

# **DOWNTOWN SAN FRANCISCO FERRY TERMINAL EXPANSION PROJECT**

Environmental Impact Statement/Environmental Impact Report  
Mitigation Monitoring and Reporting Program  
SCH No. 2011032066

*Prepared for*  
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# Mitigation Monitoring and Reporting Program

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## INTRODUCTION

The California Environmental Quality Act and National Environmental Policy Act (NEPA) require the adoption of feasible mitigation measures (MMs) to reduce the severity and magnitude of potentially significant environmental impacts associated with project development. Under NEPA regulations, a monitoring and enforcement program shall be adopted and summarized for any mitigation identified to reduce adverse effects (40 Code of Federal Regulations [CFR] Section 1505.2(c) and 23 CFR 771.27A). The Environmental Impact Statement/Environmental Impact Report (EIS/EIR) for the Downtown San Francisco Ferry Terminal Expansion Project (the proposed project), SCH No. 2011032066, recommends that the San Francisco Bay Area Water Emergency Transportation Authority (WETA) adopt a range of MMs that will mitigate to the extent feasible the environmental effects that could result from the implementation of the proposed project.

Monitoring of the implementation of adopted MMs is required by Public Resources Code Section 21081.6. This document identifies MMs and project requirements (PRs) of the EIS/EIR, and describes the process whereby the MMs and PRs would be monitored following certification of the EIS/EIR and adoption of this Mitigation Monitoring and Reporting Program (MMRP) by WETA.

## PURPOSE

The purpose of this MMRP is to ensure compliance with all MMs to mitigate or avoid potentially significant adverse environmental impacts resulting from the proposed project that were identified in the EIS/EIR. Implementation of this MMRP shall be accomplished by WETA. Project-specific MMs will be implemented (1) as part of design development of the project; (2) prior to or during project construction; or (3) as part of project operations.

## RESPONSIBILITIES AND DUTIES

In general, monitoring will consist of demonstrating that MMs were implemented, and that the responsible unit monitored the implementation of the measures. The responsible unit for determining compliance with all MMs will be WETA. Monitoring will consist of determining whether:

- The specific issues identified in the MMs were considered in the design development phase
- Construction contracts included the provisions specified in the MMs
- The required actions specified in the MMs occurred prior to or during construction
- Ongoing administrative activities included the provisions identified in the MMs

Although WETA would ultimately be responsible for compliance with the MMs and PRs, compliance with and/or implementation of many of these MMs and PRs will also be the responsibility of the Construction Contractor, and would be included in the construction contract requirements.

The project improvements will be constructed in an area under the jurisdiction of the Port of San Francisco (Port). WETA and the Port will enter into a lease agreement for the modification to existing and construction of new facilities under their jurisdiction. In accordance with the lease agreement, construction would be closely coordinated with the Port; however, any concerns between monitors and construction personnel shall be addressed by WETA.

## **LIST OF MITIGATION MEASURES**

All project-specific MMs included in the EIS/EIR for the project would be monitored as described above. These measures are listed in Table 1.

The mitigation monitoring matrix on the following pages is formatted to parallel the format of the Executive Summary table contained in the EIS/EIR. The matrix identifies the required MMs; the primary responsible monitoring party (whether WETA or WETA's Construction Contractor); the time frame for monitoring; and any responsible monitoring agencies other than WETA and WETA's Construction Contractor. In addition, requirements to report implementation to outside agencies are noted where applicable.

## **LIST OF PROJECT REQUIREMENTS**

Table 2 includes a list of project-specific requirements included in the EIS/EIR. These requirements would be monitored by WETA and are included in this MMRP to assist WETA in tracking the implementation of these commitments.

