreas, San Gregorio, Hayward, and Calaveras faults. The nearest earthquake fault to the project site that is zoned as active by the State of California Geological survey and mapped by the CDOC is the West Napa Fault, located approximately 4.5 miles northwest of the project site. The nearest quaternary fault line to the project site is located approximately 0.1-mile to the west. There are no Alquist-Priolo Earthquake Fault Hazard Zones on or near the site.

A review of historic earthquake activity from 1800 to 2005 indicates that thirteen earthquakes of magnitude M 6.0 or greater have occurred in Bay Area during this time frame. The two most consequential were the earthquakes of April 18, 1906, and October 17, 1989. The U.S. Geological Survey's 2007 Working Group on California Earthquake Probabilities estimated that there is a 63 percent probability that one or more MW 6.7 or greater earthquakes will occur in the Bay Area in the next 30 years. The probability of a

[17] U.S. Army Corps of Engineers, *Mare Island shipyard Maintenance Dredging* (2008). Available at: https://www.spn.usace.army.mil/Missions/Regulatory/Public-Notices/Article/2303094/spn-2008-00311-mare-island-shipyard-maintenance-dredging/#:~:text=The%20recently%2Ddeposited%20bottom%20sediments,during%20a%20period%20of%20growth. Accessed November 22, 2023.

MW 6.7 or greater earthquake occurring along individual faults was estimated to be 31 percent on the Hayward fault and 21 percent along the San Andreas Fault.[18]

According to information published by ABAG, a magnitude 6.9 earthquake on the Hayward fault is predicted to result in a Modified Mercalli Intensity of X, which is defined as very violent ground shaking that can result in extreme damage.[19]

Geologic Hazards

Soils at the project site exhibit moderate to high liquefaction and expansive soil characteristics. The Bay Mud deposits, in particular, are generally weak, compressible, and highly liquefiable. Combined with shallow groundwater, the combination of these factors makes the project site susceptible to soil instability due to settlement, lurching, lateral spreading, subsidence, and shoreline slope failures. However, the project site is flat; and existing conditions at the terminal have posed no landslide or erosion hazards.

City of Vallejo Propel Vallejo General Plan 2040 lists the following goals and policies related to geology and soils:

Policy NBE-5.3: Health and Safety Codes. Enforce development regulations and building code requirements to protect residents, businesses, and employees from flooding, liquefaction, earthquakes, fires, and other hazards.

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.

Less than Significant Impact. Fault rupture can occur along or immediately adjacent to faults during an earthquake. Fault rupture is characterized by ground cracks and displacement which would endanger life and property. Damage is typically limited to areas close to the moving fault. While the project site is located in an area that would be susceptible to very strong ground shaking and lies along the West Napa Fault, the project site is not located within an Alquist-Priolo Earthquake Fault Zone (CDOC, 2023).

The proposed project does not propose the construction of any habitable structures and proposed uses would be consistent with existing uses on the project site. Although the project is not anticipated to be substantially affected by seismic activity, the project would comply with General Plan Nature and Built Environment Element Policy NBE-5.3 which requires enforcement of development regulations and building code requirements to protect from natural disaster.

[18] U.S. Geological Survey, *2007 Working Group on Earthquake Probabilities, The Uniform California Earthquake Rupture Forecast, Version 2 (UCERF 2), U.S. USGS Open File Report 2007-1437* (2008). Available at: http://earthquake.usgs.gov/regional/nca/ucerf/. Accessed November 22, 2023.

[19] Association of Bay Area Governments*, ABAG Earthquake Program* (June 2004), ABAG Earthquake Shaking Scenario, North and South Hayward Earthquake—Magnitude 6.9.

Compliance with General Plan policies and plan check criteria, and other applicable sections of the California Building Code (CBC), would ensure all needed structural designs and other measures would be incorporated to the proposed project prior to the issuance a building permit. Conformance with all applicable building standards as listed and conformance to the design and review process would ensure minimal impacts associated with ground shaking. Impacts would be less than significant, and no mitigation is required.

ii. Strong seismic ground shaking?

Less than Significant Impact. The project site could experience strong seismic groundshaking as a result of an earthquake on the West Napa fault or other regional faults. The design of the project elements will be required to meet applicable County codes and the CBC requirements pertaining to seismic safety. This will address pile design and installation for the passenger landing, fixed pier, gangway, and float. All construction plans and related geotechnical plans and studies would be reviewed by County further ensuring compliance with all building standards. No new occupied structures will be constructed as part of the project; therefore, risks to people and property would not be substantial. Impacts would be less than significant, and no mitigation is required.

iii. Seismic-related ground failure, including liquefaction?

Potentially Significant Unless Mitigation Incorporated. Liquefaction generally occurs as a "quicksand" type of ground failure caused by strong ground shaking. The primary factors influencing liquefaction potential include groundwater, soil type, relative density of the sandy soils, confining pressure, and the intensity and duration of ground shaking. Per Map NBE-3 (Liquefaction Potential) of the Vallejo General Plan the liquefaction potential is very high surrounding the proposed project site (City of Vallejo 2016). The project site is underlain by made land, as well underwater sediment consisting of Bay mud and loose clayey silt within Mare Island Strait.

Other than parking lot improvements, landscaping, and enhancement to the Bay Trail amenities, no new structures would be placed on the fill materials at the landside portion of the project site. Therefore, liquefaction or other ground failure would not be a hazard for landside features.

A pile-supported fixed pier and gangway would be installed from the walkway surrounding the existing ferry terminal basin. Approximately 23 to 25 new piles would be installed, consisting of fixed pier supporting piles, guide piles at the floats, and fender piles for the terminal float and fixed pier and gangway platform. The piles would be designed and installed to a depth sufficient to withstand potential ground failure conditions. No occupied structures would be constructed on the pile system that could be damaged by liquefaction or other ground failure.

Although the project is not anticipated to be substantially affected by liquefaction, the project would comply with General Plan Nature and Built Environment Element Policy NBE-5.4 which requires site specific, design-level, geotechnical investigations be undertaken for any development in areas where potentially serious geologic risks exist. Implementation of **Mitigation Measure MM GEO-1** would ensure these requirements are

met, and compliance with General Plan policies and other applicable sections of the CBC would be incorporated to the proposed project prior to the issuance a building permit. Conformance with all applicable building standards as listed and conformance to the design and review process would ensure impacts associated with liquefaction would be minimal. Impacts would be less than significant, and no mitigation is required.

iv. Landslides?

No Impact. Landslides are mass movements of the ground that include rock falls, relatively shallow slumping and sliding of soil, and deeper rotational or transitional movement of soil or rock. The project site is relatively flat and is not located in an area mapped as an earthquake-induced landslide hazard area (CDOC, 2023). Therefore, there would be no impact, and no mitigation is required.

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

Less than Significant Impact. Other than minor improvements associated with installation of the terminal access point and utilities within the Bay Trail walkway, there would be no other above-grade soil disturbance to implement the project that would result in soil erosion. This area is covered by concrete sidewalks. There is no topsoil at the project site, and there would be no impact related to topsoil loss. The amount of erosion, if any, caused by trail work would not be substantial. The construction contractor will be required to implement a stormwater pollution prevention plan (SWPPP) that identifies erosion control measures. Further, the existing ferry vessel route would not be significantly altered with implementation of the proposed project and would not generate greater amounts of sediment transport along the shoreline than the existing use. Impacts would be less than significant, and no mitigation is required.

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

Less than Significant Impact. The proposed project does not entail significant grading or earthwork that would cause on- or off-site landslides as a result of project implementation. Liquefiable soils and soils exhibiting other characteristics that could make them unstable are present at the project site, but this would not present a hazard because no new landside structures would be placed on those soils. The fixed pier, gangway, and float would be supported on piles to a depth appropriate to withstand liquefaction, weak or compressible soils, or subsidence. The design of the project elements will be required to meet applicable City standards and CBC requirements pertaining to liquefaction, weak or compressible soils, or subsidence. The specific geotechnical features that would be needed to ensure installation and design of these features meets all applicable safety standards would be determined in the site-specific geotechnical report, which must be completed prior to building permit issuance. Impacts would be less than significant, and no mitigation is required.

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 Impact. The proposed new terminal would reconfigure the existing ferry terminal and would consist of a pile-supported fixed pier and gangway leading to a passenger float. The fixed pier and gangway would connect the existing walkway around the ferry terminal basin to the new float. The piles to support the fixed pier and gangway would not be affected by expansive soil properties because they would be continually saturated (i.e., they would not experience drying and wetting conditions that cause soil to shrink and swell). Further, project compliance with the CBC, which provides specifications related to soil compaction and stability, would ensure that project implementation would not result in on- or off-site adverse geologic conditions such as landslide, lateral spreading, subsidence, liquefaction, shrink-swell potential, or collapse such that risks to life or property would occur. Impacts would be less than significant, and no mitigation is required.

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

No Impact. No wastewater systems or septic tanks are proposed as part of the project. There are existing restroom facilities in the Vallejo tourism center building, which are connected to the City of Vallejo wastewater system. The restrooms would be available to ferry passengers. No alternative wastewater systems are proposed. There would be no impact, and no mitigation is required.

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

Less than Significant Impact. Paleontological resources are typically found in geologic strata that was deposited during the Pleistocene Epoch which includes the time between 2.6 million years ago until approximately 11,700 years ago. The Holocene Epoch began about 11,700 years ago and consists of younger sedimentary deposits and fossils that are considered less likely to be found. Because the project site has been previously developed with ferry uses and depth of excavation would be consistent with previous site improvements and frequent dredging events, it is unlikely that grading and excavation would inadvertently unearth unknown paleontological resources.

Project construction would involve earthmoving activities associated with installation of new piles that would disturb Bay Mud and other geologically young deposits that are submerged. These activities would be limited to individual, discrete, borings beneath the water and would not involve excavation beyond a dredge event prior to demolition. Although the sediment disturbed by pile removal and installation could contain invertebrate remains of shelled animals, the resources are ubiquitous throughout the Bay Area and are not considered unique or significant paleontological resources. In addition, past dredging and filling activities within the surrounding area of Mare Island Strait would likely have destroyed or compromised the integrity of fossils if they were present. Impacts would be less than significant, and no mitigation is required.

Mitigation Measures

MM GEO-1 **Design Level Geotechnical Investigation.** Prior to approval of any improvement plans, WETA or the construction contractor shall retain licensed geotechnical engineer to prepare a design-level geotechnical investigation. The design level geotechnical investigation shall include additional subsurface exploration and soil sampling, laboratory testing, and engineering evaluation of conditions on-site. The final report

shall present geotechnical engineering conclusions and specific recommendations for site preparation, pile design and installation to achieve compliance with the CBC which would reduce risk associated with seismic hazards such as lateral spreading, subsidence, liquefaction, or collapse. The project plans and specifications shall incorporate all recommendations contained in the geotechnical investigation.

4.8 Greenhouse Gas Emissions

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

Setting

This section describes impacts related to greenhouse gas emissions in the proposed Vallejo Ferry Terminal Reconfiguration project area. A Greenhouse Gas Emissions Assessment for the project was completed by Kimley-Horn in December 2023 (Appendix F).

Greenhouse Gases and Climate Change

Certain gases in the earth's atmosphere classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface and a smaller portion of this radiation is reflected toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Because the earth has a much lower temperature than the sun, it emits lower-frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth.

The primary GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Examples of fluorinated gases include chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3); however, it is noted that these gases are not associated with typical land use development. Human-caused emissions of GHGs exceeding natural ambient concentrations are believed to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the Earth's climate, known as global climate change or global warming.

GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants (TACs), which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (approximately one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of a GHG molecule is dependent on multiple variables and cannot be pinpointed, more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, or other forms of carbon sequestration. Of the total annual human-caused CO_2 emissions, approximately 55 percent is sequestered through ocean and land uptakes every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO_2 emissions remains stored in the atmosphere (Intergovernmental Panel on Climate Change, 2013).

Regulatory Framework

Federal

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 (December 2007), among other key measures, requires the following, which would aid in the reduction of national GHG emissions:

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020 and direct the National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.
- Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

U.S. Environmental Protection Agency Endangerment Finding

The U.S. Environmental Protection Agency's (EPA) authority to regulate GHG emissions stems from the U.S. Supreme Court decision in *Massachusetts v. EPA* (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Federal Clean Air Act (FCAA) and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court's ruling, the EPA finalized an endangerment finding in December 2009. Based on scientific evidence, it found that six GHGs (CO2, CH4, N2O, HFCs, PFCs, and SF6) constitute a threat to public health and welfare. Thus, it is the Supreme Court's interpretation of the existing FCAA and the EPA's assessment of the scientific evidence that form the basis for the EPA's regulatory actions.

Federal Vehicle Standards

In response to the U.S. Supreme Court ruling discussed above, Executive Order 13432 was issued in 2007 directing the EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and

light-duty trucks for model year 2011, and in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012 to 2016.

In 2010, an Executive Memorandum was issued directing the Department of Transportation, Department of Energy, U.S. EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the U.S. EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of CO2 in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon (mpg) if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021. On January 12, 2017, the U.S. EPA finalized its decision to maintain the current GHG emissions standards for model years 2022–2025 cars and light trucks.

On April 2, 2018, the Administrator signed the Mid-term Evaluation Final Determination which finds that the model year 2022-2025 GHG standards are not appropriate in light of the record before U.S. EPA and, therefore, should be revised. [20]

On March 31, 2022, the NHTSA finalized their Corporate Average Fuel Economy (CAFE) standards for model years 2024 to 2026. The final rule requires an industry-wide fuel average of approximately 49 miles per gallon (mpg) for passenger cars and light trucks in model year 2026 by increasing fuel efficiency by 8 percent annually for model years 2024 and 2025 and 10 percent for model year 2026.[21] The NHTSA estimates that final standards will reduce GHG emissions by approximately 605 million MT of CO_2, 730 thousand MT of CH_4, and 17 thousand MT of N_2O.[22] On September 19, 2019, under the Safer, Affordable, Fuel-Efficient (SAFE) Vehicles Rule, the U.S. Department of Transportation's National Highway Traffic Safety Administration (NHSTA) and the U.S. EPA issued the final "One National Program Rule." The rule states that federal law preempts state and local laws regarding tailpipe GHG emissions standards, zero emissions vehicle mandates, and fuel economy for automobiles and light duty trucks. The rule revokes California's Clean Air Act waiver and preempts California's Advanced Clean Car Regulations.[23,24]

On September 20, 2019, a lawsuit was filed by California and a coalition of 22 other states, and the cities of Los Angeles, New York and Washington, D.C., in the United States District Court for the District of Columbia (Case 1:19-cv-02826) challenging the SAFE Rule and arguing that U.S. EPA lacks the legal authority to withdraw the California waiver. In April 2021, the U.S. EPA announced it would reconsider its previous withdrawal and grant California permission to set more stringent climate requirements for cars

[20] U.S. Environmental Protection Agency, *Midterm Evaluation of Light-Duty Vehicle Greenhouse Gas Emissions Standards for Model Years 2022-2025,* https://www.epa.gov/regulations-emissions-vehicles-and-engines/midterm-evaluation-light-duty-vehicle-greenhouse-gas, accessed December 2023.

[21] NHTSA, *Corporate Average Fuel Economy*, https://www.nhtsa.gov/laws-regulations/corporate-average-fuel-economy#40466, accessed December 2023.

[22] NHTSA, *Technical Support Document: Final Rulemaking for Model Years 2024-2026 Light-Duty Vehicle Corporate Average Fuel Economy Standards*, March 2022. https://www.nhtsa.gov/sites/nhtsa.gov/files/2022-04/Final-TSD_CAFE-MY-2024-2026.pdf, accessed December 2023.

[23] U.S. Department of Transportation and U.S. EPA, *One National Program Rule on Federal Preemption of State Fuel Economy Standards,* 2019, https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100XI4W.pdf, accessed December 2023.

[24] Southern California Association of Governments. *Final Federal Safer, Affordable, Fuel-Efficient Vehicles Rule Part I (Supplemental Report),* 2019, accessed December 2023.

and SUVs. On March 9, 2022, the U.S. EPA restored California's 2013 waiver to full force, including both its GHG standards and zero-emissions vehicles sales requirements.

State of California

California Air Resources Board

The California Air Resources Board (CARB) is responsible for the coordination and oversight of State and local air pollution control programs in California. Various statewide and local initiatives to reduce California's contribution to GHG emissions have raised awareness about climate change and its potential for severe long-term adverse environmental, social, and economic effects. California is a significant emitter of CO_2e in the world and produced 381 million gross metric tons (MMT) of CO_2e in 2021.[25] The transportation sector is the State's largest emitter of GHGs, followed by industrial operations such as manufacturing and oil and gas extraction.

The State of California legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the nation. Some legislation, such as the landmark AB 32 California Global Warming Solutions Act of 2006, was specifically enacted to address GHG emissions. Other legislation, such as Title 24 building efficiency standards and Title 20 appliance energy standards, were originally adopted for other purposes such as energy and water conservation, but also provide GHG reductions. This section describes the major legislation related to GHG emissions reduction.

Regional

Bay Area Air Quality Management District Thresholds

The Bay Area Air Quality Management District (BAAQMD) is the primary agency responsible for addressing air quality concerns in the San Francisco Bay Area, including the City of Vallejo. BAAQMD also recommends methods for analyzing project-related GHGs in CEQA analyses as well as multiple GHG reduction measures for land use development projects. BAAQMD released its *Justification Report CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans* (BAAQMD Justification Report) in April 2022. BAAQMD Justification Report presents updates to the CEQA GHG thresholds from the 2017 CEQA Guidelines, which were not consistent with the statewide GHG target established by SB 32. The GHG thresholds of significance were updated to consider newer state reduction targets (e.g., SB 32) and plans for eventual carbon neutrality by 2045 (e.g., Executive Order B-55-18 and SB 1279), as well as evolving case law. The BAAQMD Justification Report (and thus the GHG thresholds) was adopted by the Board of Directors on April 20, 2022. In summary, the updated thresholds emphasize:

- Avoiding wasting electricity and developing fossil fuel infrastructure (i.e., natural gas plumbing or appliances) in new buildings that will be in place for decades and thus conflict with carbon neutrality by 2045.

- Compliance with California Green Building Standards Code (CALGreen) Tier 2 EV requirements and per capita VMT reductions consistent with SB 743.

- Consistency with a qualified GHG reduction strategy (also known as a Climate Action Plan).

[25] California Air Resources Board, *Current California GHG Emissions Inventory Data, 2000-2020 GHG inventory (2022 Edition)*, https://ww2.arb.ca.gov/ghg-inventory-data, accessed December 2023.

Clean Air Plan

Air quality plans developed to meet federal requirements are referred to as State Implementation Plans. The federal and state Clean Air Acts require plans to be developed for areas designated as nonattainment (with the exception of areas designated as nonattainment for the state PM_{10} standard). The *2017 Clean Air Plan: Spare the Air, Cool the Climate* (2017 Clean Air Plan) was adopted on April 19, 2019, by BAAQMD.

The 2017 Clean Air Plan provides a regional strategy to protect public health and protect the climate. To protect public health, the plan describes how BAAQMD will continue progress toward attaining all state and federal air quality standards and eliminating health risk disparities from exposure to air pollution among Bay Area communities. To protect the climate, the 2017 Clean Air Plan defines a vision for transitioning the region to a post-carbon economy needed to achieve ambitious greenhouse gas (GHG) reduction targets for 2030 and 2050 and provides a regional climate protection strategy that will put the Bay Area on a pathway to achieve those GHG reduction targets.

The 2017 Clean Air Plan includes a wide range of control measures designed to decrease emissions of the air pollutants that are most harmful to Bay Area residents, such as particulate matter, ozone, and toxic air contaminants; to reduce emissions of methane and other "super-GHGs" that are potent climate pollutants in the near-term; and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.

Local

City of Vallejo Municipal Code

The City's Municipal Code includes the following regulations that would reduce GHG emissions from future development:

- Green Building Code Adoption (Chapter 12.50.010)
- Water Efficient Landscape Requirements (Chapter 16.504.09)
- Construction and Demolition Debris Recycling Ordinance (Chapter 7.53)

City of Vallejo General Plan 2040

The City of Vallejo General Plan includes resource conservation measures that promote water conservation, energy efficiency, and solid waste reduction. The General Plan includes the following GHG reduction policies, which are applicable to the project.

Policy EET – 4.2: Responsible Development. Favor residential commercial, and industrial development that can mitigate or avoid environmental impacts.

- **Action EET - 4.2C:** Assess how the City's procurement policies and employee commute modes and patterns could contribute to greenhouse gas reductions and offer programs to mitigate potential impacts.

Policy MTC – 1.1: Regional Transit Connections. Enhance regional transit services for residents, employees, and visitors.

- **Action MTC - 1.1A:** Work with regional transportation agencies to coordinate regional transit planning activities, including increased frequency of bus, ferry, and rail service, timed connections, and tourism support.

Policy MTC – 1.2: Transit Ridership. Increase regional transit and ferry ridership to and from Vallejo, particularly by commuters and visitors.

- **Action MTC - 1.2A:** Participate in and contribute to regional programs to improve commute alternatives and efficiency.

City of Vallejo Climate Action Plan

The City of Vallejo's Climate Action Plan (CAP) was first published in August 2012. The CAP identifies policies that would achieve the state-recommended GHG reduction target of 15 percent below 2008 levels by 2020. The CAP provides goals and associated measures, also referred to as reduction measures, in the sectors of energy use, transportation, land use, water, solid waste, and off-road equipment. The CAP includes the following GHG reduction policies, which are applicable to the project.