**Table 1  
Mitigation Monitoring and Reporting Program Matrix**

Reference Number	Impact	Mitigation Measure	Timeframe/ Monitoring Milestone	Primary Responsible Monitoring Party (WETA/ Construction Contractor)	Other Responsible Monitoring Party (if applicable)	Reporting Requirements (if applicable)
<b>Transportation and Circulation</b>						
MM TRANS-1	<p><b>Impact 3.2-3: Potential Impacts to Pedestrian Facilities in Existing Conditions</b></p> <p>Increases in pedestrian circulation associated with the project under Existing Conditions would result in substantial overcrowding for three study area crosswalks. Preliminary analysis indicates that Mitigation Measures TRANS-1 and TRANS-2 could reduce the potential impacts, however, the impacts may not be fully mitigated.</p>	<p><b>Mitigation Measure TRANS-1: Implement The Embarcadero Midblock at the Ferry Building Southbound and Northbound (No. 15A/15B) Intersection Adjustments</b></p> <p>WETA will enter into an agreement with SFMTA to modify the intersection signal timing for The Embarcadero Midblock at the Ferry Building Southbound and Northbound (No. 15A/15B), to remove the northbound-southbound movement (No. 9); and distribute the time to the northbound movement (Turning Movement No. 2/Turning Movement No. 5) and southbound movement (Turning Movement No. 10), to allow for longer crossing times for pedestrians. This adjustment would result in the LOS for the crosswalk to be improved to LOS D for the respective AM and PM peak hours, without causing intersection LOS to drop to an unacceptable level. SFMTA has discretion over the specific timing adjustments, and the timing of the implementation of any changes affecting the transportation network in San Francisco.</p>	Prior to project operations	WETA	SFMTA	
MM TRANS-2		<p><b>Mitigation Measure TRANS-2: Implement The Embarcadero and Market West (No. 17) Crosswalk Adjustments</b></p> <p>WETA will enter into an agreement with SFMTA to widen the pedestrian crosswalk at The Embarcadero and Market Street Southbound (No. 17) to a minimum of 72 feet. This adjustment would result in the LOS for the crosswalk to be improved to LOS D, without causing a drop in intersection LOS for traffic.</p> <p>The existing crosswalk at this location is 42 feet in width; therefore, it would require a 30-foot widening (for a minimum width of 72 feet). However, there are a number of signs, poles, and other street furniture located north and south of the crosswalk on either side of the roadway that could have to be relocated to allow the crosswalk to be widened. These include:</p> <ul style="list-style-type: none"> <li>▪ Along the western side of The Embarcadero, 2.5 feet north of the crosswalk, there is a traffic signal; and 15 feet north of the crosswalk, there is a manhole.</li> <li>▪ Along the western side of The Embarcadero, south of the crosswalk, there is a pedestrian crossing signal 2 feet from the crosswalk; a newspaper vending box 8 to 16 feet from the crosswalk; a street light 20 feet from the crosswalk; a “no parking” sign 24 feet from the crosswalk; and a traffic signal 30 feet from the crosswalk. A tree is located approximately 44 feet south of the crosswalk.</li> <li>▪ Along the eastern side The Embarcadero, a traffic signal and pedestrian call button are located 1 foot north of the crosswalk.</li> <li>▪ Along the eastern side The Embarcadero, a pedestrian crossing signal is located at the southern edge of the crosswalk, a decorative spherical bollard is 23 feet south of the crosswalk, and a traffic signal is 32 feet south of the crosswalk.</li> </ul> <p>SFMTA has discretion over the specific adjustments and the timing of the implementation of any changes affecting the transportation network in San Francisco, and SFDPW will be required to review and approve any relocation of manholes.</p>	Prior to project operations	WETA	SFMTA	

**Table 1  
Mitigation Monitoring and Reporting Program Matrix (Continued)**

Reference Number	Impact	Mitigation Measure	Timeframe/ Monitoring Milestone	Primary Responsible Monitoring Party (WETA/ Construction Contractor)	Other Responsible Monitoring Party (if applicable)	Reporting Requirements (if applicable)
MM TRANS-3	<p><b>Impact 3.2-5: Potential Impact of Construction-Related Activities on Transportation and Circulation</b></p> <p>The majority of construction would be conducted from barges in the project area. In addition, the construction workforce would be small (between 4 and 25 construction workers). Between 15 and 20 trucks would access the site for construction-related activities on a given day. While the project would not result in adverse impacts, to further reduce the potential temporary disruptions to transportation and circulation, consistent with construction management best practices, WETA will implement Mitigation Measure TRANS-3, Construction Circulation Management.</p>	<p><b>Mitigation Measure TRANS-3: Construction Circulation Management</b></p> <p>WETA will meet with the Traffic Engineering Division of SFMTA, the Fire Department, Muni, and the Planning Department to determine the best methods and avoidance measures to minimize traffic congestion and potential negative effects to pedestrian or bicycle circulation in the project area during construction of the proposed project. Additional avoidance measures that could be implemented could include encouraging carpooling and transit use for construction workers, managing construction traffic on Mission Street to avoid peak-period congestion, informing the public of construction schedules and activities, and posting of wayfinding signage in the project area for pedestrians and bicycles.</p> <p>WETA will also develop a construction staging plan that will be coordinated with the Port and other leaseholders in the project area (e.g., BART and Equity Office Partners). The construction staging plan will ensure that ingress and egress to the existing gates and businesses would be maintained; vehicular access along the fire lane would be maintained; water side and land side access to other facilities on the Ferry Plaza would not be impeded; and construction would not block or prevent passage along The Embarcadero. Wayfinding signage would be posted as necessary</p>	Prior to and during construction	WETA and Construction Contractor	SFMTA, SFFD, San Francisco Planning Department, and Port	
	<p><b>Impact 3.2-8: Potential Cumulative Impacts to Pedestrian Facilities in Future (2035) Conditions</b></p> <p>Increases in pedestrian circulation associated with the project under Future (2035) Conditions would result in substantial overcrowding for three study area crosswalks. Preliminary analysis indicates that Mitigation Measures TRANS-1 and TRANS-2 could reduce the potential impacts; however, the impacts may not be fully mitigated.</p>	<p><b>Mitigation Measure TRANS-1: Implement The Embarcadero Midblock at the Ferry Building Southbound and Northbound (No. 15A/15B) Intersection Adjustments</b></p> <p><b>Mitigation Measure TRANS-2: Implement The Embarcadero and Market West (No. 17) Crosswalk Adjustments</b></p>	See Impact 3.2-3	See Impact 3.2-3	See Impact 3.2-3	See Impact 3.2-3
			See Impact 3.2-3	See Impact 3.2-3	See Impact 3.2-3	See Impact 3.2-3