Transportation Demand Management (TDM): Reduce and consolidate the number of single-occupancy vehicle trips to and from Vallejo by providing attractive alternatives and by requiring co-beneficial land use decisions.

Off-road Equipment (OR): Reduce GHG emissions from off-road equipment in Vallejo.

- **OR-7: Construction Equipment**. Reduce emissions from heavy-duty construction equipment by limiting idling and utilizing cleaner, fuels, equipment, and vehicles.

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

Less than Significant Impact.

Construction Greenhouse Gas Emissions

Project construction would result in minor increases in GHG emissions from construction equipment operating on-site and emissions from construction workers' personal vehicle travelling to and from the project construction site. Construction-related GHG emissions vary depending on the level of activity, length of the construction period, specific construction operations, types of equipment, and number of construction workers. Neither the City of Vallejo nor BAAQMD have an adopted threshold of significance for construction-related GHG emissions; however, BAAQMD recommends quantifying emissions and disclosing that GHG emissions would occur during construction. Based on CalEEMod outputs prepared for the proposed project (refer to Appendix F), project construction would generate 308 $MTCO_2e$ for the total construction period (5 months). Because project construction would be a temporary condition (a total of 5 months) and would not result in a permanent increase in emissions that would interfere with the implementation of the State's GHG

reduction goals (established by AB 32, SB 32, AB 1279, etc.), the temporary increase in emissions would be less than significant. Impacts would be less than significant and no mitigation is required.

Operational Greenhouse Gas Emissions

As mentioned previously, the project would construct an extended ferry terminal with a new reconfigured fixed pier, gangway, passenger float, and piles. The project does not propose any new sources of GHG emissions and would provide improved terminal operations and reduced dredging impacts. The project would not generate any additional traffic and population growth. Therefore, the operation of the project would not generate any new GHG emissions. Impacts would be less than significant, and no mitigation is required.

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

Less than Significant Impact.

BAAQMD Project Design Elements

As mentioned previously, the Vallejo CAP would not be applicable as it does not analyze the 2030 GHG targets established by SB 32. Thus, the project is evaluated against the BAAQMD Project Design Elements listed above in Section 4.1.

According to the BAAQMD a cumulatively considerable impact would occur if a project includes any natural gas appliances or plumbing, or a project results in any wasteful, inefficient, or unnecessary energy usage. The project would replace the existing ferry terminal with an extended ferry terminal that consists of a new reconfigured fixed pier, gangway, passenger float, and piles. The project would not include any natural gas appliances or plumbing. Further, as mentioned in Section 4.6 Energy of the project's Initial Study, the project would not permanently increase energy usage requirements in the County and would not be wasteful, inefficient, or unnecessary with its energy demands. Thus, the project would be consistent with both project design elements.

The BAAQMD also requires projects to achieve a VMT reduction and comply with electric vehicle requirements listed in the most recent version of CalGreen Tier 2 to show a less than cumulatively significant impact. The project would replace an existing ferry terminal and would not result in additional trips to the project vicinity or increase VMT. Further, the project would not be subject to parking requirements as it is replacing an existing ferry terminal. Thus, the BAAQMD Project Design Elements would not be applicable to the project.

As demonstrated above, the project would be consistent with the applicable BAAQMD Project Design Elements and would, therefore, be consistent with the BAAQMD GHG thresholds. Thus, the project would have a less than cumulatively considerable impact to global climate change. Impacts would be less than significant, and no mitigation is required.

City of Vallejo CAP

The project would be consistent with all applicable measures in the Vallejo CAP. The project would improve the efficiency of an alternative form of transportation which would promote the usage of an alternative form of commute. Further, as mentioned in the *Vallejo Ferry Terminal Reconfiguration Project Air Quality Assessment*, the project would also implement the BAAQMD's

basic control measures and would adhere to the BAAQMD idling requirements for heavy-duty construction equipment. The project would not impede any of the other measures outlined in the Vallejo CAP. Thus, the project would not conflict with the Vallejo CAP. Impacts would be less than significant and no mitigation is required.

2022 CARB Scoping Plan

As previously noted, the 2022 Scoping Plan sets a path to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels by 2045 in accordance with AB 1279. The transportation, electricity, and industrial sectors are the largest GHG contributors in the State. The 2022 Scoping Plan plans to achieve the AB 1279 targets primarily through zero-emission transportation (e.g., electrifying cars, buses, trains, and trucks). Additional GHG reductions are achieved through decarbonizing the electricity and industrial sectors.

The project would implement the Best Management Practices (BMPs) included in the *Air Quality Assessment* during construction. For example, a few of the construction measures include enforcing idling time restrictions on construction vehicles, use of added exhaust muffling and filtering devices, replant vegetation in disturbed areas as quickly as possible, and posting a publicly visible sign with the telephone number and person at the lead agency to contact regarding dust complaints.

The project would not produce any new operational GHG emissions and would improve ferry terminal operations. Thus, the project would not impede the State's progress towards carbon neutrality by 2045 under the 2022 Scoping Plan. The project would be required to comply with applicable current and future regulatory requirements promulgated through the 2022 Scoping Plan. Impacts would be less than significant, and no mitigation is required.

Plan Bay Area

The project would be consistent with the overall goals of Plan Bay Area 2050 to provide housing, healthy and safe communities, and climate protection with an overall goal to reduce VMT. As noted above, the project would develop the project site consistent with the General Plan Land Use Designation and the Vallejo Climate Action Plan. The project would add some not add any additional employment, trips related to employees that work directly at the project site. The project would provide improved operations of an alternative form of transportation. Thus, implementation of the project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Impacts would be less than significant, and no mitigation is required.

Summary

As discussed above, implementation of the project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. The project would improve the efficiency of a ferry terminal and would not result in operational GHG emissions. Further, the project would adhere to the applicable BAAQMD Project Design Element requirements and would not impede the implementation of any plans listed above. Thus, this impact would be less than significant, and no mitigation is required.

Cumulative Impacts

Cumulative Setting

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (approximately one day), GHGs have much longer atmospheric lifetimes of one year to several thousand years that allow them to be dispersed around the globe.

Cumulative Impacts

It is generally the case that an individual project of the project's size and nature is of insufficient magnitude by itself to influence climate change or result in a substantial contribution to the global GHG inventory. GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective. The additive effect of project-related GHG emissions would not result in a reasonably foreseeable cumulatively considerable contribution to global climate change. In addition, the project as well as other cumulative related projects, would be subject to all applicable regulatory requirements, which would further reduce GHG emissions. As discussed in the GHG-2 discussion above, the project would be consistent with the Vallejo CAP and the State's goals of reducing GHG levels. Thus, the project would not conflict with any GHG reduction plan. Therefore, the project's cumulative contribution of GHG emissions would be less than significant and the project's cumulative GHG impacts would also be less than cumulatively considerable. Impacts would be less than significant, and no mitigation is required.

4.9 Hazards and Hazardous Materials

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			**X**	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			**X**	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			**X**	
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				**X**
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?				**X**
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			**X**	

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?			X	

Setting

Hazardous Material Use

Hazardous materials are routinely used, stored, and transported in the City of Vallejo and are associated with industrial and commercial/retail businesses, as well as in educational facilities, hospitals, and households. Hazardous materials use is generally in proportion to the mix and types of land uses in an area. According to the Vallejo General Plan, approximately 2713 percent of the acreage within the City of Vallejo consists of commercial and industrial land uses. Commercial uses in Vallejo include local-serving retail businesses located along mixed-use corridors and region-serving businesses located in the Downtown and Waterfront areas. Vallejo's industrial past is reflected in the large amount of land dedicated to commercial and industrial uses. Within the City limits are multiple manufacturing, assembly, and warehousing businesses, research and development facilities, and naval shipyards.

The hazardous materials that are found in the City of Vallejo may be stored in small quantities in buildings and structures, in aboveground storage tanks (ASTs), underground storage tanks (USTs), drums, and other types of containers. Typically, USTs are used by businesses, such as gasoline stations. Oil refineries handle, store, and process large quantities of flammable materials and acutely toxic substances. Processing, transportation, and transfer operations are the primary activities that have the potential for posing a human health and environmental risk of hazardous materials releases.

Project Site

The proposed terminal site is located along the eastern bank of Mare Island Strait; approximately 0.2 mile west of the Vallejo downtown core. The proposed project would be at the site of the existing ferry terminal, within the ferry terminal basin off of Mare Island Way. Additional uses along Mare Island Strait include WETASWETA's North Bay Operations and Maintenance Facility, various shipyards, the Vallejo Marina, the Barbara Kondylis Waterfront Green, and industrial yards.

Sediment Quality

As described above, the project area is characterized by industrial and commercial uses. The project site is located along Mare Island Strait, which was historically a site for a U.S. Naval shipyard. As such, the potential for industrial contaminants to be present in the Bay sediment within the channel of water is high. Mare Island Strait is not identified as a toxic hot spot for any hazardous materials by the State Water Resources Control Board (SWRCB).

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

Less than Significant Impact. The project site would not accommodate hazardous materials, and fueling and maintenance of vessels would occur off site. Operation of the proposed project would be limited to the docking, loading and unloading of vessels. The existing ferry route would not be significantly altered beyond berthing procedures and the ferry route would not involve the routine transport of hazardous materials from the project site to the Downtown San Francisco Ferry Terminal. The proposed project would not involve the disposal of hazardous materials at the project site. Therefore, impacts would be less than significant, and no mitigation is required.

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

Less than Significant Impact. The proposed project would involve installation of a new fixed pier, gangway, float, and piles to replace the existing terminal components. The existing fixed pier, gangway, and float would be removed, but no building or structures would be demolished. In general, ground disturbing activities would be minimal. The proposed project would require a dredge event before construction of the proposed project, removal of approximately 16 existing piles as well as the placement of approximately 23 to 25 new piles.

The dredge event as well as the removal of existing piles could result in the disturbance of sediments in the project area. However, the dredge event would be consistent with the existing biennial dredging that currently takes place within the ferry terminal basin, and would not introduce new hazardous materials through the dredging to the sediment in Mare Island Strait. Further, increased turbidity is not a typical concern when installing or removing piles. In general, pile removal and installation of new features have little effect on bottom sediment disturbance and, therefore, it is unlikely that the proposed project would have cause a significant hazard to the public or the environment through the mobilization of contaminated sediment. Dredging activities will be required to meet the water quality performance standards required by the USFWS and the RWCB before approval from BCDC and USACE. The proposed project would incorporate conditions regarding disturbance of sediment and introduction of hazardous materials to ensure water quality is maintained. Impacts related to sediment disturbance would be less than significant.

In addition, Kimley-Horn and Associates, Inc. reviewed information from Department of Toxic Substances Control (DTSC)'s Envirostor website and the State Water Resources Control Board's Geotracker website to obtain an understanding of any releases of regulated substances or petroleum products that occurred on or near the project site. The searches did not identify any open hazardous release sites within areas of project improvements that would have an adverse environmental impact.[26][27] The closest is a completed and closed LUST Cleanup site at 400 Santa Clara Street. This Cleanup site has been closed as of 1996 and therefore would not result in the release of a hazardous material due to the project. Project operations would not require use of hazardous materials. Therefore, project implementation would not create significant hazard

[26] California, State of, *State Water Resources Control Board*. Available at: http://geotracker.waterboards.ca.gov/

[27] California, State of, *Department of Toxic Substances Control, DTSC's Envirostor Tool*. Available at: http://www.envirostor.dtsc.ca.gov/public/ Accessed: September 28, 2023.

through upset or accident conditions involving release of hazardous materials. Impacts would be less than significant, and no mitigation is required.

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

Less than Significant Impact. There are two schools within 0.25 mile of the project site – Immersive Learning Center, located .22 miles to the east on Georgia Street, and Pathways Charter School, located .25 miles to the east on Georgia Street. As discussed above, the project is not associated with the routine transport or use of hazardous materials. Project construction would result in limited dust and emissions from equipment operations, however, would not be of the scale to impact surrounding schools. Therefore, the proposed project would not emit hazardous emissions or handle hazardous materials, substances, or waste within one-quarter mile of a school. Impacts would be less than significant, and no mitigation is required.

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. Government Code Section 65962.5 refers to the Hazardous Waste and Substances Site List, commonly known as the Cortese List. The Cortese list contains hazardous waste and substance sites including public drinking water wells with detectable levels of contamination, sites with known underground storage tanks (USTs) having a reportable release, solid waste disposal facilities from which there is a known migration, hazardous substance sites selected for remedial action, historic Cortese sites, and sites with known toxic material identified through the abandoned site assessment program. The project site is not included on the hazardous sites list compiled pursuant to California Government Code Section 65962.5.[28] Therefore, the project would have no impact, and no mitigation is required.

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 two miles of a public airport or private airstrip. The project site is located approximately 7.5 miles south of Napa County Airport, the closest airport. The project site is not located within the safety zones for the airport as shown in the Napa County Airport Land Use Compatibility Plan. Further, the proposed project would not construct structures that would be occupied by residents or workers. Therefore, the proposed project would not result in a safety hazard or excessive noise for people in the project area. There would be no impact, and no mitigation is required.

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

[28] California Department of Toxic Substances Control, DTSC's Hazardous Waste and Substances Site List - Site Cleanup (Cortese List) (2022). Retrieved from https://dtsc.ca.gov/dtscs-cortese-list/. Accessed September 28, 2023

Less than Significant Impact. Implementation of the project would not impair or physically interfere with an adopted emergency response or evacuation plan. The City of Vallejo Emergency Operations Plan (EOP) was prepared by the City of Vallejo to outline policies and procedures and assign responsibilities to ensure the effective management of emergency operations. The EOP outlines the overall organizational and operational concepts in relation to response and recovery and includes the roles and responsibilities of the various committees and agencies during an emergency, and the activation and execution procedures of the emergency response system.

No revisions to the EOP would be required as a result of the proposed project. Ferry service would be maintained during construction of the proposed project with the use of a temporary terminal that has been previously utilized. During construction of the project, there may be a need for temporary lane closures along project roadways. However, traffic lanes in each direction would remain open and if necessary, detours would be provided to maintain vehicular access. Therefore, impacts would be less than significant, and no mitigation is required.

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

Less than Significant Impact. CAL FIRE identifies Fire Hazard Severity Zones (FHSZ) and designates State or Local Responsibility Areas (SRA/LRA) within the state of California. New developments located in Very High Fire Hazard Severity Zones (VHFHSZ) are required to comply with exterior wildfire design and construction codes as well as vegetation clearance and other wildland fire safety practices for structures. The project site is mapped as a non-VHFHSZ. The project site is not located within or adjacent to a VHFHSZ. See Section 4.20 Wildfire.

The proposed project would reconfigure an existing ferry terminal in Vallejo. The proposed project would not include structures that would expose residents or workers to hazards associated with wildland fires. Further, the proposed project is not located in a VHFHSZ. Therefore, impacts would be less than significant, and no mitigation is required.

4.10 Hydrology and Water Quality

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			**X**	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			**X**	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i. Result in substantial erosion or siltation on- or off-site?			**X**	
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?				**X**
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?				**X**
iv. Impede or redirect flood flows?				**X**
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			**X**	

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	

Setting

San Francisco Bay and the San Joaquin-Sacramento River Delta form the West Coast's largest estuary, combining fresh water from the rivers and numerous smaller tributaries flows with the influence of the Pacific Ocean. The San Francisco Bay Estuary (Estuary) currently encompasses roughly 1,600 square miles, drains more than 40 percent of the state, and provides drinking water to approximately two-thirds of California. The Estuary is composed of distinct hydrographic regimes: the South Bay, which extends from the Bay Bridge to the southern terminus of the Bay in San Jose; the Central Bay, which extends from the Bay Bridge north to the Richmond-San Rafael Bridge; and the North Bay that connects the Delta and the Pacific Ocean.

The project site is located in the eastern portion of the North Bay of the San Francisco Bay Estuary, also known as the San Pablo Bay. The San Pablo Bay Watershed is approximately 900 square miles and is the drainage area of the major creeks and streams that flow into San Pablo Bay. The watershed is part of the San Francisco Bay-Delta Estuary, which drains more than 40 percent of California's surface area. The San Pablo Bay Watershed is among the richest ecosystems in the West and has the largest untouched expanse of tidal wetlands in California. The Estuary is influenced by both freshwater and marine water. The Estuary receives freshwater inflow from a combination of natural creeks, human-made stormwater drainage facilities, and direct surface runoff. The project site lies adjacent to Mare Island Strait, which connects the mouth of the Napa River to the north to the Carquinez Strait and the San Pablo Bay to the south. Mare Island Strait has a projected average depth of 30 feet and an approximate depth of 60 feet at the mouth of the ferry terminal basin.[29] Sediment from the shoreline of Vallejo and Mare Island is carried by the tidal current and movement of ships in the strait to shoals and sandbars, causing siltation of the channels that periodically may require dredging.

Regulatory Framework

Federal

Clean Water Act

The Clean Water Act (CWA) (33 U.S.C. Section 1251 et seq.), formerly the Federal Water Pollution Control Act of 1972, was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the Waters of the U.S. The CWA establishes the basic structure for regulating discharges of pollutants into the "Waters of the U.S." and has given the U.S. Environmental Protection

[29] National Oceanic and Atmospheric Administration, Mare Island Strait BookletChart. Available at: https://www.charts.noaa.gov/BookletChart/18655_BookletChart.pdf. Accessed December 15, 2023.

Agency (U.S. EPA) the authority to implement pollution control programs. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point source and certain non-point source discharges to surface water. Those discharges are regulated by the National Pollutant Discharge Elimination System (NPDES) permit process (CWA Section 402).

Clean Water Act Section 404

Section 404 of the CWA (33 U.S.C. 1251 et seq.) requires a permit from the Corps for the discharge of dredged or fill material into "Waters of the U.S.," which include rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas "that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3(c)(1)). The limits of non-tidal waters extend to the Ordinary High Water Mark (OHWM) or to the limit of adjacent wetlands. The U.S. EPA also has authority over certain wetlands and may veto a Corps permit under CWA Section 404(c). In the event maintenance dredging is needed, those activities would be regulated under Sections 401 and 404.

State

Porter-Cologne Water Quality Control Act

SWRCB regulates water quality through the Porter-Cologne Water Quality Act of 1969, which contains a complete framework for the regulation of waste discharges to both surface waters and groundwater of the State. Under Subchapter 15, wastes that cannot be discharged directly or indirectly to waters of the state (and therefore must be discharged to land for treatment, storage, or disposal) are classified to determine specifically where such wastes may be discharged. This classification requirement would apply to dredged material or fill, if any, that would be disposed of in an upland environment.

Regional and Local

RWQCB Water Quality Control Plan

Regional authority for planning, permitting, and enforcement in California is delegated to the nine RWQCBs. The regional boards are required to formulate and adopt water quality control plans for all areas in the region and establish water quality objectives in the plans. As previously stated, the City of Vallejo is within the jurisdiction of the San Francisco Bay RWQCB (Region 2).

The San Francisco Bay RWQCB addresses region-wide water quality issues through the creation of the Water Quality Control Plan for San Francisco Bay Basin (Basin Plan). This Basin Plan designates beneficial uses of the State waters within Region 2; describes the water quality that must be maintained to support such uses; and provides programs, projects, and other actions necessary to achieve the standards established in the Basin Plan. The Water Quality Control Policy for the Enclosed Bays and Estuaries of California, as adopted by the SWRCB in 1995, also provides water quality principles and guidelines to prevent water quality degradation and protect the beneficial uses of waters of enclosed bays and estuaries.

San Francisco Bay Conservation and Development Commission

BCDC is responsible for implementing the McAteer-Petris Act (PRC Sections 66600 et seq.). The Act directs BCDC to exercise its authority to issue or deny permit applications for placing fill, extracting minerals, or changing the use of any land, water, or structure within the area of its jurisdiction (San Francisco Bay waters and a 100-foot-wide shoreline band inland from the high tide line). BCDC also carries out determinations of consistency with the Federal Coastal Zone Protection Act for federally sponsored

projects. It also specifies no creosote-treated wood pilings or other structures may be placed in any area subject to tidal action.

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

Less than Significant Impact. The applicable water quality standards for the portion of the Bay where the proposed project is situated are set forth in the Basin Plan, which is administered by the San Francisco RWQCB. The major waterside construction activities would include replacement of existing terminal structures as well as removal and installation of new piles. During construction activities, installation of piles could mobilize underwater sediments into the water column. Any activity involving the use of construction products and heavy equipment could also result in the incidental release of construction materials (e.g., sawdust, metal fragments, concrete), or the accidental spill of construction materials (e.g., paints and solvents) or substances commonly used in construction equipment (e.g., fuels, oil, grease). Compliance with applicable water quality regulations would reduce the potential for waterside activities to violate water quality standards. Additionally, implementation of Construction Best Management Practices (BMPs) for maintenance of water quality, including use of silt curtains, working at low tide, and containing and collecting solid debris, would further reduce potential impacts to water quality. With compliance of BMPs for underwater construction, impacts would be less than significant, and no mitigation is required. The following BMPs would be implemented for this project:

1. Seasonal work period: All work will be limited to the environmental work window between August 1 and November 30 each year.
2. Containment of Contaminants: Debris, soil, silt, bark, rubbish, creosote-treated wood, raw concrete or washings, asphalt, paint or coating material, oil or other petroleum products, or any other substances which could be hazardous to aquatic life, resulting from project related activities, shall be prevented from contaminating the soil or entering the channel.
3. Staging Equipment, Operating Equipment, and Materials Leak. Staging and storage areas for equipment, materials, fuels, lubricants, and solvents shall be located at least 150 feet away from the channel. Stationary equipment such as motors, pumps, generators, compressors, and welders located within or adjacent to the channel shall be positioned over drip-pans, or similar. Any equipment or vehicles driven and/or operated within or adjacent to the channel shall be inspected and maintained daily to prevent leads of deleterious materials into the channel. Vehicles and equipment shall be moved at least 150 feet away from the channel prior to refueling and/or lubrication.
4. Work Area. Buoys shall be used to identify the agreed limits of disturbance within the Mare Island Strait. All buoys shall be completely removed from the project site and properly disposed of upon completion of project activities.
5. Work Site Access. Access to the work site shall be via existing roads and access ramps.
6. Pile Driving – Equipment. Permittee shall install piles using a vibratory hammer only.
7. Noise and Vibration Reduction. If SPL and SEL thresholds may be exceeded, the Contractor shall furnish, install, operate, and maintain a sound attenuation system to reduce noise generated by

impact driving piles into the river. A design of the attenuation system shall be submitted to the relevant agencies for written approval 14 days prior to initiation of construction (i.e., isolation casings, confined bubble curtain, unconfined bubble curtain, wood pile cushions). The system must be operating prior to beginning pile driving activity at any given in-river pile location, or at piles within a reasonable dispersal distance of the water where it is feasible for injurious sound levels to reach the water. If the attenuation system fails, pile driving shall immediately stop and may not resume at the location until the system is put back into operation.

8. Soft Start Pile Driving. The initial strikes of all in-water piles, or piles that occur within a distance in which injurious sound levels to aquatic species could reach the water shall occur at less than full impact force for a period of 15 seconds followed by 30 seconds of no activity. This action shall be repeated two additional times and impact shall be gradually brought up to full force blows to allow aquatic species adequate time to leave the project area.
9. A biological monitor shall be assigned to the project to conduct biological surveys and/or monitor work. The monitor shall be present during all pile driving activities.
10. An educational training session shall be held for all persons employed on the project prior to performing the work.
11. No Dumping. Permittee and all contractors, subcontractors, and employees shall not dump any litter or construction debris within the river, or where it may pass into the river.
12. The Contractor shall pick up all debris and waste daily.
13. Water containing mud, silt, or other pollutants from equipment washing or other activities shall not be allowed to enter a lake, river, or river.
14. Toxic Materials. Any hazardous or toxic materials that could be deleterious to aquatic life and that could be washed into the river or its tributaries shall be contained in water-tight containers or removed from the project area.
15. Spill Containment. All activities shall have absorbent materials designated for spill containment and cleanup activities on site for use in an accidental spill. Prior to entering the work site, all field personnel shall know the location of spill kits and be trained in their appropriate use.
16. Contractor shall submit a Solid Debris Management Plan which at a minimum includes the following: source and type of expected debris, debris retrieval method, disposal method and site, schedule of disposal operations, debris containment method, if floatable debris is involved.

During landside activities, including rerouting utility connections and removal/replacement of the bridge structure, spills from construction products and leaks from the equipment have the potential to enter stormwater that flows across the site toward the Bay. Stormwater runoff would be controlled through best management practices outlined in Title 24, Part 11, of the CALGreen Code, which would be required through project implementation. Impacts would be less than significant, and no mitigation is required.

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

Less than Significant Impact. The project involves replacement and upgrades to the existing Vallejo Ferry Terminal within Mare Island Strait in the San Francisco Bay. No groundwater is expected to be encountered during construction activities because construction activities would largely take place along the shoreline of the strait, rather than landside. The project site is currently developed with landside impervious surfaces. Refurbishment of the existing Vallejo Ferry Terminal would not substantially alter impervious surfaces because most of the project structures would be located within the water. Therefore, the project would not interfere with nor adversely affect groundwater supplies or recharge. Impacts would be less than significant, and no mitigation is required.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

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

Less than Significant Impact. As previously discussed, project construction activities involving reconfiguration and replacement of structures and installation of piles would primarily occur within the shoreline (waterside) portion of the project. Landside components include minor utility modifications, the bridge structure, and installation of new piles to support it. Installation of landside components and construction are not anticipated to result in a significant temporary or permanent modification the shoreline such that it could be susceptible to erosion or cause siltation. Further, the project would comply with BMPs set forth in Title 24 of the CALGreen code intended to reduce or eliminate the potential for project-related impacts such as erosion or siltation that would otherwise degrade local water quality. As such, the project would not substantively alter the existing drainage pattern on land. Impacts would be less than significant, and no mitigation is required.

Project operations would not change from the existing uses of the ferry terminal, and implementation of the proposed project would reduce the need for frequent dredging events that mobilize underwater sediments into the water column. Dredging frequency is reduce by extending the ferry terminal to a position located out of the basin and closer to the main channel of the river. With the gangway and float located closer to the main current of the river, sedimentation associated with the ferry activity would be carried downstream in the current rather than settle in the basin. Implementation of the project would significantly reduce the siltation around the terminal and reduce the frequency for regular dredging. The duration between dredge events will likely increase to at least 20 years, thus reducing the need for scheduled disrupting activities. As a result, no impacts to water quality would occur as a result of project operation. Impacts would be less than significant, and no mitigation is required.

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

No Impact. Project implementation would include reconfiguration and replacement to structures at the existing ferry terminal in addition to minor utility modifications and updates. Structures to be replaced are located primarily on-site waterside, within Mare Island Strait and existing ferry terminal basin. No new permanent impermeable surfaces would be introduced within the project site such that increased surface water/runoff would result during a rain or storm event. No increase in- on or off-site flooding is anticipated. There would be no impact and no mitigation is required.

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?

No Impact. As described above, project implementation would not result in new, permanent impermeable surfaces that would change stormwater peak flows, volumes, or result in changes in stormwater quality compared to existing conditions. Replacement and reconfiguration of terminal structures and installation of piles would occur within Mare Island Strait and existing ferry terminal basin and would not contribute flows to a stormwater drainage system. There would be no impact and no mitigation would be required.

iv. Impede or redirect flood flows?

No Impact. As described above, the landside of the project site is located in a special flood hazard area (Zone AE), or areas with a 1 percent annual chance of flooding. The shoreside is located within the existing Vallejo Ferry Terminal basin along Mare Island Strait. Upgrades and replacement of existing terminal structures would have no effect on tidal flooding that could redirect or impede flood flows landside of the terminal because the project would not introduce new structure differing from the existing terminal, and not involve placement of fill or create barriers to flow. There would be no impact and no mitigation is required.

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

Less than Significant Impact. See criterion (c-iv) for discussion regarding flood hazards. Portions of San Francisco Bay are susceptible to tsunami hazard. However, the proposed project would not involve any occupancy of permanent structures that could be damaged by tsunami. The terminal structure, although modified and reconfigured as part of the project, could be subject to flooding by tsunami. Tsunami-induced flooding at the site could damage the terminal features or a vessel temporarily moored there as part of regular service, but people would not be exposed to any risk because evacuation procedures implemented by WETA and the City of Vallejo would ensure populations at risk would not be present. Seiche historically has not resulted in substantial flooding or damage in the San Francisco Bay Area. Given that marine elements can be readily replaced and

that landside elements are above the predicted inundation level, potential risks related to release of pollutants is low. Impacts would be less than significant, and no mitigation is required.

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

Less than Significant Impact. Implementation of the project would not involve the use of groundwater. Earthmoving activities associated with project construction would consist of installation of new piles to support replacement of terminal structures and would occur within Mare Island Strait or existing ferry terminal basin. Project construction activities would implement both land side and in-water BMPs intended to reduce water quality impacts (e.g., erosion and siltation control) consistent with the requirements of the San Francisco RWQCB. The project does not propose or require any amendments to a water quality plan. Therefore, the project would not conflict with or obstruct a water quality control plan or groundwater management plan. Impacts would be less than significant, and no mitigation is required.

4.11 Land Use and Planning

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?			**X**	
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?			**X**	

Setting

The project site is located on Mare Island Strait adjacent to the Downtown-Waterfront neighborhood, which is in the western part of the City. This area is bound by Interstate 80 (I-80) to the west, the San Pablo Bay to the east, the Carquinez Strait to the south, and CA-37 to the north. Mixed-use commercial and office buildings characterize the Waterfront area.

City of Vallejo General Plan land use designations at the project site include Parks, Recreation, and Open Space. Adjacent land use designations include Public Facilities and Institutions as well as the Downtown/Waterfront Mixed Use District overlay. The Downtown/Waterfront Mixed Use District is envisioned by the City of Vallejo General Plan as a vibrant, pedestrian-oriented district that would seamlessly integrate downtown with the waterfront area, providing easy access to a mix of uses and creating a destination for people to visit from other parts of the region.

The majority of the project site falls within the Waterfront Planned Development Master Plan area, which aims to revitalize the Vallejo Waterfront and create a pedestrian and transit-friendly neighborhood with high density commercial, office, and residential units. The proposed project site is currently zoned as Waterfront Mixed-Use, a zoning district that "intended to create and establish regulations for a waterfront mixed-use district that will allow waterfront shopping and services, and other activities." The project site is not within a Port Priority Use Area, as designated by the San Francisco Bay Area Seaport Plan.

Additional Applicable Plans

BCDC Bay Plan and Public Access Design Guidelines

BCDC has jurisdictional authority over the Bay, the 100-foot-wide shoreline band surrounding the Bay, salt ponds, managed wetlands, and certain waterways as defined in the San Francisco Bay Plan. BCDC has permitting authority for development within the 100-foot shoreline band and is also responsible for issuing Bay filling and dredging permits. The grounds on which development applications are approved or denied are outlined in the San Francisco Bay Plan.

The San Francisco Bay Plan was completed and adopted by BCDC in 1968 and submitted to the California State Legislature in 1969. The Legislature acted upon BCDC's recommendations in the Bay Plan and revised the McAteer-Petris Act by designating BCDC as the agency responsible for maintaining and carrying out the provisions of the Act and the Bay Plan for the protection of the Bay and its natural resources, as well as the development of the Bay and shoreline. The McAteer-Petris Act directs BCDC to exercise its authority to issue or deny permit applications for placing fill, extracting materials, or changing the use of any land, water, or structure within the area of its jurisdiction.

The latest amendment to the Bay Plan was adopted in October 2019 (Resolution 11-08), which added policies acknowledging and incorporating social justice and social equity. It also implemented further policies pertaining to safety of fills and protection of habitat. The purpose of the BCDC Public Access Design Guidelines for the San Francisco Bay is to provide the Bay region with a design resource for development projects along the shoreline of the Bay. These guidelines provide suggestions for site planning, as well as recommendations for designing and developing attractive and usable public access areas. The guidelines are not legally enforceable standards, but are an advisory set of design principles aimed at enhancing shoreline access while providing for the protection of Bay resources, regional livability, and local economic prosperity.

The guidelines are general in scope due to the varied conditions of the shoreline and the numerous uses that occur along the Bay. They are applicable to all development projects within BCDC's jurisdiction and are intended to complement the guidelines and design standards of the local municipalities within the region. Although the Public Access Design Guidelines are advisory, they have been adopted by BCDC and are based on San Francisco Bay Plan policies. The guidelines also reflect past recommendations of BCDC's Design Review Board and formal decisions of the BCDC.[30]

ABAG Bay Trail Plan

The Bay Trail Plan proposes development of a regional hiking and bicycling trail around the perimeter of San Francisco and San Pablo Bays. The Plan was adopted by ABAG in July 1989 and includes a proposed alignment for a multi-use trail; a set of policies to guide the future selection, design, and implementation of routes; and strategies for implementation and financing. The Plan was prepared by ABAG pursuant to Senate Bill 100 that was passed into law in 1987 and mandated that the Bay Trail: provide connections to existing park and recreation facilities; create links to existing and proposed transportation facilities; and be planned in such a way as to avoid adverse effects on environmentally sensitive areas. Since the Bay Trail Plan was adopted, the majority of the jurisdictions along the Bay Trail alignment has passed resolutions in support of the Bay Trail and has incorporated it into their general plans.

The Bay Trail Plan is envisioned to be a continuous 500-mile public corridor along the Bay Area's shoreline containing recreational, environmental education, and nonmotorized transportation opportunities, 310 miles of which are complete (approximately 60 percent of the ultimate length). When complete, it would cross all counties and major toll bridges in the Bay Area. The Bay Trail Plan contains five categories of policies to guide selections of the trail route and implementation of the trail system: trail alignment, trail design, environmental protection, transportation access, and implementation policies. Bay Trail policies

[30] San Francisco Bay Conservation and Development Commission, *San Francisco Bay Plan*. Available at: https://www.bcdc.ca.gov/plans/sfbay_plan.html. Accessed November 27, 2023.

and design guidelines are intended to complement, rather than supplant the adopted regulations and guidelines of local management agencies. Policies relevant to the proposed project include: ensuring a continuous trail around the Bay, locating the trail close to the shoreline, and providing easy access to trail users, safe trails, and trail-related amenities.

The Vallejo sections of the Bay Trail run along the shoreline wherever physically feasible. Segments to fill gaps between trail sections in Vallejo are currently being planned, as well as an extension of the trail through South Vallejo. The Bay Trail, in the vicinity of the project site, extends around the ferry terminal basin, extending up and down Mare Island Strait shoreline from the Mare Island Bridge to the southern end of Independence Park.[31]

a) Physically divide an established community?

Less than Significant Impact. The proposed project would not divide an established community. The project site is located in an area that is characterized by mixed-use commercial buildings and ferry terminal uses. The project site is currently developed with an existing ferry terminal, including a fixed pier, gangway, and float structure in the ferry basin area. Although the proposed project would replace the existing ferry terminal with a new larger, reconfigured ferry terminal, and would potentially make minor improvements to the surrounding area, implementation of the proposed project would not significantly alter existing or permitted uses and would replace the existing use with a similar use. In addition, while the ferry basin area is physically separated from the downtown neighborhood to the west and residential neighborhoods to the north and south along Mare Island Way, pedestrian, bicycle, and vehicular connections are available. The proposed project would not alter these connections or create new barriers. There would be no impact, and no mitigation is required.

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

Less than Significant Impact. The key planning documents that are directly related to, or that establish a framework for the development of the proposed project include the City of Vallejo General Plan and Zoning Ordinance, the Vallejo Waterfront Planned Development Master Plan, the San Francisco Bay Conservation and Development Commission (BCDC) Plan, and the Association of Bay Area Governments (ABAG) Bay Trail Plan.

No General Plan land use or zoning designation change is expected as a result of the proposed project. As such, the proposed project would be consistent with existing land use designations and zoning. One of the Nature and Built Environment goals of the Vallejo General Plan (NBE-4.2) is to activate waterfront open spaces adjacent to downtown Vallejo. While the proposed project would reconfigure a ferry terminal to help bring visitors to this area and thus continue to provide access to the City, no changes in the existing ferry service provided would occur as a result of project implementation. As stated in Policies MTC-1 and -2, the General Plan supports the use of the ferry terminal in its existing location and seeks to enhance service and increase ridership. Providing fast

[31] Association of Bay Area Governments, *San Francisco Bay Trail Plan*. Available at: https://abag.ca.gov/our-work/projects/san-francisco-bay-trail. Accessed November 27, 2023.

and efficient transit to San Francisco via the reconfigured ferry terminal would provide a focus for transit-oriented development and support use of the waterfront open spaces, all of which would support the goals and policies of the General Plan. Further, the proposed project would also conserve, protect, and enhance natural and cultural resources along Mare Island Strait. In compliance with Policy NBE-4.1, the proposed project would protect these natural areas and minimize adverse effects. As such, the proposed project would be generally consistent with the General Plan, resulting in less-than-significant impacts.

Within the BCDC Plan, Transportation Policy 5 states that ferry terminals should be sited at locations that are near navigable channels, which would not rapidly fill with sediment, and would not significantly impact tidal marches, tidal flats, or other valuable wildlife habitat. The proposed project would require minor dredging for installation of the passenger float and significantly less ongoing maintenance dredging in an area that currently undergoes frequent dredging for ferry terminal operations. Implementation of a reconfigured ferry terminal is consistent with the current use of the site and therefore, would not impact these areas. As such, the project site would be navigable, and the proposed project would be consistent with Transportation Policy 5. Review and approval from BCDC and its Design Review Board is required for development and/or improvements to property within the 100-foot shoreline band. The proposed terminal access point would extend into Mare Island Strait from this 100-foot shoreline band. All public access provided through BCDC's permit process would be planned, designed, constructed, and maintained on the basis of the outlined objectives. The following public access objectives will help the proposed project achieve the BCDC goal of providing maximum feasible public access: make public access usable; provide, maintain, and enhance visual access to the shoreline; maintain the visual quality of the shoreline and adjacent developments; provide connections and continuity along the shoreline; take advantage of the Bay setting; and ensure that public access is compatible with wildlife through siting, design, and management strategies.[32] Development of the proposed project would be consistent with the objectives of the BCDC Public Access Design Guidelines. The existing terminal access gate along the Bay Trail would remain in its existing location with implementation of the proposed project. The proposed passenger queuing areas and terminal access gate placement would reduce conflicts with pedestrian users of the Bay Trail by providing a separate area adjacent to the existing Bay Trail for these activities to occur. As such, the proposed project would further the goals of the BCDC Design Guidelines by continuing to provide shoreline access. In addition, most BCDC public access permits include requirements for signage intended to help the public find and use the public access. BCDC provides a guide, the Public Access Signage Guidelines, to develop a comprehensive sign program for required public access areas. WETA would be required to comply with the Public Access Signage Guidelines. As such, the proposed project would result in less-than-significant impacts regarding consistency with the BCDC Public Access Design Guidelines.

Development of the proposed project includes reconfiguring an existing ferry terminal that would extend from existing Bay Trail system, which currently travels along the shoreline around the ferry terminal basin. The proposed project would include new paving, signage, and potentially a new access point for the terminal including queuing. As such, the proposed project would be required

[32] San Francisco Bay Conservation and Development Commission, *Shoreline Spaces: Public Access Design Guidelines for the San Francisco Bay* (April 2005). Available at: https://bcdc.ca.gov/planning/reports/ShorelineSpacesPublicAccessDesignGuidelinesForSFBay_Apr2005.pdf. Accessed November 27, 2023.

to adhere to the ABAG Bay Trail Plan and Design Guidelines. The Bay Trail Plan mandates that the Bay Trail provide connections to existing park and recreation facilities, create links to existing and proposed transportation facilities, and be planned in a way to avoid adverse effects on environmentally sensitive areas. The proposed project would continue to serve as a source of public transportation to and from other regions of the Bay Area and enhance community connections within the Downtown-Waterfront area. Further, any proposed project work that would potentially occur in the right of way of the Bay Trail would adhere to the Bay Trail Plan policies and the plans would be reviewed by the Bay Trail Advisory Committee to ensure compliance. In addition, the proposed project would comply with the Bay Trail Design Guidelines, resulting in less-than-significant impacts regarding consistency with the ABAG Bay Trail Plan and Design Guidelines.

As a result, the proposed project would not result in any conflicts with existing land use policies adopted for the purpose of avoiding or mitigation an environmental effect. Therefore, impacts would be less than significant, and no mitigation is required.

4.12 Mineral Resources

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				**X**
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				**X**

Setting

According to the Resources Element of the Solano County General Plan, mineral resources in the County largely consist of mercury, sand and gravel, clay, stone products, calcium, and sulfur.[33] Figure RS-4 of the Solano County General Plan shows no mineral resource zones (MRZs) of significance are within or immediately adjacent to the proposed project site. The nearest mineral extraction site is the Lake Herman Quarry in Vallejo, approximately 4.5 miles west of the proposed project site.

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact. The proposed project would be located along the shoreline on the eastern side of Mare Island Strait, and is not located in an MRZ of significance. The proposed project would include only minor ground-disturbing activities along this shoreline area. As described in the setting, mineral production in Solano County has historically been limited to mercury, sand and gravel, clay, stone products, calcium, and sulfur, none of which are present in significant quantities at the project site. The proposed project would not result in the loss of a known mineral resource. There would be no impact, and no mitigation is required.

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 Surface Mining and Reclamation Act of 1975 (SMARA) requires classification of land into MRZs according to the known or inferred mineral potential of the area. Under SMARA, areas are categorized into MRZs as follows:

[33] Solano County, *Solano County General Plan (November 2008)*. Available at: https://www.solanocounty.com/depts/rm/planning/general_plan.asp. Accessed November 21, 2023.

MRZ-1 Areas where the available geologic information indicates no significant mineral deposits or a minimal likelihood of significant mineral deposits.

MRZ-2 Areas where the available geologic information indicates that there are significant mineral deposits or that there is a likelihood of significant mineral deposits. However, the significance of the deposit is undetermined.

MRZ-3 Areas where the available geologic information indicates that mineral deposits are inferred to exist; however, the significance of the deposit is undetermined.

MRZ-4 Areas where there is not enough information available to determine the presence or absence of mineral deposits.

In 2013, the California Geological Survey (CGS) published an updated Mineral Lands Classification Maps within the County of Solano that covered the project site. The proposed project site is designated by CGS as MRZ-1, where little likelihood for the presence of significant mineral resources exists. Therefore, the proposed project would not result in the loss of availability of a locally-important mineral resource recovery site. There would be no impact, and no mitigation is required.

4.13 Noise

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		**X**		
b) Generation of excessive groundborne vibration or groundborne noise levels?			**X**	
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?			**X**	

Setting

The City of Vallejo is impacted by various noise sources. Mobile sources of noise, particularly cars and trucks, are the most common and significant sources of noise in most communities. Other sources of noise are the various land uses (e.g., residential, commercial, institutional, and recreational and parks activities) throughout the City that generate stationary-source noise. An Acoustical Assessment (Appendix G) was prepared for the project in addition to a Hydroacoustic Impact Assessment by Illingworth & Rodkin (Appendix H) in January 2023.