**Table 1  
Mitigation Monitoring and Reporting Program Matrix (Continued)**

Reference Number	Impact	Mitigation Measure	Timeframe/ Monitoring Milestone	Primary Responsible Monitoring Party (WETA/ Construction Contractor)	Other Responsible Monitoring Party (if applicable)	Reporting Requirements (if applicable)
<b>Land Use and Land Use Planning</b>						
MM LU-1	<p><b>Impact 3.3-2: Conflict with Applicable BCDC Plans and Policies</b></p> <p>With implementation of Mitigation Measure LU-1, the project would not conflict with applicable BCDC land use plans and policies adopted to avoid or mitigate environmental effects. As a result of BCDC’s review and permitting for the proposed project, the project would be implemented in a manner consistent with BCDC plans and policies, and would be consistent with the Coastal Zone Management Act.</p>	<p><b>Mitigation Measure LU-1: Removal of Fill in San Francisco Bay</b></p> <p>To offset the new fill in San Francisco Bay created by the proposed project improvements, WETA will remove fill elsewhere in San Francisco Bay. Fill removal location and amount will be determined in coordination with BCDC during the Major Permit and Design Review process. The amount of fill to be removed is anticipated to be no more than the amount of new fill created by the project. Sites that would be considered for fill removal include dilapidated piers, wharfs, and remnant pilings that were constructed with creosote-treated wood; have no current maritime uses; and are not in areas with sensitive biological resources, such as eelgrass beds.</p> <p>WETA would conduct removal activities in accordance with applicable regulatory permits (as described in this EIS/EIR), and would cut or break the piles off at least 2 feet below the mudline. WETA would minimize sediment disturbance during removal, use a floating boom around the work area to contain and capture debris; and have absorbent pads available in the event that a petroleum sheen develops during removal of the structures. Mitigation measures and regulatory requirements described in the EIS/EIR for proposed project activities (i.e., demolition and removal of piles and piers) would also apply to the demolition and removal of fill elsewhere in the Bay; these would include Mitigation Measures AQ-1, Implement BAAQMD-Recommended Best Management Practices; CUL-1, Inadvertent Discovery Measures; CUL-2, Stop Construction if Buried Paleontological Resources are Discovered; HAZ-1, Prepare a Hazardous Materials Management Plan; and BIO-1, Dredging and Pile Driving Measures.</p>	Funded prior to the completion of construction, or sooner as mandated by BCDC permit requirements	WETA	BCDC and NMFS	As required by the Major Permit issued by BCDC  As required by the Biological Opinion and Incidental Take Statement issued by NMFS

**Table 1  
Mitigation Monitoring and Reporting Program Matrix (Continued)**

Reference Number	Impact	Mitigation Measure	Timeframe/ Monitoring Milestone	Primary Responsible Monitoring Party (WETA/ Construction Contractor)	Other Responsible Monitoring Party (if applicable)	Reporting Requirements (if applicable)
<b>Parklands and Recreation</b>						
MM REC-1	<p><b>Impact 3.4-2: Conflict with Recreation and Public Access Plans and Policies</b></p> <p>With implementation of Mitigation Measure REC-1, the project would be consistent with applicable recreation and public access plans and policies.</p>	<p><b>Mitigation Measure REC-1: Public Access Improvements</b></p> <p>To demonstrate that the proposed project includes public access improvements consistent with BCDC’s plans and policies, WETA will develop a public access improvements plan in coordination with BCDC as a part of the Major Permit and Design Review process. The public access improvements plan will detail the public access features included in the project’s Final Design, including details on the location, square footage, and expected benefit of the improvements. Public access improvements described in the plan would include, at a minimum, the Gate A Access Pier, North Basin Marginal Wharf Improvements, East Bayside Promenade, Embarcadero Plaza, and South Apron of the Agriculture Building Improvements. Other minor improvements such as seatwalls, planters, lighting, minor resurfacing, and/or railing replacements, not described here but in the project area, may be considered in this public access improvement plan. The feasibility of additional improvements outside of the Construction Zone shown on Figure 2-9 will be determined at the time of permitting, because feasibility will be dependent on the cooperation of other entities that have long-term leases (and therefore jurisdiction) over these other areas.</p> <p>WETA would construct public access improvements in accordance with applicable regulatory permits (as described in this EIS/EIR). Mitigation measures and regulatory requirements described in this EIS/EIR for proposed project activities (i.e., surface improvements) would also apply to the construction of public access improvements elsewhere in the project area. These would include Mitigation Measures AQ-2, Implement BAAQMD-Recommended Best Management Practices; TRANS-3, Construction Circulation Management; NOISE-1, Construction Notification; NOISE-4, General Construction Equipment Measures to Minimize Vibration; CUL-4, Plan for Protection Against, and Response to, Inadvertent Damage; HAZ-1, Prepare a Hazardous Materials Management Plan.</p>	During development of the project design	WETA	BCDC	Documented as a part of the Major Permit (BCDC)
<b>Section 4(f)</b>						
	The project would not require the use of any Section 4(f) park or recreation property. The project would result in a <i>de minimis</i> impact to Pier 1, the Port Embarcadero Historic District, and the Central Embarcadero Piers Historic District.	Mitigation measures identified for Noise (NOISE-3) and Cultural Resources (CUL-3, CUL-4, CUL-6), discussed below.	See Impact 3.7-3, Impact 3.8-3, and Impact 3.8-5	See Impact 3.7-3, Impact 3.8-3, and Impact 3.8-5	See Impact 3.7-3, Impact 3.8-3, and Impact 3.8-5	See Impact 3.7-3, Impact 3.8-3, and Impact 3.8-5

**Table 1  
Mitigation Monitoring and Reporting Program Matrix (Continued)**

Reference Number	Impact	Mitigation Measure	Timeframe/ Monitoring Milestone	Primary Responsible Monitoring Party (WETA/ Construction Contractor)	Other Responsible Monitoring Party (if applicable)	Reporting Requirements (if applicable)
<b>Air Quality and Global Climate Change</b>						
MM AQ-1	<p><b>Impact 3.6-4: Construction-Related Emissions of ROG, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> that Could Exceed Applicable Air Quality Standards</b></p> <p>If construction activities in the North and South Basins overlapped, the project’s unmitigated ROG, PM<sub>10</sub>, and PM<sub>2.5</sub> construction-related emissions would not exceed the BAAQMD’s average daily emission standards for construction activities; however, the project’s unmitigated construction-related NO<sub>x</sub> emissions could exceed the BAAQMD standards. Implementation of Mitigation Measures AQ-1 and AQ-2 would reduce the project’s construction NO<sub>x</sub> emissions below BAAQMD’s thresholds.</p>	<p><b>Mitigation Measure AQ-1: Construction Phasing</b></p> <p>WETA will phase construction activities in such a way that onsite emission-generating construction activities for the North Basin and South Basin improvements do not overlap.</p>	During development of the project design	WETA		
MM AQ-2		<p><b>Mitigation Measure AQ-2: Implement BAAQMD-Recommended Best Management Practices</b></p> <p>The following BAAQMD-recommended best management practices will be implemented to reduce exhaust emissions:</p> <ul style="list-style-type: none"> <li>▪ Minimize the idling time of diesel-powered construction equipment to 2 minutes.</li> <li>▪ The contractor will demonstrate at various phases of construction (e.g., 25 percent, 50 percent, and completion) that the off-road equipment (more than 50 horsepower) and marine vessels to be used during construction (i.e., owned, leased, and subcontractor vehicles) would achieve a project-wide fleet-average 20 percent NO<sub>x</sub> reduction, and a 45 percent PM reduction compared to the most recent CARB fleet average, to the extent feasible. Acceptable options for reducing emissions include the use of late-model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options that may become available. The contractor will document efforts taken to achieve the specified goals, explain why meeting the goals was not feasible (if applicable), and indicate what emissions reduction and equipment use goals were achieved.</li> <li>▪ Require that all construction equipment, diesel trucks, and generators be equipped with Best Available Control Technology for emission reductions of NO<sub>x</sub> and PM.</li> <li>▪ Require that all contractors use equipment that meets CARB’s most recent certification standard for off-road heavy-duty diesel engines.</li> </ul>	During construction	Construction Contractor		
	<p><b>Impact 3.6-5: Expose Sensitive Receptors to Substantial Construction-Related Pollutant Concentrations</b></p> <p>The project’s construction emissions could result in PM<sub>2.5</sub> concentrations that exceed BAAQMD’s significance thresholds for exposure of sensitive receptors to this pollutant. With implementation of Mitigation Measures AQ-1 and AQ-2, the project’s construction emissions would be less than BAAQMD’s thresholds, and consequently would not expose sensitive receptors to substantial pollutant concentrations.</p>	<p><b>Mitigation Measure AQ-1: Construction Phasing</b></p>	See Impact 3.6-4	See Impact 3.6-4	See Impact 3.6-4	See Impact 3.6-4
		<p><b>Mitigation Measure AQ-2: Implement BAAQMD-Recommended Best Management Practices</b></p>	See Impact 3.6-4	See Impact 3.6-4	See Impact 3.6-4	See Impact 3.6-4