Noise Measurements

To determine ambient noise levels in the project area, four 10-minute noise measurements were taken using a Larson Davis SoundExpert® LxT Sound Level Meter between 9:33 a.m. and 10:45 a.m. on December 5, 2023; refer to Appendix G for existing noise measurement data and **Figure 13: Noise Measurement Locations**. Noise Measurement 1 (NM-1) was taken to represent the ambient noise level in the existing residential neighborhood on Maine Street southeast of the project site, while NM-2 was taken to represent the ambient noise level at the southeast edge of the project site. NM- 3 was taken to represent the ambient noise level at the northeast edge of the project site, while NM-4 was taken to represent the existing public facilities on Georgia Street northeast of the project site. The primary noise sources during all four measurements were traffic on Mare Island Way, Maine Street, and Georgia Street and operational

noise from existing ferry operations. Table 16: Noise Measurements, provides the ambient noise levels measured at these locations.

Table 16: Noise Measurements

Site No.	Location	L_{eq} (dBA)	L_{min} (dBA)	L_{max} (dBA)	Time
NM-1	101-201 Maine Street	61.6	45.1	46.8	9:33 a.m.
NM-2	285 Mare Island Way	59.4	49.8	70.5	10:13 a.m.
NM-3	289 Mare Island Way	61.4	47.9	75.3	9:58 a.m.
NM-4	155 Georgia Street	58.2	44.1	70.5	10:35 a.m.
Source: Noise Measurements taken by Kimley-Horn on December 5, 2023.					

Existing Mobile Noise

There is existing mobile noise from surrounding roadways: Mare Island Way, Georgia Street, and Maine Street. Further, mobile noise is generated by the ferries operating at the existing ferry terminal.

Existing Stationary Noise

The primary sources of stationary noise in the project vicinity are those associated with the operations of the existing ferry terminal, nearby residential uses to the southeast of the site, and existing commercial northwest and east of the project site. The noise associated with these sources may represent a single-event noise occurrence, short-term noise, or long-term/continuous noise.

Sensitive Receptors

Noise exposure standards and guidelines for various types of land uses reflect the varying noise sensitivities associated with each of these uses. Residences, hospitals, schools, guest lodging, libraries, and churches are treated as the most sensitive to noise intrusion and therefore have more stringent noise exposure targets than do other uses, such as manufacturing or agricultural uses that are not subject to impacts such as sleep disturbance. As shown in Table 17: Sensitive Receptors and **Figure 12: Sensitive Receptors**, sensitive receptors near the project site include a multi-family residential community approximately 545 feet southeast and the Vallejo John F. Kennedy Library approximately 615 feet east. The nearest school is the Pathways Charter School approximately 2,155 feet east. These distances are from the project site to the sensitive receptor property line.

Table 17: Sensitive Receptors

Receptor Description	Distance and Direction from the Project Site
Multi-family residential community	545 feet southeast
Vallejo John F. Kennedy Library	615 feet east
Pathways Charter School	2,155 feet east
1. Distances are measured from the Project site boundary to the property line. Source: Google Earth, 2023.	

Source: ESRI, 2023

Figure 13: Noise Measurement Locations

WETA Vallejo Ferry Terminal Reconfiguration Project

Not to scale

Kimley»Horn

Acoustic Fundamentals

Sound and Environmental Noise

Acoustics is the science of sound. Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a medium (e.g. air) to human (or animal) ear. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound and is expressed as cycles per second, or hertz (Hz).

Noise is defined as loud, unexpected, or annoying sound. The fundamental acoustics model consists of a noise source, receptor, and the propagation path between the two. The loudness of the noise source, obstructions, or atmospheric factors affecting the propagation path, determine the perceived sound level and noise characteristics at the receptor. Acoustics deal primarily with the propagation and control of sound. A typical noise environment consists of ambient noise that is the sum of many distant and indistinguishable noise sources. Superimposed on this ambient noise is the sound from individual local sources. These sources can vary from an occasional aircraft or train passing by to continuous noise from traffic on a major highway. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a large range of numbers. To avoid this, the decibel (dB) scale was devised. The dB scale uses the hearing threshold of 20 micropascals (µPa) as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The dB scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels correspond closely to human perception of relative loudness. Table 18: Typical Noise Levels provides typical noise levels.

Table 78: Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	– 110 –	Rock Band
Jet fly-over at 1,000 feet		
	– 100 –	
Gas lawnmower at 3 feet		
	– 90 –	
Diesel truck at 50 feet at 50 miles per hour		Food blender at 3 feet
	– 80 –	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawnmower, 100 feet	– 70 –	Vacuum cleaner at 10 feet
Commercial area		Normal Speech at 3 feet
Heavy traffic at 300 feet	– 60 –	
		Large business office
Quiet urban daytime	– 50 –	Dishwasher in next room

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Quiet urban nighttime	– 40 –	Theater, large conference room (background)
Quiet suburban nighttime		
	– 30 –	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	– 20 –	
		Broadcast/recording studio
	– 10 –	
Lowest threshold of human hearing	– 0 –	Lowest threshold of human hearing

Source: California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013.

Noise Descriptors

The dB scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Several rating scales have been developed to analyze the adverse effect of community noise on people. Because environmental noise fluctuates over time, these scales consider that the effect of noise on people is largely dependent on the total acoustical energy content of the noise, as well as the time of day when the noise occurs. The equivalent noise level (L_{eq}) is the average noise level averaged over the measurement period, while the day-night noise level (L_{dn}) and Community Equivalent Noise Level (CNEL) are measures of energy average during a 24-hour period, with dB weighted sound levels from 7:00 p.m. to 7:00 a.m. Most commonly, environmental sounds are described in terms of L_{eq} that has the same acoustical energy as the summation of all the time-varying events. Each is applicable to this analysis and defined Table 19: Definitions of Acoustical Terms.

Table 19: Definitions of Acoustical Terms

Term	Definitions
Decibel (dB)	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in µPa (or 20 micronewtons per square meter), where 1 pascals is the pressure resulting from a force of 1 newton exerted over an area of 1 square meter. The sound pressure level is expressed in dB as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g. 20 µPa). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sound are below 20 Hz and ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level (dBA)	The sound pressure level in dB as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.

Term	Definitions
Equivalent Noise Level (L_{eq})	The average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
Maximum Noise Level (L_{max}) Minimum Noise Level (L_{min})	The maximum and minimum dBA during the measurement period.
Exceeded Noise Levels (L_1, L_{10}, L_{50}, L_{90})	The dBA values that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Day-Night Noise Level (L_{dn})	A 24-hour average L_{eq} with a 10 dBA weighting added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity at nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.4 dBA L_{dn}.
Community Noise Equivalent Level (CNEL)	A 24-hour average Leq with a 5 dBA weighting during the hours of 7:00 a.m. to 10:00 a.m. and a 10 dBA weighting added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.7 dBA CNEL.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends on its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

The A-weighted decibel (dBA) sound level scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be used. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about plus or minus 1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends on the distance between the receptor and the noise source.

A-Weighted Decibels

The perceived loudness of sounds is dependent on many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable and can be approximated by dBA values. There is a strong correlation between dBA and the way the human ear perceives sound. For this reason, the dBA has become the standard tool of environmental noise assessment. All noise levels reported in this document are in terms of dBA, but are expressed as dB, unless otherwise noted.

Addition of Decibels

The dB scale is logarithmic, not linear, and therefore sound levels cannot be added or subtracted through ordinary arithmetic. Two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic dB is A-weighted, an increase of 10 dBA is generally perceived as a doubling in

loudness. For example, a 70-dBA sound is half as loud as an 80-dBA sound and twice as loud as a 60-dBA sound. When two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dBA higher than one source under the same conditions. Under the dB scale, three sources of equal loudness together would produce an increase of 5 dBA.

Sound Propagation and Attenuation

Sound spreads (propagates uniformly outward in a spherical pattern, and the sound level decreases (attenuates) at a rate of approximately 6 dB for each doubling of distance from a stationary or point source. Sound from a line source, such as a highway, propagates outward in a cylindrical pattern. Sound levels attenuate at a rate of approximately 3 dB for each doubling of distance from a line source, such as a roadway, depending on ground surface characteristics. No excess attenuation is assumed for hard surfaces like a parking lot or a body of water. Soft surfaces, such as soft dirt or grass, can absorb sound, so an excess ground-attenuation value of 1.5 dB per doubling of distance is normally assumed. For line sources, an overall attenuation rate of 3 dB per doubling of distance is assumed.

Noise levels may also be reduced by intervening structures; generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm reduces noise levels by 5 to 10 dBA. The way older homes in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows. The exterior-to-interior reduction of newer residential units is generally 30 dBA or more.

Human Response to Noise

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

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

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

Effects of Noise on People

Hearing Loss. While physical damage to the ear from an intense noise impulse is rare, a degradation of auditory acuity can occur even within a community noise environment. Hearing loss occurs mainly due to chronic exposure to excessive noise but may be due to a single event such as an explosion. Natural hearing loss associated with aging may also be accelerated from chronic exposure to loud noise. The Occupational Safety and Health Administration has a noise exposure standard that is set at the noise threshold where hearing loss may occur from long-term exposures. The maximum allowable level is 90 dBA averaged over 8 hours. If the noise is above 90 dBA, the allowable exposure time is correspondingly shorter.

Annoyance. Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that causes for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. The L_{dn} as a measure of noise has been found to provide a valid correlation of noise level and the percentage of people annoyed. People have been asked to judge the annoyance caused by aircraft noise and ground transportation noise. There continues to be disagreement about the relative annoyance of these different sources. A noise level of about 55 dBA L_{dn} is the threshold at which a substantial percentage of people begin to report annoyance[34].

Groundborne Vibration

Sources of groundborne vibrations include natural phenomena (earthquakes, volcanic eruptions, sea waves, landslides, etc.) or man-made causes (explosions, machinery, traffic, trains, construction equipment, etc.). Vibration sources may be continuous (e.g. factory machinery) or transient (e.g. explosions). Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One is the peak particle velocity (PPV); another is the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. The RMS velocity is defined as the average of the squared amplitude of the signal. The PPV and RMS vibration velocity amplitudes are used to evaluate human response to vibration.

Table 20: Human Reaction and Damage to Buildings for Continuous or Frequent Vibration, displays the reactions of people and the effects on buildings produced by continuous vibration levels. The annoyance levels shown in the table should be interpreted with care since vibration may be found to be annoying at much lower levels than those listed, depending on the level of activity or the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage. In high noise environments, which are more prevalent where groundborne vibration approaches perceptible levels, this rattling phenomenon may also be produced by loud airborne environmental noise causing induced vibration in exterior doors and windows.

[34] Federal Interagency Committee on Noise, *Federal Agency Review of Selected Airport Noise Analysis Issues*, August 1992.

Table 20: Human Reaction and Damage to Buildings for Continuous or Frequent Intermittent Vibration

Maximum PPV (in/sec)	Vibration Annoyance Potential Criteria	Vibration Damage Potential Threshold Criteria	FTA Vibration Damage Criteria
0.008	-	Extremely fragile historic buildings, ruins, ancient monuments	-
0.01	Barely Perceptible	-	-
0.04	Distinctly Perceptible	-	-
0.1	Strongly Perceptible	Fragile buildings	-
0.12	-	-	Buildings extremely susceptible to vibration damage
0.2	-	-	Non-engineered timber and masonry buildings
0.25	-	Historic and some old buildings	-
0.3	-	Older residential structures	Engineered concrete and masonry (no plaster)
0.4	Severe	-	-
0.5	-	New residential structures, Modern industrial/commercial buildings	Reinforced-concrete, steel, or timber (no plaster)
PPV = peak particle velocity; in/sec = inches per second; FTA = Federal Transit Administration			
Source: California Department of Transportation, Transportation and Construction Vibration Guidance Manual, 2020 and Federal Transit Administration; Transit Noise and Vibration Assessment Manual, 2018.			

Ground vibration can be a concern in instances where buildings shake, and substantial rumblings occur. However, it is unusual for vibration from typical urban sources such as buses and heavy trucks to be perceptible. Common sources for groundborne vibration are planes, trains, and construction activities such as earth-moving which requires the use of heavy-duty earth moving equipment. For the purposes of this analysis, a PPV descriptor with units of inches per second (in/sec) is used to evaluate construction-generated vibration for building damage and human complaints.

Regulatory Setting

To limit population exposure to physically or psychologically damaging as well as intrusive noise levels, the Federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise.

State of California

California Government Code

California Government Code Section 65302(f) mandates that the legislative body of each county and city adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines established by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of "normally acceptable", "conditionally acceptable", "normally unacceptable", and "clearly unacceptable" noise levels for various land use types. Single-family homes are "normally acceptable" in exterior noise environments up to 60 CNEL and "conditionally acceptable" up to 70 CNEL. Multiple-family residential uses are "normally acceptable" up to 65 CNEL and "conditionally acceptable" up to 70 CNEL. Schools, libraries, and churches are "normally acceptable" up to 70 CNEL, as are office buildings and business, commercial, and professional uses.

Title 24 – Building Code

The State's noise insulation standards are codified in the California Code of Regulations, Title 24: Part 1, Building Standards Administrative Code, and Part 2, California Building Code. These noise standards are applied to new construction in California for interior noise compatibility from exterior noise sources. The regulations specify that acoustical studies must be prepared when noise-sensitive structures, such as residential buildings, schools, or hospitals, are located near major transportation noise sources, and where such noise sources create an exterior noise level of 65 dBA CNEL or higher. Acoustical studies that accompany building plans must demonstrate that the structure has been designed to limit interior noise in habitable rooms to acceptable noise levels. For new multi-family residential buildings, the acceptable interior noise limit for new construction is 45 dBA CNEL.

Local

City of Vallejo General Plan 2040

The Vallejo General Plan (General Plan) identifies goals, policies, and implementations in the Noise Element. The Noise Element provides a basis for comprehensive local programs to regulate environmental noise and protect citizens from excessive exposure. Table 21: California Land-Use Compatibility Guidelines for Community Noise Environments highlights five land-use categories and the outdoor noise compatibility guidelines.

Table 21: California Land-Use Compatibility Guidelines for Community Noise Environments

Land-Use Category	Exterior Noise Exposure (DNL), in dBA			
	Normally Acceptable[1]	**Conditionally Acceptable[2]**	**Normally Unacceptable[3]**	**Clearly Unacceptable[4]**
Residential – Low Density Single-Family, Duplex, Mobile Homes	Up to 60	>55 to 70	>70 to 75	<75
Residential – Multiple Family	Up to 65	>60 to 70	>70 to 75	<75
Transient Lodging, Motels, Hotels	Up to 65	>60 to 70	>70 to 80	<80
Schools, Libraries, Churches, Hospitals, Nursing Homes	Up to 70	-	>70 to 80	<80
Auditoriums, Concert Halls, Amphitheaters	-	>50 to 70	-	<65
Sports Arena, Outdoor Spectator Sports	-	>50 to 75	-	<70
Playgrounds, Neighborhood Parks	Up to 70	>68 to 75	-	<73
Golf Courses, Riding Stables, Water Recreation, Cemeteries	Up to 75	>70 to 80	-	<80
Office Buildings, Businesses, Commercial, and Professional	Up to 70	>68 to 78	>75 to 85	-
Industrial, Manufacturing, Utilities, Agricultural	Up to 75	>70 to 80	>75 to 85	-

Source: City of Vallejo, 2017.
1. Normally Acceptable – Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction. There are no special noise insulation requirements.
2. Conditionally Acceptable – New construction should be undertaken only after a detailed analysis of the noise reduction requirement is conducted and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice
3. Normally Unacceptable – New construction or development should generally be discouraged. If new construction does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
4. Clearly Unacceptable –New construction or development generally should not be undertaken.

Project relevant General Plan goals and policies related to noise are listed below:

Policy NBE-5.13: Noise Control. Ensure that noise does not affect quality of life in the community.

- **Action NBE-5.13C**: Update City regulations to restrict the allowable hours to between 7 AM and 7 PM on weekdays for construction, demolition, maintenance, and loading/unloading activities that may impact noise-sensitive land uses.

Policy NBE-5.14: Vibration Control. Ensure that vibration does not affect quality of life in the community.

- **Action NBE-5.14A**: Update City regulations to establish quantified vibration level limits similar to commonly used guidelines found in the Federal Transit Administration document "Transit Noise and Vibration Impact Assessment" (2006).

Policy NBE-5.15: Noise Compatibility Standards. Apply the General Plan noise and land use compatibility standards to all new residential, commercial, and mixed-use development and redevelopment.

- **Action NBE-5.15E**: When approving new development, limit project-related noise increases to the following for permanent stationary and transportation-related noise sources:
    - No more than 10 dB in non-residential areas;
    - No more than 5 dB in residential areas where the with-project noise level is less than the maximum "normally acceptable" level in the Noise and Land Use Compatibility figure; and
    - No more than 3 dB where the with-project noise level exceeds the "normally acceptable" level in the Noise and Land Use Compatibility figure.
- **Action NBE-5.15F**: Require acoustical studies with appropriate mitigation measures for projects that are likely to be exposed to noise levels that exceed the "normally acceptable" standard and for any other projects that are likely to generate noise in excess of these standards.

City of Vallejo Municipal Code

The Vallejo Municipal Code, Section 16.502.09 establishes the exterior noise standards applicable to certain uses and facilities. Table 22: Vallejo Maximum Noise Level by Noise Zone shows the maximum exterior noise standard allowed by the City's Municipal Code.

Table 22: Vallejo Maximum Noise Level by Noise Zone

Noise Zone Districts	Maximum Noise Level in dBA (level not to exceeded more than 30 minutes in any hour)		Maximum Noise Level in dBA (level not to be exceeded more than 5 minutes in any hour)
	Measured at Property Line or District Boundary	**Measured at Any Boundary of a Residential Zone**	**Between 10 PM and 7 AM, Measured at any Boundary of a Residential Zone**
Single-Unit Residential	60	60	-
Multiple-Unit Residential	65	65	-
Commercial and Mixed-Use, Medical, Office	70	60	50 or Ambient Level
Light Industrial	75	65	50 or Ambient Level
General Industrial	75	65	50 or Ambient Level
Public Facilities and Community Use	65	60	50 or Ambient Level
Open Space and Recreational Districts	65	60	50 or Ambient Level
Source: City of Vallejo Municipal Code, 2023.			

The standard exterior noise limits listed in Table 22, would be adjusted by five decibels for noise that contains a stead pure tone, such as a screech or hum, or impulsive sound, such as hammering or riveting, or contains music or speech, as described below.

- Any type of noise, other than construction and related activities between 7 AM and 10 PM would allow for a plus 5 dBA adjustment;
- Any noise of unusual impulsive character (e.g., hammering or drilling) would have an exterior noise limit reduction of 5 dBA;
- Any noise of unusual periodic character (e.g., screeching or hammering) would have an exterior noise limit reduction of 5 dBA.

According to Vallejo Municipal Code, Section 16.502.09.D, construction hours in a residential or mixed-use zoning district are limited to the hours of 7 AM to 7 PM, when noise levels are exceeding the limits shown in Table 23: Maximum Noise Level for Temporary Construction Activity.

Table 23: Maximum Noise Level for Temporary Construction Activity

Time	Rural Residential (RR), Residential Low Density (RLD)	Residential Medium Density (RMD), Residential High Density (RHD), Neighborhood Mixed-Use (NMX), Neighborhood Commercial (NC)	Commercial (Including medical and office) and Industrial
Mobile Construction Equipment – nonscheduled, intermittent, and short term for less than 15 days			
Weekdays 7 AM to 6 PM	75 dBA	80 dBA	85 dBA
Saturdays 9 AM to 6 PM	60 dBA	65 dBA	70 dBA
Sundays and Legal Holidays	None	None	None
Stationary Construction Equipment			
Weekdays 7 AM to 6 PM	60 dBA	65 dBA	70 dBA
Saturdays 9 AM to 6 PM	60 dBA	65 dBA	70 dBA
Sundays and Legal Holidays	None	None	None
Source: City of Vallejo Municipal Code, 2023.			

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?

Potentially Significant Unless Mitigation Incorporated.

Construction

Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g. land clearing, grading, excavation, paving). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. During construction, exterior noise levels could affect the residential neighborhoods surrounding the construction site. Project construction would occur approximately 545 feet from existing multi-family residences to the southeast of the project site, along Maine Street. However, construction activities would occur throughout the project site and would not be concentrated at a

single point near sensitive receptors. Noise levels typically attenuate (or drop off) at a rate of 6 dB per doubling of distance from point sources, such as industrial machinery. During construction, exterior noise levels have a low potential to affect the residential neighborhoods near the construction site.

The project would require Bay fill removal (existing piles) and placement for installation of pilings for the new float, donut fenders, and fixed pier support. It is estimated that approximately 116 to 126 square feet of 17 to 18 pilings would be installed. Further, the existing steel dolphins within the basin and terminal area would be removed. Overwater construction would include the installation of all of the approach sections, concrete dolphins, and utility installation. Installation of concrete dolphins would require barges, a concrete mixer, a concrete pump, a concrete vibrator, and a crane.

Demolition of the existing facility would be required prior to installation of any new waterside terminal components. The demolition work includes removal of the piles, fixed pier, gangway, and float. This work would be conducted from barges, one for materials storage and one outfitted with demolition equipment (crane and clamshell bucket or vibratory impact pile driver for pulling of piles and a crane for gangway removal). Diesel power tugboats would bring the barges to the project site, where the barges would be anchored. Pile driving would be limited to the environmental work window of August 1 through November 30. Piles would be removed by either pulling the pile or cutting the piles off below the mud line. The in-water demolition work would include the removal of the existing piles, pile dolphins, and floats.

Landside construction activities include minor demolition and building construction. Construction equipment would include a small backhoe and bulldozer/bobcat, haul trucks, material delivery trucks, a crane, and delivery and support trucks. Operating cycles for these types of construction equipment may involve one or two minutes of full-power operation followed by three to four minutes at lower power settings. Other primary sources of noise would be shorter-duration incidents, such as dropping large pieces of equipment or the hydraulic movement of machinery lifts, which would last less than one minute. It should be noted that only a limited amount of equipment can operate near a given location at a particular time.

It should be noted that the majority of construction would take place on barges above the water rather than on land. The noise levels shown below assume that construction equipment is located at the closest point to sensitive receptors and do not account for any attenuating structures or surfaces. Typical noise levels associated with individual construction equipment are listed in Table 24: Typical Construction Noise Levels. As shown in Table 24, construction equipment noise levels at the closest sensitive receptor, located 545 feet away, would not reach levels exceeding 65 dBA L_{eq} except for impact pile driving equipment. At the closest commercial receptor, located approximately 50 feet away, all construction equipment would exceed the 70 dBA L_{eq} construction noise standard. Thus, implementation of **Mitigation Measure MM NOI-1** would be required to reduce noise levels below the construction standards in Section 16.502.09D of the Vallejo Municipal Code. Implementation of **MM NOI-1** would require the project to use noise reduction technology on construction equipment, construct temporary sound barriers at the project property line, and prohibit the idling of stationary equipment. Noise levels associated with construction would collectively reduce by 20 to 30 decibels with the implementation of **MM NOI-1**. With this reduction,

construction equipment noise levels would adhere to the Vallejo Municipal Code Construction Standards except for pile driving equipment noise at the nearest commercial receptors. However, as mentioned previously, pile driving would operate from barges above the water rather than at the closest point to sensitive receptors. In reality, pile driving equipment would be located approximately 150 feet away from the nearest commercial uses and would produce a noise level of 91 dBA L_{eq} at this distance. With implementation of **MM NOI-1**, noise levels associated with pile driving at the nearest commercial uses would be below the construction equipment noise standards listed in Section 16.502.09D of the Vallejo Municipal Code. Thus, with the implementation of **MM NOI-1**, impacts would be less than significant.

Table 24: Typical Construction Noise Levels

Equipment	Typical Noise Level (dBA) at 50 feet from Source[1]	Noise Level (dBa) at 545 feet from Source
Air Compressor	80	59
Backhoe	80	59
Concrete Mixer	85	64
Concrete Pump	82	61
Concrete Vibrator	76	55
Crane, Mobile	83	62
Dozer	85	64
Generator	82	61
Impact Wrench	85	64
Loader	80	59
Pile Driving (Impact)	101	80
Pneumatic Tool	85	64
Pump	77	56
Saw	83	55
Shovel	82	61
Truck	84	63

1. Calculated using the inverse square law formula for sound attenuation: $dBA_2 = dBA_1+20Log(d_1/d_2)$
Where: dBA_2 = estimated noise level at receptor; dBA_1 = reference noise level; d_1 = reference distance; d_2 = receptor location distance
Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018.

Construction Traffic Noise

Construction noise may be generated by large trucks moving materials to and from the project site. Large trucks would be necessary to deliver building materials as well as remove demolition materials. During the demolition phase of the project, approximately 5,674 square feet of materials would be removed. Based on the California Emissions Estimator Model (CalEEMod) default assumptions for this project, as analyzed in *Air Quality Assessment - Vallejo Ferry Terminal Reconfiguration Project* (Kimley-Horn, 2023), the project would generate the highest number of daily trips during the demolition phase. The model estimates that the project would generate up to 21 worker trips per day during demolition. Because of the logarithmic nature of noise levels, a doubling of the traffic volume (assuming that the speed and vehicle mix do not also change) would result in a noise level increase of 3 dBA. Mare Island Way (between Marin Street and Maine Street) has an average daily trip volume of 13,241 vehicles and Mare Island way (between Maine Street

and Florida Street) has an average daily trip volume of 12,778 vehicles[35]. Therefore, the project's 21 demolition worker trips would not double the existing traffic volume. Construction related traffic noise would not be perceptible. Impacts would be less than significant.

California establishes noise limits for vehicles licensed to operate on public roads using a pass-by test procedure. Pass-by noise refers to the noise level produced by an individual vehicle as it travels past a fixed location. The pass-by procedure measures the total noise emissions of a moving vehicle with a microphone. When the vehicle reaches the microphone, the vehicle is at full throttle acceleration at an engine speed calculated for its displacement.

For heavy trucks, the State pass-by standard is consistent with the federal limit of 80 dB. The State pass-by standard for light trucks and passenger cars (less than 4.5 tons gross vehicle rating) is also 80 dB at 15 meters from the centerline. According to the FHWA, dump trucks typically generate noise levels of 77 dBA and flatbed trucks typically generate noise levels of 74 dBA, at a distance of 50 feet from the truck[36].

Operations

Traffic Noise

Implementation of the project would not generate increased traffic volumes on nearby roadway segments. The project would not result in uses that would increase traffic volumes over existing levels on surrounding roadway segments given that the project proposes the same operational uses as the existing facilities. Therefore, there would not be any new operational traffic noise impacts.

Stationary Noise Sources

Implementation of the project would not create new sources of noise in the project vicinity from the terminal, the passenger queuing and waiting area, parking and circulation, other area improvements (San Francisco Bay Trail improvements), and the ferry route. The project would reconfigure the existing ferry terminal to reduce or eliminate maintenance dredging and increase operational safety in support of continued ferry service. The project would not generate any additional sources of stationary noise sources differing from the existing ferry terminal. Therefore, the proposed project would not result in changes to the existing uses that would create any new operational sources of noise.

Overall, noise impacts associated with construction, traffic, and operation of the ferry terminal would remain less than significant. As stated previously, the project would not generate additional daily trips or result in any new sources of stationary noise during operation. Project operations would be the same as the existing ferry terminal. Therefore, impacts would be less than significant.

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

[35] City of Vallejo, *City of Vallejo, CA Traffic Counts – Updated 2007/2008 Average Daily Traffic Volumes*, 2008. Available at https://www.cityofvallejo.net/our_city/departments_divisions/public_works_department/engineering_division/traffic_engineering.

[36] Federal Highway Administration, *Roadway Construction Noise Model*, 2006.

Less than Significant Impact.

Construction

Increases in groundborne vibration levels attributable to the project would be primarily associated with construction-related activities. Construction on the project site would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and the operations involved. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. The effect on buildings located in the vicinity of the construction site often varies depending on soil type, ground strata, and construction characteristics of the receiver building(s). The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage at the highest levels. Groundborne vibrations from construction activities rarely reach levels that damage structures.

Table 25: Typical Construction Equipment Vibration Levels, lists vibration levels at 25 feet for typical construction equipment. Groundborne vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. As indicated in Table 25, based on FTA data, vibration velocities from typical heavy construction equipment operations that would be used during project construction range from 0.003 to 1.518 in/sec PPV at 25 feet from the source of activity. The nearest building structure is approximately 50 feet from the edge of the active construction zone and approximately 150 feet from the closest pile driving location.

Table 25: Typical Construction Equipment Vibration Levels

Equipment	Peak Particle Velocity at 25 Feet (in/sec)	Peak Particle Velocity at 50 Feet (in/sec) 1	Peak Particle Velocity at 150 Feet (in/sec) [1]
Pile Driver (impact)	1.518	-	0.1033
Large Bulldozer	0.089	0.0315	0.0061
Loaded Trucks	0.076	0.0269	0.0052
Small Bulldozer/Tractors	0.003	0.0011	0.0002

1. Calculated using the following formula: $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$, where: PPV_{equip} = the peak particle velocity in in/sec of the equipment adjusted for the distance; PPV_{ref} = the reference vibration level in in/sec from Table 7-4 of the Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, 2018; D = the distance from the equipment to the receiver.

Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018.

As shown in Table 25, the highest vibration levels are achieved with the large bulldozer operations at the receptors located approximately 50 feet away and the impact pile driver operations at receptors located approximately 150 feet away. Large bulldozer operations are expected to take place during demolition and building construction. Pile driving operations are only expected to take place during demolition of the existing facility, which would take place approximately 150 feet away from the nearest building structure over water. At these distances, construction equipment vibration velocities would not exceed the FTA's 0.20 PPV threshold. In general, other construction activities would occur throughout the project site and would not be concentrated at the point

closest to the nearest building structure. Furthermore, construction activity would mostly occur over water and, therefore, these estimates are conservative. Thus, impacts would be less than significant, and no mitigation is required.

Operations

The project would not generate any new or additional groundborne vibration that could be felt at surrounding uses. The proposed project includes the reconfiguration of an existing ferry terminal, including the relocation and expansion of an existing fixed pier and gangway, and installation of a new passenger float. The project proposes the same operational uses as the existing facilities that are currently used for standard WETA ferry operations. Therefore, there would be no change in operational groundborne vibration as a result of the project. Furthermore, project operations would not involve railroads or substantial heavy truck operations, and therefore would not result in vibration impacts at surrounding uses. As a result, impacts would be less than significant, and no mitigation is required.

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?

Less than Significant Impact. The nearest airports to the project site are the Napa County Airport located approximately 7.4 miles north of the project. The project is not within 2.0 miles of a public airport or within an airport influence zone. Additionally, there are no private airstrips located within the project vicinity. The project site is located well outside the noise impact area of the Napa County Airport, the nearest airport to the project site. Therefore, the project would not expose people working in or visiting the project area to excessive airport- or airstrip-related noise levels. Impacts would be less than significant, and no mitigation is required.

Mitigation Measures

MM NOI-1 **Construction Noise Logistics Plan**. Prior to Grading Permit issuance, the Applicant shall demonstrate, to the satisfaction of the City of Vallejo Director of Public Works or City Engineer that the project complies with the following measures:

- Construct solid plywood fences around ground level construction sites, resulting in a decibel reduction of 5-15 dBA.
- Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment. This would provide at least a 10 dBA reduction to individual equipment noise.[37]
- Equip Pile Drivers with pile driver shrouds.

[37] United States Environmental Protection Agency, *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*, 1971.

- Prohibit unnecessary idling of internal combustion engines.
- Locate stationary noise-generating equipment such as air compressors or portable power generators as far as possible from the project property line. Construct temporary noise barriers to screen stationary noise-generating equipment in the construction area.
- Utilize "quiet" air compressors and other stationary noise sources where technology exists.
- Notify all adjacent business, residences, and other noise-sensitive land uses of the construction schedule, in writing, and provide a written schedule of "noisy" construction activities to the adjacent land uses and nearby residences.
- If complaints are received or excessive noise levels cannot be reduced using the measures above, erect a temporary noise control blanket barrier along surrounding building facades that face the construction sites.
- Designate a "disturbance coordinator" who shall be responsible for responding to any complaints about construction noise. The disturbance coordinator shall determine the cause of the noise complaint (e.g., bad muffler, etc.) and shall require that reasonable measures be implemented to correct the problem. Conspicuously post a telephone number for the disturbance coordinator at the construction site and include it in the notice sent to neighbors regarding the construction schedule.

Cumulative Impacts

Noise by definition is a localized phenomenon, and drastically reduces as distance from the source increases. Cumulative noise impacts involve development of the project in combination with ambient growth and other related development projects. As noise levels decrease as distance from the source increases, only projects in the nearby area could combine with the project to potentially result in cumulative noise impacts.

Cumulative Construction Noise

The project would contribute to other proximate construction noise impacts if construction activities were conducted concurrently. However, based on the City of Vallejo Development Project Website, there are no nearby projects that would construct concurrently with the project.[38] Further, construction activities at other planned and approved projects would be required to take place during daytime hours, and the City and project applicants would be required to evaluate construction noise impacts and implement mitigation, if necessary, to minimize noise impacts. Therefore, project construction would not contribute to cumulative impacts and impacts in this regard are not cumulatively considerable. As such, the project

[38] City of Vallejo, *Development Projects*, 2023. Accessed at https://www.cityofvallejo.net/our_city/departments_divisions/planning_development_services/economic_development_department/development_projects.

would not result in a cumulatively considerable construction noise impact. Impacts would be less than significant, and no mitigation is required.

Cumulative Operational Noise

Cumulative noise impacts describe how much noise levels are projected to increase over existing conditions with the development of the project and other foreseeable projects. Cumulative operational noise impacts would be less than significant given that the proposed project uses would be the same as the existing uses. Thus operational noise impacts would not be cumulatively significant, and no mitigation is required.

Stationary Noise

As mentioned previously, the project would not add any new stationary noise sources to the project vicinity. Given that the proposed project would not change from existing conditions, cumulative noise impacts would remain less than significant. Thus, cumulative operational noise impacts from related projects, in conjunction with project-specific noise impacts, would not be cumulatively significant and no mitigation is required.

Traffic Noise

There would be no cumulative increase in traffic noise levels as a result of project operations. The project would not generate any new permanent operational trips given that the proposed uses would remain the same as the existing uses. Therefore, the proposed project would not increase traffic volumes when compared to the existing ferry terminal. Thus, cumulative traffic noise levels impacts would be less than significant, and no mitigation is required.

4.14 Population and Housing

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				**X**
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				**X**

Setting

Population

The City of Vallejo is located in the nine-county San Francisco Bay Area in Solano County. For the purposes of this section, U.S. Census and Department of Finance data has been used for existing 2020 population statistics, while future data is analyzed using Vallejo General Plan estimates.

The current population in the city of Vallejo is approximately 123,564 residents. By 2040, the population is forecasted to grow to approximately 131,000 residents, an increase of over 11%. In 2020, Vallejo accounted for approximately 28.5% of the population of Solano County. Table 26: Current (2020) and Future (2040) Population summarizes the current and future population within the City of Richmond, Contra Costa County, and the Bay Area.

Table 26: Current (2020) and Future (2040) Population

	2015		2020	Growth (2015-2020)	2040	Growth (2015-2040)
City of Vallejo	118,100		126,090	5,464 (4.6%)	131,800	13,700 (11.6%)
Solano County	427,300		448,747	21,447 (5%)	511,600	84,300 (19.7%)
Bay Area	7,416,400		7,765,640	349,247 (4.7%)	9,299,100	1,837,700 (24.6%)
Sources: Vallejo General Plan Draft EIR (2014), U.S. Census (2020), California Department of Finance (2023)						

Housing

According to the 2020 U.S. Census, there are 46,006 households in the City of Vallejo. The project site is located along Mare Island Strait in the Downtown/Waterfront District, which includes no housing directly adjacent to the project site. The nearest residential housing sites around the project area are the condominiums and apartments along Maine Street off of Mare Island Way, approximately 545 feet to the southeast, and the apartments along Capitol Street, approximately 0.2 miles to the north.

However, the Waterfront Planned Development Master Plan include a potential mixed-use development in the Northern Waterfront and Central Waterfront area, directly adjacent to the proposed project site. This plan proposes up to a total of 731 new housing units in the Downtown/Waterfront District. As such, housing could be developed within the immediate vicinity of the proposed project in the future.

Employment

According to data published by the California Employment Development Department (EDD), Vallejo's labor force has decreased in recent years; On an annual average basis (seasonally unadjusted) Vallejo's labor force decreased from 56,300 to 54,400 between 2019 and 2023, a decrease of approximately 3 percent. This decrease appropriately coincides with a corresponding rise in unemployment. Unemployment in Vallejo increased from an annual average of 4 percent in 2019 to 5.3 percent in 2023. Vallejo is home to a variety of large employers, including Kaiser Permanente, Six Flags Discovery Kingdom, Sutter Health, the United States Department of Agriculture Forest Service, and the city of Vallejo. The Vallejo ferry terminal area includes operations such as the Vallejo Tourism Information Center building and associated businesses, as well as surrounding restaurants. Total buildout in the Downtown/Waterfront District under the Waterfront Planned Development Master Plan would add up to 161,000 sf of retail and office uses, 200,000 sf of hotel uses, 176,140 sf of public open spaces, 1,646 parking spaces in garages, and 731 residential units.

The proposed project site is located along the eastern bank of Mare Island Strait, at the site of the existing Vallejo ferry terminal. No WETA jobs would be directly impacted by implementation of the proposed 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)?

No Impact. The proposed project does not include any residential uses that would directly generate new residents and increase the population within Vallejo or Solano County. The proposed project also would not result in intensification of land uses, or the addition of structures or uses that would differ from the current General Plan, or that would require new employees or uses that would increase demand for permanent employees.

The proposed components at the Vallejo Ferry Terminal include a fixed pier, gangway, passenger float, and piles within the existing ferry terminal basin vicinity. Other project components include an access gate with informational signage. No new structures are proposed. Passengers would pay for their fares with Clipper cards or on board the vessels; therefore, manned ticketing booths on land are not proposed as part of the project. A designated outdoor queuing area adjacent to the proposed terminal entry gate is also proposed. Ferry service would not increase or decrease as a

direct result of implementation of the proposed project. The reconfiguration and associated improvements are to address existing operations at the ferry terminal and would not lead to any unplanned population growth. The improvements would not directly or indirectly result in substantial unplanned population growth in an area, either directly or indirectly. There would be no impact, and no mitigation is required.

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

No Impact. The proposed project would not require the relocation or displacement of substantial numbers of people from the adjacent businesses. As such, the need for replacement housing would not be required. Further, no housing is located at, or immediately adjacent to, the project site. The proposed project would result in no impact to the displacement of a substantial number of people. While housing may be constructed in the vicinity as a result of the General Plan and associated city planning documents, implementation of the proposed project would have no impact on the displacement of existing housing. There would be no impact, and no mitigation is required.

4.15 Public Services

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
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?				**X**
ii) Police protection?				**X**
iii) Schools?				**X**
iv) Parks?				**X**
v) Other public facilities?				**X**

Setting

Fire Protection

The Vallejo Fire Department (VFD) provides fire fighting and prevention services to the incorporated area of the City. VFD is responsible for emergency medical services, fire suppression, mitigation of disasters, and rescue activities. Firefighters inspect commercial and waterfront facilities on an annual basis. In addition to emergency work, VFD members provide a wide range of services to the Richmond community, including tours of fire stations and apparatus and fire and life safety presentations and trainings. There are seven VFD stations in the City.[39] Fire Station 21 at 1220 Marin Street is located approximately 0.62 miles northeast of the proposed project site; the primary Emergency Operations Center (EOC) is also located at this station to provide service in emergency situations. Personnel are assigned to all seven stations throughout the City and serve approximately 123,564 people living in Vallejo as well as surrounding areas with mutual aid agreements in emergencies. The Vallejo Fire Department (VFD) currently meets response time goals in much of the city, where incidents are generally clustered in

[39] City of Vallejo, *Fire Department*. Available at: https://www.cityofvallejo.net/our_city/departments_divisions/fire_department. Accessed November 21, 2023

proximity to higher call-volume fire stations. Current staffing and equipment levels are able to provide an adequate number of firefighters for smaller fires and common medical or rescue situations.[40]

VFD has a staff of 99 sworn personnel. They have a personnel-to-population-ratio of approximately 0.8 personnel to 1,000 residents. Development impact fees are collected during the planning process for new development projects to ensure that RFD has adequate equipment and infrastructure to serve the developing areas of the City. VFD has seven fire companies (six engines and one ladder truck) spread out over seven fire stations throughout the city. The ladder truck is stationed at Station 21. All fire stations, with the exception of Station 21 house an engine company and three firefighters on each shift. Station 21 operates with a truck company, three fire fighters and a 110-foot ladder truck on each shift. The Battalion chief's office is located at Station 21.

Police Protection

The Vallejo Police Department (VPD) provides police protection services to the City of Vallejo. Services provided include response to emergency and non-emergency calls for assistance, routine patrol, traffic enforcement, investigation of crimes, parking control services, community problem-solving, and code enforcement. In addition, VPD provides a range of community service programs, including youth mentoring programs, task forces, community coalitions, human trafficking awareness programs, high school programs, and local business forums. As of 2021, VPD operates with 119 sworn officers and 61 civilian personnel. VPD maintains approximately 0.96 officers for every 1,000 residents. [41]

VPD operates out of the Vallejo Police Station, located at 111 Amador Street, approximately 1 mile east of the proposed project site. The police station provides office space for administrative and operational staff, in addition to four holding cells with audio/video surveillance that is monitored by the department dispatch center. VPD is organized into eight Units providing field operations and support services which include: Records; Communications and Dispatch; Patrol; Detectives; Traffic; Management Support; Community Services Section; and Code Enforcement. VPD's Community Services Section (CSS) operates out of a separate facility located at 2 Florida Street and addresses quality of life crimes in the city and provides assistance and support to Neighborhood Watch groups as well as public education and outreach services in the community.

On average, VPD officers respond to over 150 calls for service each day. In 2021, the VPD responded to 57,914 calls for service. The City of Vallejo does not have an established response time goal. Instead, incoming calls are prioritized and responded to according to level of urgency. Priority 1 calls involve people at risk of immediate danger, injury, or loss of life, and Priority 2 calls require an immediate response to prevent a situation from escalating to a Priority 1. Response times for lower priority service requests can vary considerably depending upon the time of day, day of week, and call volume.