**Table 1  
Mitigation Monitoring and Reporting Program Matrix (Continued)**

Reference Number	Impact	Mitigation Measure	Timeframe/ Monitoring Milestone	Primary Responsible Monitoring Party (WETA/ Construction Contractor)	Other Responsible Monitoring Party (if applicable)	Reporting Requirements (if applicable)
<b>Noise and Vibration</b>						
MM NOISE-1	<b>Impact 3.7-2: Potential Impact of Construction and Demolition Equipment other than Impact Tools on Adjacent Noise-Sensitive Land Uses</b> General construction noise would adversely impact noise-sensitive receivers in the project vicinity. Impacts would be reduced with implementation of Mitigation Measures NOISE-1 and NOISE-2.	<b>Mitigation Measure NOISE-1: Construction Notification</b> Prior to the start of construction, the owners and occupants of Pier 1, the Hotel Vitale, the Ferry Building, the Carmelien by the Bay, and the Agriculture Building (i.e., those noise-sensitive receivers listed in Table 3.7-7) will be notified of the project schedule, and that noise- and vibration-generating construction activities are anticipated. Prior to the start of the job, these businesses will be provided with the phone number of the construction foreman, or another responsible party who can be reached for noise- and vibration-related questions and concerns.	Prior to construction	WETA		
MM NOISE-2		<b>Mitigation Measure NOISE-2: Use of Smaller and Quieter Construction Equipment within 15 Feet of the Agriculture Building</b> When construction activities would occur within 15 feet of the Agriculture Building during a time when the building is occupied, equipment will be selected to minimize the noise generated from construction. The contractor will use smaller and quieter construction equipment with lower noise-emission ratings.	During construction	Construction Contractor		
	<b>Impact 3.7-3: Potential Impact of Pile Driving During Project Construction on Adjacent Noise-Sensitive Land Uses</b> Construction noise from pile-driving activities would be potentially adverse when conducted within 55 feet of the Ferry Building, the Agriculture Building, and Pier 1. This impact would be reduced with implementation of Mitigation Measures NOISE-1 and NOISE-3.	<b>Mitigation Measure NOISE-1: Construction Notification</b>	See Impact 3.7-2	See Impact 3.7-2	See Impact 3.7-2	See Impact 3.7-2
MM NOISE-3		<b>Mitigation Measure NOISE-3: Pile-Driving Technique Selection, and Monitoring; and Corrective Measures to Minimize Noise and Vibration at Nearby Buildings</b> To reduce the effect of noise and vibration on adjacent land uses and structures, the following measures will be implemented during construction: <ul style="list-style-type: none"> <li>▪ Within 55 feet of a building (i.e., the Ferry Building, the Agriculture Building, or Pier 1), vibratory pile driving will be employed to reduce noise levels at the building to below 100 dBA.</li> <li>▪ When vibratory pile driving occurs within 32 feet of an occupied building (i.e., the Ferry Building, the Agriculture Building, or Pier 1), noise monitoring will be conducted to ensure that noise levels at the building do not exceed 100 dBA. If necessary, noise-reducing measures will be employed to reduce noise levels at the building to below 100 dBA.</li> <li>▪ When impact pile driving occurs within 540 feet of the Hotel Vitale, vibration monitoring will be performed to ensure that the vibration levels at the hotel do not exceed 75 VdB (the threshold for annoyance for residential land uses).</li> <li>▪ When vibratory pile driving occurs within 315 feet of the Hotel Vitale, vibration monitoring will be performed to ensure that the vibration levels at the hotel do not exceed 75 VdB (the threshold for annoyance for residential land uses).</li> </ul>	During construction planning and construction	Construction Contractor and noise/vibration monitor, as required		