Schools

The proposed project is within the VCUSD. The Vallejo City Unified School District is a medium-sized TK-12 school district serving approximately 10,000 students. CVUSD serves students with 15 elementary schools [K-8 schools (including 1 K-8 dependent charter school)], one middle school serving grades 6-8, three high schools, one adult school, seven child development centers, and non-traditional school which

[40] City of Vallejo, *Vallejo General Plan 2040*. Accessed November 21, 2023.
[41] Vallejo Police Department, *Our Mission,* https://www.vallejopd.net/. *Accessed November 21, 2023.*

provides support to families who choose an independent study/home study option. [42] The nearest school to the proposed project site is Pathway Charter School located approximately 0.25 miles.

Parks

Parks within Vallejo are managed by the Greater Vallejo Recreation District (GVRD). The City of Vallejo contains over 1,400 acres of parks and open space including local, regional, and state resources. GVRD manages 407 acres of public park space including 20 neighborhood parks, 10 community parks, 6 special-purpose parks, an Olympic-size swimming pool, and 4 community centers. GVRD maintains over 1,000 acres of public land and offers programs that benefit over 120,000 Vallejo residents of all ages each year.

There are several parks within the project vicinity, including Barbara Kondylis Waterfront Green 0.12 mile to the northwest, Marina Vista Memorial Park 0.15 mile to the north, and Martin Luther King Jr. Park located approximately 0.10 mile to the east. The Bay Trail lies immediately adjacent to the proposed project site, surrounding the ferry terminal.

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?

No Impact. As described in Section 4.14 Population and Housing, the proposed project would not result in an increase of residents or employees within the City. There would be no increased need for fire protection resulting from the improvements to the ferry terminal and the project would not require the provision of new or physically altered fire protection facilities. The proposed project would not include additional residential units, or people within the County.

The proposed improvements would not result in an intensification of land use, or the addition of structures or uses that would differ from the current use or that would increase the number of residents that could increase demand for emergency services. Accordingly, the proposed project would not require the expansion or development of a new fire station or any other fire infrastructure, the construction of which could result in impacts to the environment. There would be no impact, and no mitigation is required.

ii. Police protection?

No Impact. As described above, the proposed project would not result in substantial population or employment growth within the City. The proposed project includes the reconfiguration of the existing ferry terminal. These improvements would not result in intensification of land use, or the addition of structures or uses that would differ from the current use or that would increase the number of residents that could increase demand for law enforcement services. Implementation of the proposed project is not expected to result in adverse impacts to VPD service levels, response times, or service ratio levels that

[42] Vallejo City Unified School District, *About Us*. Available at: https://www.vcusd.org/Domain/6. Accessed November 21, 2023.

would necessitate the construction of new facilities or expansion of existing facilities. There would be no impact, and no mitigation is required.

iii. Schools?

No Impact. As described in Section 4.14 Population and Housing, the proposed project would not result in a permanent increase of residents or employees within the City. The proposed project would not result in intensification of land use, or the addition of structures or uses that would differ from the current ferry terminal uses or that would increase the number of residents that could increase demand for school services. Accordingly, the proposed project would not require the expansion or development of a school or any other education related infrastructure, the construction of which could result in impacts to the environment. There would be no impact, and no mitigation is required.

iv. Parks?

No Impact. The project would not alter or impede any existing or future park plans, as the project would not result in intensification of land use, or the addition of structures or uses that would differ from the current ferry terminal uses or that would increase the number of residents that could increase demand for parks. Accordingly, the proposed project would not require the expansion or development of any park, the construction of which could result in impacts to the environment. See Section 4.16 Recreation for a discussion of recreational uses in the area. There would be no impact, and no mitigation is required.

v. Other public facilities?

No Impact. Other public facilities in the area such as health care, production, commercial, retail, residential, etc. would not be adversely impacted. Reconfiguration of the access point to the ferry terminal would result in less than significant impacts to the San Francisco Bay Trail. Further, any proposed project work that would potentially occur in the right of way of the Bay Trail would adhere to the Bay Trail Plan policies and the plans would be reviewed by the Bay Trail Advisory Committee to ensure compliance. See Section 4.16 Recreation. The proposed project would not differ from the existing uses at the ferry terminal. The proposed project would not include additional residential units, or people within the County, and would not result in intensification of land use or the addition of structures or uses that would differ from the current ferry terminal uses or that would increase the number of residents that could increase demand for other public services. Accordingly, the proposed project would not require the expansion or development of any of these resources, the construction of which could result in impacts to the environment. There would be no impact, and no mitigation is required.

4.16 Recreation

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			**X**	
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			**X**	

Setting

According to the Greater Vallejo Recreation District (GVRD), Vallejo contains over 1,400 acres of parks and open space including local, regional, and state resources. GVRD manages 407 acres of public park space including 20 neighborhood parks, 10 community parks, 6 special-purpose parks, an Olympic-size swimming pool, and 4 community centers. GVRD maintains over 1,000 acres of public land and in addition to these parkland resources, Vallejo has a network of trails and greenways; joint-use, private and community facilities; and a variety of recreational programs and services.

There are several parks within the project vicinity, including Barbara Kondylis Waterfront Green 0.12 mile to the northwest, Marina Vista Memorial Park 0.15 mile to the north, and Martin Luther King Jr. Park located approximately 0.10 mile to the east. The Bay Trail lies immediately adjacent to the proposed project site, surrounding the ferry terminal.

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

Less than Significant Impact. The proposed project would be located along the eastern bank of Mare Island Strait, immediately adjacent to a portion of the Bay Trail and in the vicinity of other surrounding parks. The proposed project does not include any residential units or any other type of use that would increase the population, or park and recreation facility demand in the area, or include any other type of use that would directly increase the use of park and recreation facilities. The proposed project would not result in an intensification of land uses, or the addition of structures or uses that would differ from the current ferry terminal uses. The proposed project would have the same uses as the existing facilities, and

would not add additional use to recreational facilities as a result of project implementation. Therefore, impacts would be less than significant, and no mitigation is required.

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

Less than Significant Impact. The proposed project consists of a reconfiguration of an existing ferry terminal and does not include new or expanded City of Vallejo park facilities. The project would also not result in a substantial increase in the transient or permanent population at the project site or the in the City of Vallejo requiring the construction or expansion of recreational facilities. The proposed project access point will connect to a portion of the San Francisco Bay Trail, which may include improvements as part of the project such as installation of educational and directional signage, queuing markers, relocation of trash receptacles, and other amenities under the jurisdiction of BCDC. Because the existing use of the proposed project site is consistent with the proposed modifications, no adverse effects as a result of recreational facility impacts would occur. Any proposed project work that would potentially occur in the right of way of the Bay Trail would adhere to the Bay Trail Plan policies and the plans would be reviewed by the Bay Trail Advisory Committee and BCDC to ensure compliance. The proposed passenger queuing areas and the terminal access gate placement would reduce conflicts with pedestrian users of the Bay Trail by providing a separate area adjacent to the existing Bay Trail for these activities to occur. Impacts would be less than significant, and no mitigation is required.

4.17 Transportation

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			**X**	
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?			**X**	
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?		**X**		
d) Result in inadequate emergency access?		**X**		

Setting

A Transportation and Circulation Report (Appendix I) was prepared by Fehr & Peers in October 2023. The Report describes the existing conditions related to transportation resources within the vicinity of the project site, provides regulatory and environmental setting for the project, and discusses potential traffic impacts that could result under implementation of the proposed project.

Roadway Network

Regional and local roadways serving the project site are described below.

Regional Access

- I-80 is an east-west freeway directly east of the project site extending southwest to Berkeley and San Francisco via the Carquinez Bridge, and northeast through Fairfield and Sacramento, into Nevada and beyond. I-80 is oriented in the north-south direction through the study area and is accessible from the project site via interchanges at SR-29, Magazine Street, Curtola Parkway, Benicia Road, Georgia Street, Springs Road, and Tennessee Street. In the study area, I-80 provides three lanes in each direction and has a posted speed limit of 65 miles per hour (mph).
- I-780 is an east-west freeway directly east of the project site that connects from I-680, north of the Benicia-Martinez Bridge, to I-80 in Vallejo. The freeway terminates at the I-80/I-780 interchange,

connecting to Curtola Parkway at the Lemon Street intersection. I-780 is accessible from the project site via Curtola Parkway. In Vallejo, I-780 consists of two lanes in each direction with a posted speed limit of 65 mph.

- SR-29 is a north-south principal arterial/state route directly east of the project site extending from I-80 in the south, to SR-37, through American Canyon until its intersection and transition with SR-12. SR-29 runs through the western part of the City of Vallejo where the roadway is also known as Sonoma Boulevard. SR-29 can be accessed from the project site via Curtola Parkway, Maine Street, Georgia Street, and Tennessee Street. In the project vicinity, Sonoma Boulevard is a two-lane roadway with left-turn pockets at major intersections and a posted speed limit of 30 mph.

- SR-37 is an east west freeway/two-lane divided highway north of the project site. In the project vicinity, SR-37 is a freeway with a northeast-southwest orientation. SR-37 extends from its interchange with I-80 through Vallejo west to its interchange with US-101. SR-37 is accessible from the project site via its interchanges at Railroad Avenue and Walnut Avenue on Mare Island, Wilson Avenue, and SR-29. In Vallejo, SR-37 consists of two lanes in each direction with a posted speed limit of 65 mph.

Local Access

- Curtola Parkway is an east-west arterial street south of the project site. Curtola Parkway extends west from the I-780 terminus to the Maine Street and Mare Island Way intersection where the roadway transitions into Mare Island Way. Curtola Parkway provides two travel lanes in each direction. The posted speed limit is 40 mph from I-780 to the Sonoma Boulevard (SR-29) intersection, where it lowers to 35 mph.

- Mare Island Way is a north-south arterial road that runs along the eastern boundary of the project site extending from the Maine Street and Curtola Parkway intersection to the Hichborn Street and Wilson Avenue intersection, where the roadway transitions to Wilson Avenue. In the project vicinity, Mare Island Way provides two travel lanes in either direction and the posted speed limit is 35 mph.

- Georgia Street is an east-west arterial street that extends from the intersection of Ascot Parkway to the intersection of Mare Island Way bordering the project site. Georgia Street connects to I-80 via its interchange and intersects with Sonoma Boulevard (SR-29). In the project vicinity, Georgia Street provides one lane of travel in each direction with a posted speed limit of 25 mph.

- Tennessee Street is an east-west arterial street directly north of the project site extending from the intersection of Columbus Parkway to the Mare Island Road and Mare Island Causeway intersection, where the roadway transitions to Mare Island Causeway. The roadway connects to I-80 via its interchange and intersects with Sonoma Boulevard (SR-29). In the project vicinity, Tennessee Street provides two travel lanes in each direction with a posted speed limit of 30 mph.

- Mare Island Causeway is an east-west arterial road directly north of the project site and extends from the Mare Island Way and Tennessee Street intersection to the Nimitz Avenue and G Street intersection, where the roadway transitions into G Street. Besides SR-37, Mare Island Causeway serves as the only connection from Vallejo to Mare Island. In the project vicinity, this road provides one lane of travel in each direction with a posted speed limit of 30 mph.

- Maine Street is an east-west collector street just south of the project site extending from its transition to Benicia Road at the Solano Avenue and Amador Street intersection to Curtola Parkway. In the project vicinity, Maine Street provides two travel lanes in each direction with a posted speed limit of 25 mph.

- Florida Street is an east-west collector street north of the project site extending from the Solano Avenue and 14th Street intersection to Mare Island Way. In the project vicinity, this road provides one lane of travel in each direction with a posted speed limit of 25 mph.

Transit System

Transit service providers in the project vicinity include Solano County Transit (SolTrans), VINE Transit, Amtrak, and the San Francisco Bay Ferry. SolTrans provides local and intercity bus service, while VINE Transit and Amtrak provide regional intercity bus service. San Francisco Bay Ferry provides access to the San Francisco Bay Area through specific terminals. Existing transit services near the project site are shown in **Figure 14: Existing Transit Services** and described below.

Bus Services

SolTrans serves as the primary bus service provider in Vallejo providing both local and regional options. Regional lines R, Y, and 82 along with local lines 1, 2, 3, 4, 5, 6, 7A, 7B, and 8 operate within the project vicinity. All Soltrans routes stop at either the Vallejo Ferry Terminal, or the Vallejo Transit Center (approximately 0.2-mile walking distance from the Vallejo Ferry Terminal). VINE Transit service lines 11 and 11X also stop at either the Vallejo Ferry Terminal, or Vallejo Transit Center, and provide regional access to American Canyon. Amtrak provides a connecting bus service (route 7) from the Martinez Amtrak Station to Cal Poly Humboldt Campus that stops at the Vallejo Transit Center. Table 27: SolTrans, VINE Transit, and Amtrak Routes in the Project Vicinity summarizes the characteristics of the SolTrans, VINE Transit, and Amtrak routes operating in the project area.

Table 27: SolTrans, VINE Transit, and Amtrak Routes in the Project Vicinity

Agency	Route	Type	Termini	Closest Stop	Hours of Operation[1]	Peak Frequency
SolTrans	Y	Intercity/ Commuter	Vallejo Transit Center to Walnut Creek BART	Vallejo Ferry Terminal	Monday to Friday: 4:30 AM to 10:30 PM Weekend: 6:15 AM to 9:00 PM	Monday to Friday: 60 minutes Weekend: 60-90 minutes

Agency	Route	Type	Termini	Closest Stop	Hours of Operation[1]	Peak Frequency
SolTrans	R	Intercity/ Commuter	Suisun/Fairfield Amtrak Station to El Cerrito del Norte BART	Vallejo Transit Center	Monday to Friday: 4:30 AM to 11:00 PM[2] Weekend: 7:00 AM to 10:00 PM[2]	60 minutes
SolTrans	82	Intercity/ Commuter	Fairfield Transportation Center to San Francisco Ferry Terminal	Vallejo Transit Center	Monday to Friday: 4:45 AM to 11:30 PM	2 buses per peak period
SolTrans	1	Local	Vallejo Transit Center to Rancho Square	Vallejo Transit Center	Monday to Friday: 6:45 AM to 9:15 PM Weekend: 8:30 AM to 7:15 PM	60 minutes
SolTrans	2	Local	Vallejo Transit Center to Gateway & Fairgrounds	Vallejo Transit Center	Monday to Friday: 7:00 AM to 9:45 PM Saturday: 9:00 AM to 6:45 PM	60 minutes
SolTrans	3	Local	Vallejo Transit Center to Fulton & Old Glen Cove	Vallejo Transit Center	Monday to Friday: 7:30 AM to 8:15 PM Saturday: 8:45 AM to 6:15 PM	30 minutes
SolTrans	4	Local	Vallejo Transit Center to Sereno Transit Center	Vallejo Transit Center	Monday to Friday: 7:00 AM to 9:00 PM Saturday: 8:30 AM to 6:30 PM	60 minutes
SolTrans	5	Local	Vallejo Transit Center to Gateway & Fairgrounds	Vallejo Ferry Terminal	Monday to Friday: 6:45 AM to 8:00 PM Saturday: 8:30 AM to 6:00 PM	60 minutes
SolTrans	6	Local	Vallejo Transit Center to Georgia & Rosewood Hogan MS	Vallejo Transit Center	Monday to Friday: 7:00 AM to 8:00 PM Saturday: 8:30 AM to 6:15 PM	60 minutes

Agency	Route	Type	Termini	Closest Stop	Hours of Operation[1]	Peak Frequency
SolTrans	7A	Local	Vallejo Transit Center to Gateway Plaza	Vallejo Transit Center	Monday to Friday: 6:45 AM to 9:00 PM Weekend: 8:45 AM to 7:15 PM	60 minutes
SolTrans	7B	Local	Vallejo Transit Center to Gateway Plaza	Vallejo Transit Center	Monday to Friday: 6:45 AM to 9:00 PM Weekend: 8:45 AM to 6:45 PM	60 minutes
SolTrans	8	Local	Vallejo Transit Center to Georgia & Rosewood Hogan MS	Vallejo Transit Center	Monday to Friday: 6:30 AM to 8:45 PM Saturday: 9:00 AM to 6:45 PM	60 minutes
VINE	11	Intercity/ Commuter	Vallejo Ferry Terminal to Redwood Park & Ride	Vallejo Ferry Terminal	Monday to Friday: 6:30 AM to 9:30 PM Weekend: 7:45 AM to 9:30 PM	60 minutes
VINE	11X	Intercity/ Commuter	Vallejo Ferry Terminal to Redwood Park & Ride	Vallejo Ferry Terminal	Monday to Friday: 6:15 AM to 7:30 PM	2 buses in AM peak period 3 buses in PM peak period
Amtrak	Route 7 NB	Intercity	Martinez Amtrak Station to Cal Poly Humboldt Campus	Vallejo Transit Center	Monday to Sunday: 10:45 AM to 8:00 PM	4 buses per day
Amtrak	Route 7 SB	Intercity	Cal Poly Humboldt Campus to Martinez Amtrak Station	Vallejo Transit Center	Monday to Sunday: 7:00 AM to 4:45 PM	3 buses per day

Table Notes
1. Time rounded to 15 minutes.
2. Limited service offered within this time.
Source: SolTrans, VINE Transit, and Amtrak, accessed July 2023.

San Francisco Bay Ferry

The San Francisco Bay Ferry provides medium distance, cross-bay ferry service at various ferry terminals around the San Francisco Bay Area. The Vallejo Route provides 30-minute service during peak frequency with 60-minute travel times expected. The Vallejo Ferry Terminal is approximately 0.2 miles walking distance from the Vallejo Transit Center.

Pedestrian Network

Pedestrian facilities such as sidewalks, multi-use paved trails, and unpaved recreational trails are provided in the City of Vallejo. Continuous sidewalks are provided in developed areas of the city. Pedestrian activity is concentrated primarily in the downtown area, particularly near the Vallejo Ferry Terminal, Vallejo Transit Center, and the denser, gridded portions of Georgia Street, Virginia Street, Capitol Street, and Sonoma Boulevard. According to the Solano County Active Transportation Plan, in 2020 there were 515 existing miles of sidewalk, with 727 miles of potential sidewalk throughout the city.

Much of the denser, grid-like portion of the downtown area has existing pedestrian facilities. However, some sidewalk gaps exist within the project vicinity as highlighted in the Solano County Active Transportation Plan. North of the project site, sidewalks are generally provided although minor gaps exist in the residential neighborhoods, such as on portions of Trinity Street and Kentucky Street. The main two roads used to access the Vallejo Ferry Terminal – Mare Island Way and Georgia Street – present continuous sidewalks in both sides of the road.

Protected (signalized) crossings are provided at intersections along significant roads, such as Mare Island Way, and Sonoma Boulevard. The Vallejo Transit Center serves nearly all bus lines in the area and is a significant destination for ferry users. The Vallejo Transit Center is 0.2 miles walking distance from the Vallejo Ferry Terminal via the protected crossing at the Mare Island Way/City of Vallejo Parking Garage Entrance intersection and the marked crossing on Santa Clara Street directly in front of the Vallejo Transit Center.

Bicycle Network

Bikeway planning and design in California typically relies on guidelines and design standards established by California Department of Transportation (Caltrans) in the *Highway Design Manual* (Chapter 1000: Bikeway Planning and Design). Caltrans provides examples for four distinct types of bikeway facilities, as described below and shown in the accompanying figures. Class 1 bicycle paths are provided along the Vallejo waterfront parallel to Mare Island Way. Class 2 facilities are provided on Mare Island Way between Georgia Street and Maine Street, and further along the road between Florida Street and Wilson Avenue. These facilities are also provided on Georgia Street between Sonoma Boulevard and Monterey Street. Sonoma Boulevard also has an existing Class 2 bikeway lasting between Georgia Street and Florida Street.

The Solano County Active Transportation Plan and Vallejo General Plan propose the following bicycle projects in the project vicinity:

- Class I facilities
  - San Francisco Bay Trail at Sacramento Street
  - Mare Island Causeway between Tennessee Street and Azuar Drive
- Class II facilities
  - Mare Island Way between Florida Street and Curtola Parkway
  - Wilson Avenue/Sacramento Street between San Francisco Bay Trail to Mare Island Way
- Class III facilities
  - Georgia Street between Sonoma Boulevard and Mare Island Way
  - Tennessee Street between Humboldt Street and Mare Island Way
  - Sacramento Street between Tennessee Street and Maine Street
  - Solano Avenue from Springs Road to Vallejo waterfront

- Maine Street between Marin Street and Mare Island Way

- Class IV facilities
  - Sonoma Boulevard (SR-29) between I-80 and SR-37

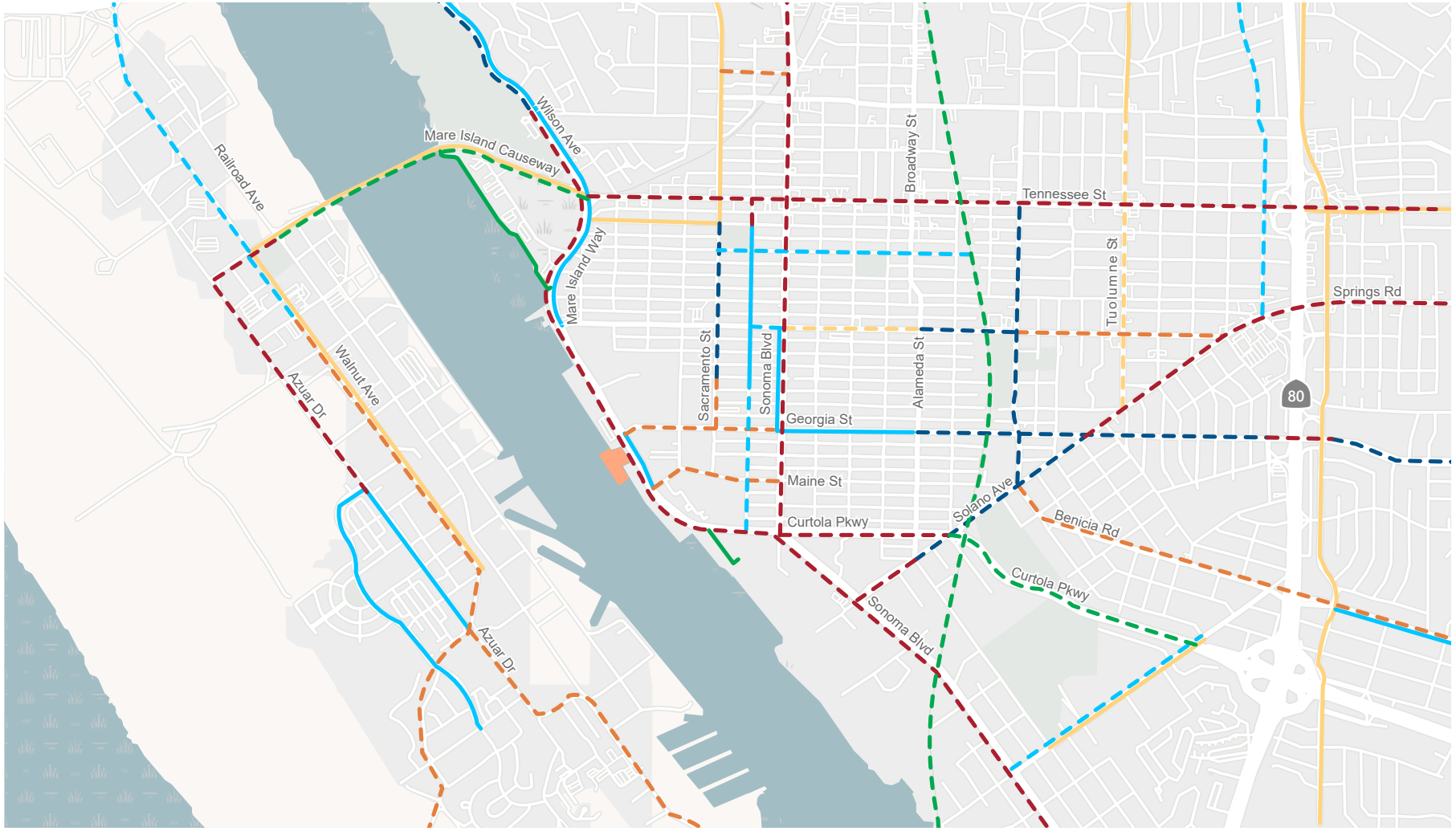
Figure 15. Existing and Planned Bicycle Network illustrates the existing and proposed bicycle facilities in the project vicinity.

Source: Fehr and Peers, 2023

Figure 14: Existing Transit Services
WETA Vallejo Ferry Terminal Reconfiguration Project

Not to scale

Kimley»Horn



Source: Fehr and Peers, 2023

Figure 15: Existing and Planned Bicycle Network

WETA Vallejo Ferry Terminal Reconfiguration Project

Not to scale

Kimley»Horn

Regulatory Framework

Federal Regulations

Americans with Disabilities Act of 1990

The Americans with Disabilities Act of 1990 (revised 2010) is a landmark civil rights law that prohibits discrimination based upon disability. Titles I, II, III, and V of the act have been codified in Title 42 of the United States Code, beginning at Section 12101. Title III prohibits discrimination on the basis of disability in "places of public accommodation" (businesses and non-profit agencies that serve the public) and "commercial facilities" (other businesses). The regulation includes Appendix 4.13-A to Part 36 (Standards for Accessible Design), which establishes minimum standards for ensuring accessibility for persons with a disability when designing and constructing a new facility or altering an existing facility, including roadways, parking lots, and sidewalks. Examples of key guidelines include detectable warnings for pedestrians when entering traffic where there is no curb, a clear zone of 48 inches for the pedestrian travel way, and a vibration-free zone for pedestrians.

State Regulations

California Department of Transportation

Caltrans has authority over the State highway system, including freeways, interchanges, and arterial routes. Caltrans operates and maintains State highways in Vallejo. In the study area, Caltrans maintains control of Intestate 80 (I-80), Interstate 780 (I-780), State Route 29 (SR-29), including the ramp terminal intersection at I-780/I-80/Curtola Parkway, and State Route 37 (SR-37). Caltrans issued the VMT-Focused Transportation Impact Study Guide (TISG) in May 2020, providing the process by which Caltrans will review and assess VMT impacts of land development projects. The TISG generally aligns with the guidance in the OPR Technical Advisory.

Caltrans also issued the Transportation Analysis Framework (TAF) in September 2020, which details methodology for calculating induced travel demand for capacity increasing transportation projects on the State Highway System. Caltrans also issued the Transportation Analysis Under CEQA (TAC) guidance in September 2020 which describes significance determinations for capacity increasing projects on the State Highway System.

Caltrans also issued Traffic Safety Bulletin 20-02-R1: Interim Local Development Intergovernmental Review Safety Review Practitioner Guidance in December 2020, describing the methods with which Caltrans will assess the safety impacts of projects on the Caltrans owned and operated network. This guidance states that Caltrans will provide its safety assessment to lead agencies for inclusion in environmental documents.

Finally, Caltrans has adopted procedures to oversee construction activities on and around its facilities. The Caltrans Construction Manual (Caltrans, 2020b) describes best practices for construction activities, including personnel and equipment safety requirements, temporary traffic control, signage, and other requirements aimed at reducing construction-related hazards and constructing projects safely and efficiently. Any work proposed on Caltrans facilities would be required to abide by these requirements.

State Transportation Improvement Program

The California Transportation Commission administers transportation programming, which is the public decision-making process that sets priorities and funds projects that have been envisioned in long-range transportation plans. The California Transportation Commission commits expected revenues for transportation projects over a multi-year period. The State Transportation Improvement Program is a

multi-year capital improvement program for transportation projects both on and off the State highway system. The State Transportation Improvement Program is funded with revenues from the State Highway Account and other funding sources. State Transportation Improvement Program programming typically occurs every 2 years.

California Transportation Plan 2050

The California Transportation Plan 2050 was adopted in 2021. The plan, which is overseen by Caltrans, serves as a blueprint for California's transportation system, as defined by goals, policies, and strategies to meet the State's future mobility needs. The goals defined in the plan are related to safety, climate, equity, accessibility, quality of life and public health, economy, environment, and infrastructure. Each goal is tied to performance measures. In turn, members from regional and metropolitan planning agencies report these performance measures to Caltrans.

Senate Bill 375 (SB 375)

Senate Bill (SB) 375 provides guidance regarding curbing emissions from cars and light trucks. There are four major components to SB 375. First, SB 375 requires regional greenhouse gas emission targets. These targets must be updated every 8 years in conjunction with the revision schedule of the housing and transportation elements of local general plans. Second, Metropolitan Planning Organizations are required to create a Sustainable Communities Strategy (SCS) that provides a plan for meeting regional targets. Third, SB 375 requires housing elements and transportation plans to be synchronized on 8-year schedules. Finally, Metropolitan Planning Organizations must use transportation and air emissions modeling techniques that are consistent with the guidelines prepared by the California Transportation Commission.

Complete Streets (AB 1358)

Assembly Bill 1358, also known as the California Complete Streets Act of 2008, requires cities and counties to include "complete street" policies in their general plans. These policies address the safe accommodation of all users, including bicyclists, pedestrians, motorists, public transit vehicles and riders, children, the elderly, and persons with disabilities. These policies can apply to new streets, as well as the redesign of corridors.

Senate Bill 743 (SB 743)

Passed in 2013, California Senate Bill (SB) 743 changes the focus of transportation impact analysis in CEQA from measuring impacts to drivers, to measuring the impact of driving. The change is being made by replacing Level of Service (LOS) as a performance metric with a vehicle miles traveled (VMT) approach. This shift in transportation impact focus is intended to better align transportation impact analysis and mitigation outcomes with the State's goals to reduce greenhouse gas (GHG) emissions, encourage infill development, and improve public health through development of multimodal transportation networks. LOS or other delay metrics may still be used to evaluate the impact of projects on drivers as part of land use entitlement review and impact fee programs.

In December 2018, the Natural Resources Agency finalized updates to Section 15064.3 of the CEQA Guidelines, including the incorporation of SB 743 modifications. The Guidelines' changes were approved by the Office of Administrative Law and as of July 1, 2020 are now in effect statewide.

To help aid lead agencies with SB 743 implementation, the Governor's Office of Planning and Research (OPR) produced the *Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018) that provides guidance about the variety of implementation questions they face with respect to shifting to a VMT metric. Key guidance from this document includes:

- VMT is the most appropriate metric to evaluate a project's transportation impact.
- OPR recommends tour- and trip-based travel models to estimate VMT, but ultimately defers to local agencies to determine the appropriate tools.
- OPR recommends measuring VMT for residential and office projects on a "per rate" basis.
- OPR recommends that, for residential and office projects, a per capita or per employee VMT that is fifteen percent below that of existing development may be a reasonable threshold. In other words, an office project that generates VMT per employee that is more than 85 percent of the regional VMT per employee could result in a significant impact. OPR notes that this threshold is supported by evidence that connects this level of reduction to the State's emissions goals.
- For roadway infrastructure projects, projects that increase roadway capacity should be analyzed for their potential to increase VMT; projects that decrease roadway capacity will generally reduce VMT and would therefore be expected to have a less than significant effect on transportation.
- Transit and active transportation projects generally reduce VMT and therefore are presumed to cause a less-than-significant impact on transportation. The Technical Advisory states that this presumption may apply to all passenger rail projects, bus and bus rapid transit projects, and bicycle and pedestrian infrastructure projects. However, it can be presumed to apply to ferry terminal projects as well.
- Lead agencies have the discretion to set or apply their own significance thresholds.

Regional Regulations

San Francisco Bay Area Water Emergency Transportation Authority

The San Francisco Bay Area Water Emergency Transportation Authority (WETA) is a regional public transit agency tasked with operating and expanding ferry service on the San Francisco Bay and with coordinating the water transit response to regional emergencies. WETA owns and operates the San Francisco Bay Ferry service between the Vallejo Ferry Terminal and San Francisco. WETA is developing a Business Plan for the San Francisco Bay Area ferry system in 2050, which will present the specific strategies and actions required to achieve their 2050 Service Vision, including the level of service and extent of WETA ferry operations and emergency response.

Metropolitan Transportation Commission

Metropolitan Transportation Commission (MTC) is the regional transportation planning, coordinating, and financing agency for the nine-county Bay Area, including Solano County. It is the federally designated metropolitan planning organization (MPO) for the Bay Area region. MTC is responsible for preparing the Regional Transportation Plan (RTP), a comprehensive blueprint for the development of mass transit, highway, airport, seaport, railroad, bicycle, and pedestrian facilities. The RTP is a 20-year plan that is updated every 3 years to reflect new planning priorities and changing projections of future growth and travel demand. The long-range plan must be based upon a realistic forecast of future revenues, and the transportation projects taken must help improve regional air quality. MTC also screens requests from local agencies for State and federal grants for transportation projects to determine compatibility with the RTP.

Plan Bay Area 2050

Plan Bay Area 2050 is a long-range integrated transportation and land-use/housing strategy through the year 2050 for the San Francisco Bay Area. On October 21, 2021, the Association of Bay Area Governments (ABAG) Executive Board and the Metropolitan Transportation Commission (MTC) jointly approved the

plan. Plan Bay Area 2050 connects the elements of housing, the economy, transportation, and the environment through 35 strategies that will make the Bay Area more equitable for all residents and more resilient in the face of unexpected challenges. In the short-term, the plan's Implementation Plan identifies more than 80 specific actions for MTC, ABAG, and partner organizations to take over the next five years to make headway on each of the 35 strategies. Plan Bay Area is the nine-county region's long-range plan designed to meet the requirements of Senate Bill 375, described above.

Bay Area Air Quality Management District

The Bay Area Air Quality Management District is the regional agency with the authority to develop and enforce regulations for the control of air pollution throughout the Bay Area. The Clean Air Plan is the district's plan for reducing the emissions of air pollutants that combine to produce ozone. The Bay Area Air Quality Management District has published guidelines for the purpose of evaluating the air quality impact of projects and plans. One criterion calls for plans, including general plans, to demonstrate reasonable efforts to implement the transportation control measures included in the Clean Air Plan that identify local governments as the implementing agencies.

On-road motor vehicles are the largest source of air pollution in the Bay Area. To address the impact of vehicles, the California Clean Air Act requires air districts to adopt, implement, and enforce transportation control measures.

Solano Transportation Authority

The Solano Transportation Authority (STA) was created in 1990 and has jurisdiction for Solano County to manage the county's federal, state, and regional transportation funds. In the role of Solano County's Congestion Management Agency, STA partners with the Metropolitan Transportation Commission and Caltrans District 4. STA provides countywide planning and program prioritization, funding, operating, and maintaining transportation programs and services.

STA maintains the County Congestion Management Program (CMP). The most recently published CMP update is the 2021 CMP. The next update to the CMP will occur in 2023. The CMP requires that the transportation system within the County be monitored biennially for compliance with LOS standards. Each jurisdiction is responsible for monitoring the LOS on segments or intersections within its jurisdiction. The LOS standard for the County CMP facilities has been set at LOS E for all roadways except for those already operating at LOS F when the first CMP was prepared (County of Solano 2013). The CMP transportation system includes all of the state routes in the County and other Routes of Regional Significance. A comprehensive list of these routes is available in the CMP.

In addition to LOS, the CMP considers other performance measures to measure the effectiveness of the multimodal transportation system. These performance measures include intercity transit ridership, bicycle and pedestrian counts, multimodal commute patterns, and travel time reliability.

Local Regulations

City of Vallejo General Plan 2040

The City of Vallejo General Plan 2040 (2017) is a policy document divided into individual elements for topics including mobility, transportation, and connectivity. The Plan is a comprehensive general plan that serves as the City's primary guide for long-term development. The mobility, transportation, and connectivity (MTC) section of the General Plan addresses three goals that represent the priorities of the City: Regional Transportation Hub, Mobile Community, and Interconnected Community.

Policy MTC-1.1: Regional Transit Connections. Enhance regional transit service for residents, employees and visitors.

- **Action MTC-1.1A**: Work with regional transportation agencies to coordinate regional transit planning activities, including increased frequency of bus, ferry, and rail service, timed connections, and tourism support.

- **Action MTC-1.1C**: Coordinate with private investors and regional transportation agencies to investigate the feasibility of water transport connecting downtown Vallejo/Vallejo Ferry Terminal with Napa.

- **Action MTC-1.1D**: Study the feasibility of a visitor rail connection between the Vallejo Ferry Terminal and the Napa Valley in coordination with private investors.

Policy MTC-1.3: First/Last Mile Connections. Provide enhancements to the local transit network that make it easier and more convenient to use regional transit.

- **Action MTC-1.3A**: Pursue One Bay Area grants and other funding to better connect regional transit and the local bicycle and pedestrian network, including through physical infrastructure, wayfinding signage, and real-time information displays.

Policy MTC-1.4: Regional Transportation Planning: Ensure that Vallejo is well connected to road, rail, air and maritime systems in support of both mobility and local economic development.

- **Action MTC-1.4A**: Continue to coordinate with State and regional agencies on the planning and implementation of regional transportation systems.

- **Action MTC-1.4F**: Continue to study the feasibility of a visitor rail connection between the **Vallejo Ferry Terminal and Napa Valley in coordination with private investors.**

- **Action MTC-1.4G**: Work with shoreline land owners to develop services to the maritime industry and water based transportation.

Policy MTC-2.4: Citywide Mobility. Maintain a transportation network that provides mobility for all ages and abilities and for all areas of the community.

- **Action MTC-2.4B**: Consult with regional transportation agencies on projects that utilize the multi-modal transportation network to ensure a safe and efficient transportation system.

Policy MTC-2.8: Transportation Demand Management. Decrease dependence on single-occupant vehicles by increasing the attractiveness of other modes of transportation.

- **Action MTC-2.8A**: Coordinate with employers and transit agencies to encourage and promote the use of shuttles, carpools, vanpools, transit passes, variable work hours, telecommuting, and other methods to reduce vehicle miles travelled (VMT).

Policy MTC-3.1: Coordinated Transportation Planning. Ensure that improvements to the transportation network support a land use pattern that connects the community and facilitates travel among Vallejo's neighborhoods.

- **Action MTC-3.1D**: Extend Capitol Street so that it connects Santa Clara Street to Mare Island Way, improving circulation and strengthening multi-modal connections between downtown and the waterfront, including the Ferry Terminal.

Policy MTC-3.5: Walkability. Promote a well-designed, interconnected, pedestrian-friendly environment in the Downtown/Waterfront District.

- **Action MTC-3.5A**: Continue to improve the pedestrian realm connecting downtown with the waterfront and along the waterfront on both sides of Mare Island Strait, consistent with the Waterfront Planned Development Master Plan and the Mare Island Specific Plan.

Policy MTC-3.6: Wayfinding. Emphasize pedestrian access in the Downtown/Waterfront circulation system.

- **Action MTC-3.6A**: Enhance and expand the wayfinding and branded signage program for the Downtown/Waterfront District to direct residents and visitors to key destinations, transit, and parking.

Policy MTC-10: Boating. Support recreational boating in Vallejo and foster the development of commercial boating activities, including dinner cruises and water taxis.

- **Action MTC-3.10A**: Operate the Municipal Marina in a financially viable manner.
- **Action MTC-3.10B**: Seek funding for marina operations and maintenance, including needed dredging within the existing harbor.

Policy MTC-3.11: Cross-Strait Connections. Facilitate connections across Mare Island Strait.

- **Action MTC-3.11A**: Explore the feasibility of water shuttles connecting the Downtown/Waterfront District and points on Mare Island.

City of Vallejo VMT Guidelines

The City of Vallejo has adopted VMT analysis methodology, metrics, and significance thresholds for use in CEQA impact analysis (City of Vallejo CEQA Transportation Impact Analysis Guidelines, October 2020). This document requires assessing home-based VMT per resident for residential uses, home-based-work VMT per employee for employment uses, and project-specific metrics for other use types. It states that a land use project which generates VMT per resident or VMT per employee at a rate higher than the citywide average would be considered a significant impact under CEQA.

The Vallejo Guidelines address only land use projects. Because the ferry terminal reconfiguration project is not a land use project, but rather a transportation infrastructure project, the Vallejo Guidelines do not provide direction for the VMT impact analysis of the project. Therefore, the OPR *Technical Advisory*,

discussed above under State Regulations, has been used to develop the threshold of significance with respect to VMT for this analysis.

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

Less than Significant Impact. The project reconfigures the Ferry Terminal water-side infrastructure by relocating and expanding the existing fixed pier and gangway and installing a new passenger float. While temporary pedestrian and bicycle detours along Mare Island Way in the immediate vicinity of the terminal may be needed during construction, under project operations, no changes to pedestrian or bicycle facilities are planned. Similarly, no changes to bus operations, including service changes or bus stop location changes, are proposed. No changes to parking lot supply or pricing that would affect those who drive to the terminal are proposed as part of the project. Thus, the project would not obstruct City of Vallejo transit, roadway, bicycle and pedestrian facilities.

The City of Vallejo General Plan 2040 contains three overarching goals: Regional Transportation Hub, Mobile Community, and Interconnected Community. Supporting policies and actions are listed in the regulatory setting. By ensuring the continued efficiency and effectiveness of the Vallejo Ferry Terminal, the project is consistent with the General Plan goals, policies and actions, and does not present conflicts with the General Plan. Therefore, impacts would be less than significant, and no mitigation is required.

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

Less than Significant Impact. Transit and active transportation projects generally reduce VMT and therefore are presumed to cause a less-than-significant impact on transportation. The Technical Advisory states that this presumption may apply to all passenger rail projects, bus and bus rapid transit projects, and bicycle and pedestrian infrastructure projects. However, it can be presumed to apply to ferry terminal projects as well.

The project proposes changes to the water-side berth configuration of the ferry terminal. It does not increase the berth capacity to serve more vessels at one time, nor does it propose an increase in ferry service frequency. It also does not increase the land-side vehicle parking capacity serving those who drive to take the ferry, nor does it propose land-side bus service increases. For these reasons, the project is not expected to increase vehicle miles of travel associated with the Vallejo Ferry Terminal under operating conditions. In addition, because the project is a transit project, the Technical Advisory on Evaluating Transportation Impacts in CEQA supports a finding of a less than significant impact on VMT. Therefore, the impact of the project under operating conditions is less than significant.

During project construction, additional construction employee trips and trucks delivering materials and hauling away debris will increase vehicle miles of travel generated at the project site. This would be a temporary impact. Therefore, impacts would be less than significant, and no mitigation is required.

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

Potentially Significant Unless Mitigation Incorporated. The project does not propose any changes to the roadway, pedestrian, bicycle, and transit facilities and services serving the Vallejo Ferry Terminal site. Therefore, under project operating conditions, no geometric design features will be affected, and no new uses will be introduced to the transportation network serving the site. Impacts would be less than significant, and no mitigation is required.

During project construction, it may be necessary to use traffic control plans to detour vehicles, bicyclists, pedestrians and buses around construction activities. With implementation of Mitigation **Measure MM TRANS-1**, the lead contractor will submit to the satisfaction of the City of Vallejo a Construction Traffic Control Plan to ensure and maintain circulation around project construction. Implementation of **Mitigation Measure MM TRANS-1** would reduce impacts to less than significant.

d) Result in inadequate emergency access?