**Table 1  
Mitigation Monitoring and Reporting Program Matrix (Continued)**

Reference Number	Impact	Mitigation Measure	Timeframe/ Monitoring Milestone	Primary Responsible Monitoring Party (WETA/ Construction Contractor)	Other Responsible Monitoring Party (if applicable)	Reporting Requirements (if applicable)
		<ul style="list-style-type: none"> <li>▪ When pile driving occurs within 290 feet of the Hotel Vitale, techniques to reduce vibration, such as selection of vibratory pile driving, will be applied to ensure that vibration levels at the hotel do not exceed 75 VdB (the threshold for annoyance for residential land uses).</li> <li>▪ To ensure that vibration from construction activities does not result in damage to any of the Vibration Category II structures in the project area (the Ferry Building, the Agriculture Building, Carmelian by the Bay, Pier 1, and the seawall), the following measures will be applied:               <ul style="list-style-type: none"> <li>– When impact pile driving occurs within 73 feet of the building, vibration will be monitored to ensure that the vibration levels at the building do not exceed 0.3 PPV.</li> <li>– Within 42 feet of an existing building, an alternative method to impact pile driving will be employed, such as vibratory pile-driving construction.</li> <li>– When vibratory pile driving occurs within 45 feet of the building, vibration will be monitored to ensure that the vibration levels at the building do not exceed 0.3 PPV.</li> <li>– Pile driving will not be implemented within 17 feet of an existing building unless it can be demonstrated that the activity will not generate vibration levels that would exceed 0.3 PPV at the building.</li> </ul> </li> <li>▪ To ensure that vibration from construction activities does not result in damage to the Ferry Plaza (Vibration Category I), the following measures will be applied:               <ul style="list-style-type: none"> <li>– When impact pile driving occurs within 53 feet of the Ferry Plaza, vibration will be monitored to ensure that the vibration levels at the plaza do not exceed 0.5 PPV.</li> <li>– Within 30 feet of the Ferry Plaza, an alternative method to impact pile driving will be employed, such as vibratory pile-driving construction.</li> <li>– When vibratory pile driving occurs within 33 feet of the Ferry Plaza, vibration will be monitored to ensure that the vibration levels at the plaza do not exceed 0.5 PPV.</li> <li>– Pile driving will not be implemented within 13 feet of the Ferry Plaza, unless it can be demonstrated that the activity will not generate vibration levels that would exceed 0.5 PPV at the plaza.</li> </ul> </li> <li>▪ Should the noise and vibration monitoring on site indicate that levels reach or exceed the thresholds indicated here, all impact work will cease, and corrective measures or alternative construction methods will be implemented to minimize the risk to the subject or structure.</li> </ul>				

**Table 1  
Mitigation Monitoring and Reporting Program Matrix (Continued)**

Reference Number	Impact	Mitigation Measure	Timeframe/ Monitoring Milestone	Primary Responsible Monitoring Party (WETA/ Construction Contractor)	Other Responsible Monitoring Party (if applicable)	Reporting Requirements (if applicable)
	<b>Impact 3.7-4: Vibration from Project Construction that Could Result in Human Annoyance</b>	<b>Mitigation Measure NOISE-1: Construction Notification</b>	See Impact 3.7-2	See Impact 3.7-2	See Impact 3.7-2	See Impact 3.7-2
	Vibration from pile driving could adversely affect the residential uses at the Hotel Vitale, causing annoyance. This impact would be reduced with implementation of Mitigation Measures NOISE-1 and NOISE-3.	<b>Mitigation Measure NOISE-3: Pile-Driving Technique Selection, and Monitoring; and Corrective Measures to Minimize Noise and Vibration at Nearby Buildings</b>	See Impact 3.7-3	See Impact 3.7-3	See Impact 3.7-3	See Impact 3.7-3
	<b>Impact 3.7-5: Damage to Structures Caused by Vibration from Project Construction</b>	<b>Mitigation Measure NOISE-3: Pile-Driving Technique Selection, and Monitoring; and Corrective Measures to Minimize Noise and Vibration at Nearby Buildings</b>	See Impact 3.7-3	See Impact 3.7-3	See Impact 3.7-3	See Impact 3.7-3
MM NOISE-4	Project construction activities could produce vibration that could exceed thresholds designed to protect the seawall, the Ferry Building, the Ferry Plaza, the Agriculture Building, and Pier 1 from structural damage. Impacts would be reduced with implementation of Mitigation Measures NOISE-3 and NOISE-4.	<p><b>Mitigation Measure NOISE-4: General Construction Equipment Measures to Minimize Vibration</b></p> <p>To reduce construction-related vibration that has the potential to damage structures in the project area, the following measures will be implemented during construction:</p> <ul style="list-style-type: none"> <li>▪ Vibrating construction equipment should be placed and operated from the construction barge, if feasible.</li> <li>▪ When working within 20 feet of the Agriculture Building or the seawall (except when on a barge), equipment that produces less vibration when operated will be selected (refer to Table 3.7-13). If vibration-producing equipment is used within 20 feet of the Agriculture Building or the seawall, vibration will be monitored to ensure that it does not exceed 0.3 PPV. Should the onsite vibration monitoring indicate that levels reach or exceed the thresholds indicated here, all impact work will cease, and corrective measures will be implemented to minimize the risk to the subject or structure.</li> </ul>	During construction planning and construction	Construction Contractor and noise/vibration monitor, as required		

**Table 1  
Mitigation Monitoring and Reporting Program Matrix (Continued)**

Reference Number	Impact	Mitigation Measure	Timeframe/ Monitoring Milestone	Primary Responsible Monitoring Party (WETA/ Construction Contractor)	Other Responsible Monitoring Party (if applicable)	Reporting Requirements (if applicable)
<b>Cultural and Paleontological Resources</b>						
MM CUL-1	<p><b>Impact 3.8-1: Substantial Adverse Change to NRHP and/or CRHR Listed, or Eligible to Be Listed, or Unique Archaeological Resources</b></p> <p>There are no known archeological resources in the project APE. The inadvertent discovery of archaeological materials during project activities represents a potential project impact; however, implementation of Mitigation Measure CUL-1, would reduce the project’s potential to result in impacts to archaeological resources.</p>	<p><b>Mitigation Measure CUL-1: Inadvertent Discovery Measures</b></p> <p>To avoid any potential adverse effect on inadvertently discovered NRHP- and/or CRHR-eligible or unique archaeological resources as defined in CEQA Guidelines Section 15064.5(a)(c), WETA will distribute an archaeological resource “ALERT” sheet to the project prime contractor, and to any project subcontractor firms involved in soil/ sediment disturbing activities in the project site. The “ALERT” sheet will contain sufficient information to allow contractor personnel to identify conditions that may indicate the presence of archaeological resources. Prior to undertaking any soil-disturbing activities (i.e., dredging, pile installation), each contractor is responsible for ensuring that the “ALERT” sheet is circulated to all field personnel, including machine operators, field crew, pile drivers, and supervisory personnel. Should there be any indication of an archeological resource—including, but not limited to, encountering fragments of bone, stone tools, midden soils, structural remains, ship remnants, or historic refuse—during any soil-disturbing activity of the project, WETA will immediately suspend any soil-disturbing activities in the vicinity of the discovery.</p> <p>In the event of such a discovery, WETA will retain the services of a qualified archaeological consultant. The archaeological consultant will advise WETA as to whether the discovery is an archaeological resource that retains sufficient integrity, and is of potential scientific/historical/cultural significance. If an archaeological resource is present, the archaeological consultant will identify and evaluate the archaeological resource. The archaeological consultant will make a recommendation to WETA as to what action or additional measures, if any, are warranted, including coordination with appropriate agencies, including the California State Lands Commission.</p> <p>Measures might include preservation <i>in situ</i> of the archaeological resource; an archaeological monitoring program; or an archaeological evaluation program. If an archaeological resource cannot be avoided by project activities, the archaeologist will prepare an Archaeological Evaluation Plan (AEP). The AEP will create a program to determine the potential of the expected resource to meet the CRHR criteria—particularly Criterion 4, the resource’s potential to address important research questions identified in the AEP—and the archaeologist will submit this plan to WETA for approval. The archaeologist will then conduct an evaluation consistent with the WETA-approved AEP. The methods and findings of the evaluation will be presented in an Archaeological Evaluation and Effects Report, which will be submitted to WETA for review on completion.</p>	During construction	Construction Contractor and qualified archaeological consultant, if required	Port and California State Lands Commission	If resource is discovered, documentation and reporting of the discovery will be coordinated with the Port and California State Lands Commission, as required