Potentially Significant Unless Mitigation Incorporated. The project does not propose any changes to the roadway network serving the Vallejo Ferry Terminal site. Therefore, under project operating conditions, emergency vehicle access to the site as well as circulation near the site would not be affected. Impacts would be less than significant, and no mitigation is required.

During project construction, it may be necessary to use traffic control plans to detour vehicles around construction activities. As previously noted, it is expected that with implementation of **Mitigation Measure MM TRANS-1**, a Construction Traffic Control Plan will be developed for the construction periods requiring partial or full closure of roadways. Implementation of **Mitigation Measure MM TRANS-1** would reduce impacts to less than significant.

Mitigation Measures

MM TRANS-1 Construction Traffic Control Plan. Prior to construction, the project operator shall:

1. Prepare and submit a Construction Traffic Control Plan to City of Vallejo for approval. The Construction Traffic Control Plan must be prepared in accordance with the California Department of Transportation Manual on Uniform Traffic Control Devices and but not be limited to, the following issues:

    a. Timing of deliveries of heavy equipment and building materials. To the extent feasible, restrict deliveries and vendor vehicle arrivals and departures during either the AM and PM peak periods;

    b. Placing temporary signing, lighting, and traffic control devices if required, including, but not limited to, appropriate signage along access routes to indicate the presence of heavy vehicles and construction traffic;

    c. Ensuring access for emergency vehicles to the project sites;

    d. Maintaining access to San Francisco Bay Trail;

    e. Consult with the City to develop coordinated plans that would address construction-related vehicle routing and detours adjacent to the construction area for the duration of construction overlap with neighboring projects. Key coordination meetings would be held jointly between applicants and contractors of other projects for which the City determines impacts could overlap.

2. Obtain all necessary encroachment permits for the work within the road right-of-way or use of oversized/overweight vehicles that will utilize City-maintained roads.

4.18 Tribal Cultural Resources

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?		**X**		
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?		**X**		

Setting

Assembly Bill (AB) 52, signed by Governor Edmund G. Brown, Jr., in September 2014, established a new class of resources under CEQA: "tribal cultural resources." AB 52, as provided in Public Resource Code Sections 21080.3.1, 21080.3.2, and 21082.3, requires that lead agencies undertaking CEQA review must, upon written request of a California Native American Tribe, begin consultation once the lead agency

determines that the application for the project is complete, prior to the issuance of a Notice of Preparation of an EIR or notice of intent to adopt a negative declaration or mitigated negative declaration.

The Native American Heritage Commission (NAHC) was contacted to request a Sacred Lands File search for known cultural resources within or near the project site. The results of the search returned by the NAHC on February 2, 2024, indicated that no SLF listed resources were known within the project area. The response letter also provided a listing of Native American contacts that might have knowledge about the project area and the presence or absence of any properties of religious or cultural significance not listed in the SLF. For this reason, letters to each of the listed tribal contacts were sent on February 14, 2024, and an updated notice was sent on March 21, 2024, which reflected some changes to the project description. The purpose of the letters is for information scoping purposes only, and do not constitute formal consultation. The following tribes were contacted for consultation under AB 52:

- Cachil Dehe Band of Wintun Indians of the Colusa Indian Community
- Muwekma Ohlone Indian Tribe of the SF Bay Area
- Cortina Rancheria - Kletsel Dehe Band of Wintun Indians
- Guidiville Rancheria of California
- Yocha Dehe Wintun Nation
- The Confederated Villages of Lisjan Nation

The Confederated Villages of Lisjan Nation responded on February 29, 2024, requesting a copy of the Cultural Report. WETA provided the Cultural Report to the Tribe and no further communication has occurred as of the date of this report. A tribal consultation with representatives from the Yocha Dehe Wintun Nation was held on May 6, 2024. Tribal representatives requested the addition of Mitigation Measure MM TCR-1 regarding Tribal Cultural Resources Awareness Training to this document.

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:

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)?

b) Or,

i. 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?

Potentially Significant Unless Mitigation Incorporated. Project construction activities would involve dredging activities as well as disturbance associated with replacement terminal structures,

including the terminal fixed pier, gangway, and terminal float. As described above, the NAHC response received on February 2, 2024, did not return Native American cultural resources in the project vicinity. Therefore, the potential to adversely affect tribal cultural resources within the project area is minimal. Nonetheless, though no known resources have been identified within the project site and surrounding area, the possibility remains that archaeological materials could be encountered during construction-related ground disturbing activities. As such, the project could result in a potentially significant impact. Mitigation Measure TCR-1 requires that the prior to construction all personnel involved in the project construction are required to attend a cultural and tribal cultural resources training program. The intent of the program is to educate construction personnel on regulations, avoidance protocols and legal consequences regarding the discovery of sensitive cultural resources or tribal cultural resources during the construction process. The education component minimizes potential impacts to tribal cultural resources because construction workers have been trained in how to respond if previously undiscovered tribal cultural resources are observed or located during construction. Implementation of **Mitigation Measures MM TCR-1**, **MM CUL-1** and **MM CUL-2** would reduce impacts to less than significant.

Mitigation Measures

MM TCR-1 **Cultural and Tribal Cultural Resources Awareness Training.** The project operator/contractor shall provide a cultural resources and tribal cultural resources sensitivity and awareness training program for all personnel involved in project construction, including field consultants and construction workers. The training program will be developed in coordination with a Secretary of the Interior-qualified archaeologist. The agency will invite consulting Native American tribal representatives to participate. The training program will include relevant information regarding sensitive cultural resources and tribal cultural resources, including applicable regulations, protocols for avoidance, and consequences of violating State laws and regulations. The training program will also describe appropriate avoidance and minimization measures for resources that have the potential to be located in the project area and will outline what to do and who to contact if any potential cultural resources or tribal cultural resources are encountered. The training program will emphasize the requirement for confidentiality and culturally appropriate treatment of any discovery of significance to Native Americans.

4.19 Utilities and Service Systems

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			**X**	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			**X**	
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			**X**	
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			**X**	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			**X**	

Setting

Water Supply

Water supply in the City of Vallejo, including the project site, is provided by the Vallejo Water Department. This water system serves approximately 121,000 people through more than 38,000 service connections

within Vallejo.[43] The City of Vallejo's primary sources of water are the Solano Project (Lake Berryessa), State Water Project (SWP)/Vallejo Permit Water (California Bay Delta), and Lakes Frey and Madigan. The City also receives a small amount of water from the City of Fairfield to augment service to the Lakes System.[44] The City's water demand has historically been primarily attributed to residential use, with roughly 62 percent of all water produced serving residential demands. In 2015, 49 percent of water produced serviced single family residences and 13 percent served multi-family homes. Commercial demands (which includes institutional and industrial demands) is the next largest water user, at 17 percent in 2015. The remaining water use in 2015 included irrigation demand (9 percent of water produced), other demands such as public facilities and fire hydrants (3 percent), and water loss (9 percent).

Wastewater Treatment

The project area is within the Vallejo Flood and Wastewater District (VFWWD), which operates a wastewater treatment plant (WWTP). The Vallejo WWTP has a dry weather capacity of 15.5 mgd and a wet weather capacity of 60 mgd. As of 2015 VSFCD's dry weather flow was approximately 10 mgd and has been decreasing due to low flow fixtures and a reduction of inflow and infiltration into the collection system. Treatment consists of conventional secondary treatment with trickling filters, short-term aeration, chlorination, and dechlorination before treated effluent is discharged to the Carquinez Strait.[45]

Solid Waste

Solid Waste services in the City are provided by Recology and service within the City is mandatory. Recology also offers recycling service for multi-family units, debris box service, and garbage and recycling collection for commercial businesses. Recology provides residential curbside pickup that includes household hazardous waste, yard waste, recycling, waste, and used oil and filters. Commercial business and multi-tenant dwelling services also are provided. The Recology Hay Landfill is located in Vacaville, California. It has a permitted throughput capacity of 2,400 tons per day. Its remaining permitted capacity is 30,433,000 cubic yards. It has an estimated "cease operation date" of January 1, 2077.[46] The Potrero Hills Landfill is located in Suisun City, California. It has a permitted throughput capacity of 4,330 tons per day. Its remaining permitted capacity is 13,872,000 cubic yards. It has an estimated "cease operation date" of February 14, 2048.[47]

Energy

Energy resources consist of electricity and natural gas. Pacific Gas and Electric (PG&E) is the primary electricity and natural gas supplier in Solano County (including the City of Vallejo) and provides electricity and natural gas to approximately 16 million people throughout a 70,000-square-mile service area in northern and central California. PG&E has 106,681 circuit miles of electric distribution lines and 18,466 circuit miles of interconnected transmission lines, with 5.5 million electric customer accounts.

[43] City of Vallejo, *Water Department*. Available at: https://www.cityofvallejo.net/our_city/departments_divisions/water_department/water_billing#:~:text=The%20City%20of%20Vallejo%20provides,more%20than%2038%2C000%20service%20connections. Accessed November 22, 2023.
[44] City of Vallejo, *2015 Urban Water Management Plan*. Accessed November 22, 2023.
[45] Vallejo Flood and Wastewater District, *Wastewater*. Available at: https://www.vallejowastewater.org/31/Wastewater. Accessed November 22, 2023.
[46] CalRecycle. *Recology Hay Road*. Available at: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1184?siteID=3582. Accessed November 22, 2023.
[47] CalRecycle. *Portero Hills Landfill.* Available at: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1194?siteID=3591. Accessed November 22, 2023.

PG&E has 42,141 miles of natural gas distribution pipelines and 6,438 miles of transportation pipelines. PG&E has 4.5 million natural gas customer accounts. Natural gas is obtained from gas fields in northern California and other sources outside its service area.[48]

Stormwater

There are existing storm drains that serve the project area along Mare Island Way. The project area contains a substantial amount of impervious surface cover in the form of concrete and asphalt surrounding the ferry terminal.

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

Less than Significant Impact. The proposed project would include reconfiguration of an existing ferry terminal to replace the existing fixed pier, gangway, passenger float, and piles. No new structures would be added to the area as a result of the proposed project. The proposed project would not include additional residential units, or people to the County such that new or expanded utilities would be required. No additional demand for water, wastewater, storm water drainage, electric power, natural gas, or telecommunications facilities will be created by the proposed project. The improvements associated with the proposed project are intended to reduce recurring maintenance costs associated with the existing terminal.

Passengers would be allowed to use restrooms within the existing Vallejo Tourism Center building. Restrooms onboard the WETA fleet are serviced by existing sewage and water connections in the ferry terminal basin, which may require relocation within the basin. Nonetheless, water used and wastewater generated onboard by the existing WETA fleet would not change as a result of implementation of the project, as the project would not directly cause a permanent increase in ridership or employees. Therefore, these impacts are less than significant.

Electricity and natural gas are provided to the project site by PG&E. The proposed project may reroute the electrical utility wiring along the concrete basin wall. Light fixtures could be placed along the proposed fixed pier, gangway; however, the electricity demand of these lights would be consistent with existing uses of the ferry terminal. The proposed project would not require the expansion of existing or construction of new energy production or transmission facilities. Impacts would be less than significant, and no mitigation is required.

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

Less than Significant Impact. Water supply in the City of Vallejo, including the project site, is provided by the Vallejo Water Department. The proposed project will not result in intensification of land use, or the addition of structures or uses that would differ from the current General Plan. The proposed project would not include additional residential units, or people to the County such that new demand for water would occur, or such that new or expanded water infrastructure would be

[48] Pacific Gas and Electric, *Company Profile*. Available at: https://www.pge.com/en/about/company-information/company-profile.html. Accessed November 22, 2023.

required. Therefore, the proposed project has sufficient water supplies to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.

It should be noted that limited volumes of water may be necessary during construction related activities for watering of soils for dust control, washing vehicles, mixing materials, etc. This use, however, would be temporary in nature for construction related activities only, and would not be in substantial volumes. Thus, the proposed project would not result in substantial use of water from the existing supplies during normal, dry, or multiple dry years. The project water demand would be served through existing entitlements and resources. Impacts would be less than significant, and no mitigation is required.

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

Less than Significant Impact. The project area is within the VFWD, which operates the Vallejo WWTP. The Vallejo WWTP has a dry weather capacity of 15.5 mgd and a wet weather capacity of 60 mgd. As previously stated, the proposed project would not result in intensification of land use, or the addition of structures or uses that would differ from the current General Plan. No additional demand for wastewater treatment, or other water treatment facilities would be needed or are proposed as part of the project. The proposed project would not increase the service capacity of any existing wastewater connection lines. Thus, the proposed project would not result in any new sources of wastewater generation, nor does it propose any improvements that would result in increased treatment demand for the wastewater treatment provider that new capacity would be needed. Impacts would be less than significant, and mitigation is not required.

No new structures would be added as a result of the proposed project. Passenger waiting areas would be located in a designated outdoor queuing area adjacent to the proposed terminal entry. Passengers currently are and will continue to be allowed to use the restrooms within the Vallejo Tourism Center building during business hours. Restrooms onboard the WETA fleet are serviced by existing sewage and water connections in the ferry terminal basin. The proposed project is consistent with the existing use of the ferry terminal, and demand is not expected to increase as a direct result of project implementation. Therefore, wastewater generated onboard by the existing WETA fleet and around the ferry terminal area would not change as a result of implementation of the project, as the project would not directly cause a permanent increase in ridership or employees. Impacts would be less than significant, and no mitigation is required.

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?

Or,

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

Less than Significant Impact. The proposed project would generate solid waste as a result of construction and site clearing activities, consisting of the following debris: existing steel float, steel piles, fixed pier and gangway, bridge structure, bridge structure steel support system (H-Pile and

steel beams), and miscellaneous electrical/mechanical conduit attached to the existing elements. These materials would be disposed of or recycled by Recology Vallejo, which utilizes the Recology Hay Landfill in Vacaville or the Portero Hills Landfill in Suisun. The proposed project would be in accordance with Section 5.408 of the CALGreen Code to salvage and reuse a minimum 65 percent of nonhazardous construction/demolition debris and/or implement a Construction Waste Management Plan (CWMP). Further, the City of Vallejo requires construction and demolition projects to comply with a construction and demolition (C&D) debris recycling ordinance to salvage and/or recycle 50% of debris and 75% of concrete and asphalt. Materials removed from the project site would be removed via a support barge in the Vallejo Ferry Terminal basin area. The proposed project also would be required to meet all local, State, and federal requirements related to solid waste disposal. Thus, the proposed project would not interfere with regulations related to solid waste or generate waste in excess of the capacity of local infrastructure. Impacts would be less than significant, and no mitigation is required.

4.20 Wildfire

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	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?			**X**	
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?			**X**	
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?			**X**	
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?			**X**	

Setting

The proposed project site is located within an urban area and is predominately surrounded by commercial uses and Mare Island Strait. According to the California Department of Forestry and Fire Protection, the project site is within a Local Responsibility Area (LRA) and is not located in a very high or high wildfire hazard severity zone.[49] The nearest Very High Fire Hazard Severity Zone is approximately 12 miles northeast of the project site. The City has also adopted an Emergency Operations Plan, which includes standard operating procedures for hazards, including urban/wildland interface fires. The Plan identifies

[49] Cal Fire, *State Responsibility Area Fire Hazard Severity Zones*. Available at: https://osfm.fire.ca.gov/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones/fire-hazard-severity-zones-maps-2022. Accessed November 22, 2023.

the responsibilities of City personnel and coordination with other agencies to ensure the safety of Vallejo citizens in the event of a fire, geologic, or other hazardous occurrence.[50]

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

Less than Significant Impact. There are adopted emergency response or evacuation plans by both the City and Solano County for the project area. Given that the proposed project will be similar to that of the existing ferry terminal, the proposed project would not interfere or impair with the Emergency Management Plan of the City of Vallejo or the Solano County Emergency Operations Plan.

As mentioned in the Project Description, the proposed project would help increase operational safety in support of continued ferry service between the cities of San Francisco and Vallejo. The proposed project would improve operational safety of an alternative mode of transit in the case of emergency wildfire events when roads, bridges, and/or tunnels are congested or unavailable. The proposed project would continue to provide an additional evacuation route in the event of an emergency. The project would not substantially impair an adopted emergency response plan or emergency evacuation plan. Impacts would be less than significant, and no mitigation is required.

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?

Less than Significant Impact. The risk of wildfire is related to a variety of parameters, including fuel loading (vegetation), fire weather (winds, temperatures, humidity levels and fuel moisture contents) and topography (degree of slope). Steep slopes contribute to fire hazard by intensifying the effects of wind and making fire suppression difficult. The project is not located on a steep slope and would not have a significant impact in this regard. Fuels such as grass are highly flammable because they have a high surface area to mass ratio and require less heat to reach the ignition point. The proposed project would adhere to the City's landscaping maintenance requirements in Section 16.504.08 of the Vallejo Municipal Code. Reconfiguration and improvements associated with the proposed project are primarily within the existing Ferry Terminal. These improvements would not increase risk of wildfire. Impacts would be less than significant, and no mitigation is required.

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?

Less than Significant Impact. The proposed project includes standard infrastructure improvements associated with reconfiguration. The project site is located in a Local Responsibility Area and is not located in a very high or high wildfire hazard severity zone and is predominantly surrounded by commercial and recreational uses that are not prone to wildfire. The proposed project does not include the need for construction of use of roadways, fuel breaks, emergency water sources, power lines, or other utilities that could exacerbate fire risk, and it would not result in temporary or long-term impacts in this regard. The proposed project would reroute existing electrical utility lines along

[50] City of Vallejo, *2015 Emergency Operations Plan*. Available at: https://www.vallejopipes.com/common/pages/DisplayFile.aspx?itemId=229720. Accessed November 22, 2023.

the concrete basin wall. However, the proposed project is consistent with the existing use of the ferry terminal. Therefore, impacts would be less than significant, and no mitigation is required.

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?

Less than Significant Impact. The proposed project site is not in a Very High Fire Hazard Severity Zones (VHFHSZ) nor located directly to steep slopes or hillsides. The proposed project would not create drainage changes and would not increase stormwater running off the site. The proposed project site would not expose people to downstream flooding or landslides as a result of runoff.

No permanent landside structures would be constructed or modified as a result of the project. Landside improvements would be minor and would be limited to installation of hardscaping and striping around the ferry terminal basin, along the existing paved portion of the San Francisco Bay Trail. These improvements would have no effect on landside drainage patterns, and, therefore, would have little on- or off-site flooding risk. Therefore, impacts would be less than significant, and no mitigation is required.

4.21 Mandatory Findings of Significance

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Does the project:				
a) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		**X**		
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?		**X**		
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		**X**		

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

Potentially Significant Unless Mitigation Incorporated. Implementation of **Mitigation Measures MM BIO-1** through **MM BIO-9**, identified in Section 4.4, "Biological Resources," of this Initial Study

would ensure that the project would not substantially affect fish or wildlife species during construction with regard to underwater noise, would not result in the spread of invasive marine species, and would not result in adverse effects on jurisdictional wetlands and/or water. Implementation of **Mitigation Measures MM CUL-1**, **MM CUL-2 and MM TCR-1**, identified in Sections 4.5, "Cultural Resources," and 4.18, "Tribal Cultural Resources," respectively, would prevent the project from significantly affecting previously undiscovered archaeological and/or tribal cultural resources.

Therefore, with implementation of **Mitigation Measures MM BIO-1** through **MM BIO-9**, **MM CUL-1**, and **MM CUL-2**, the project would have reduced potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory. With implementation of the aforementioned Mitigation Measures, impacts would be less than significant.

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

Potentially Significant Unless Mitigation Incorporated. As presented throughout this environmental checklist, the project would result in less-than-significant impacts or impacts that are mitigated to less-than-significant levels. The potential effects to fish and wildlife species, sensitive communities, and jurisdictional wetlands shall be avoided through **Mitigation Measures MM BIO-1** through **MM BIO-9**. The potential for unknown archaeological materials or tribal cultural resources to be disturbed is addressed through implementation of **Mitigation Measures MM CUL-1**, **MM CUL-2 and MM TCR-1**. Traffic control and Circulation would be addressed through implementation of **Mitigation Measure MM TRANS-1.** Finally, noise impacts would be appropriately addressed through implementation of **Mitigation Measure MM NOI-1**. Therefore, the project would not result in significant construction or operational environmental impacts, and the project would not contribute to significant cumulative impacts. With implementation of the aforementioned Mitigation Measures, impacts would be less than significant.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Potentially Significant Unless Mitigation Incorporated. Potential adverse effects to human beings would occur due to project-related construction impacts related to liquefaction, noise, and transportation. However, through implementation of **Mitigation Measures MM GEO-1**, the project would ensure design level geotechnical investigation is carried out and a geotechnical engineer is engaged for monitoring of construction activities. Further, potential noise generated during project construction would be reduced to less-than-significant levels by implementation of **Mitigation Measure MM NOI-1**, as previously discussed. Additionally, a Construction Traffic Control Plan would be prepared and implemented through **Mitigation Measure MM TRANS-1**. Therefore, with

implementation of the aforementioned Mitigation Measures, impacts would be less than significant.

5.0 REFERENCES AND PREPARERS

5.1 References

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Appendix A1

Blue & Gold Captains Feedback

Appendix A2

Public Outreach Report

Appendix B

Air Quality Assessment

Appendix C

Biological Resources Technical Report

Appendix D

Cultural Report

Appendix E

Energy Calculations

Appendix F

Greenhouse Gas Emissions Assessment

Appendix G

Acoustical Assessment

Appendix H

Hydroacoustic Impact Assessment

Appendix I

Transportation and Circulation Report