**Table 1  
Mitigation Monitoring and Reporting Program Matrix (Continued)**

Reference Number	Impact	Mitigation Measure	Timeframe/ Monitoring Milestone	Primary Responsible Monitoring Party (WETA/ Construction Contractor)	Other Responsible Monitoring Party (if applicable)	Reporting Requirements (if applicable)
	<b>Impact 3.8-2: Disturbance of Human Remains, Including those Interred Outside of a Formal Cemetery</b>	<b>Mitigation Measure CUL-1: Inadvertent Discovery Measures</b>	See Impact 3.8-1	See Impact 3.8-1	See Impact 3.8-1	See Impact 3.8-1
MM CUL-2	There are no known human remains in the project APE. The inadvertent disturbance of human remains during construction represents a potential project impact; however, implementation of Mitigation Measures CUL-1 and CUL-2 would reduce the project's potential to result in impacts to human remains.	<b>Mitigation Measure CUL-2: Treatment of Human Remains</b> The treatment of human remains and associated or unassociated funerary objects discovered during any soil-disturbing activity will comply with applicable state laws. In the event the discovery is composed entirely of, or includes, human skeletal remains, in addition to implementation of Mitigation Measure CUL-1, Inadvertent Discovery Measures, construction activities will immediately cease and WETA's project representative will immediately contact the San Francisco County coroner to evaluate the remains, following the procedures and protocols set forth in Section 15064.5 (e)(1) of the CEQA Guidelines. If the coroner determines that the remains are Native American, WETA will contact the NAHC, who will appoint a Most Likely Descendant (MLD), in accordance with Health and Safety Code Section 7050.5, subdivision (c), and PRC 5097.98 (as amended by AB 2641). In accordance with PRC 5097.98, WETA and the Port (as landowner/administrator) will ensure that, according to generally accepted cultural or archaeological standards or practices, the immediate vicinity of the Native American human remains is not damaged or disturbed by further development activity until WETA and the Port have discussed and conferred with the MLD, as prescribed in this section (PRC 5097.98), regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. WETA, the Port, and the MLD will make all reasonable efforts to develop an agreement for the treatment, with appropriate dignity, of human remains and associated or unassociated funerary objects (CEQA Guidelines Sec. 15064.5[d]). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. PRC allows 48 hours to reach agreement on these matters. If the MLD and the other parties do not agree on the reburial method, the project will follow Section 5097.98(b) of the PRC, which states, "the landowner or his or her authorized representative will re-inter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance."	During construction	Construction Contractor	Port and San Francisco County Coroner; NAHC and Most Likely Descendant, if required	If human remains are discovered, documentation and reporting of the discovery will be coordinated with the Port and San Francisco County coroner's office, as required

**Table 1  
Mitigation Monitoring and Reporting Program Matrix (Continued)**

Reference Number	Impact	Mitigation Measure	Timeframe/ Monitoring Milestone	Primary Responsible Monitoring Party (WETA/ Construction Contractor)	Other Responsible Monitoring Party (if applicable)	Reporting Requirements (if applicable)
MM CUL-3	<p><b>Impact 3.8-3: Cause a Direct Adverse Effect or Impact to Historic Properties or Resources</b></p> <p>Should it be determined that the fendering along Pier 1 requires replacement, the project could directly affect historic properties or resources. During the Final Design of the project, the existing fendering along the southern edge of Pier 1 would be inspected to determine whether replacement is necessary. Implementation of Mitigation Measures CUL-3 and CUL-4 require application of measures during construction to avoid inadvertent damage; implementation of a response and repair plan, should any inadvertent damage occur during construction; and replacement of the fendering along Pier 1, in a manner consistent with the <i>Secretary of the Interior's Standards for the Treatment of Historic Properties, Standards for Rehabilitation</i>.</p>	<p><b>Mitigation Measure CUL-3: Replacement in Accordance with Secretary of Interior Standards for Rehabilitation</b></p> <p>If replacement of the existing pile fendering attached to the southern side of Pier 1 is deemed necessary, the replacement work will be conducted in accordance with the <i>Secretary of the Interior's Standards for the Treatment of Historic Properties</i> (NPS, 2001), specifically adhering to the Standards for Rehabilitation. Project compliance with the Secretary of the Interior's Standards and applicable guidelines will ensure that Pier 1 retains sufficient historic integrity to convey its significance for listing in the NRHP and CRHR, therefore avoiding and minimizing the adverse effect or significant impact potentially caused by this undertaking.</p> <p>When replacing the pile fendering on the southern side of the building, in-kind replacement materials will be used to the greatest extent feasible. The replacement timber pilings will have a diameter similar to that of the original pilings. The number of replacement pilings will match the number of pilings being removed (33), and the new pilings will be spaced similarly to the originals. The selection of replacement pilings should include input and review from an architectural historian who meets the Secretary of the Interior's Professional Qualification Standards (as defined in 36 CFR, Part 61). The project's compliance with the Standards for Rehabilitation will result in Pier 1 retaining integrity of design, workmanship, materials, feeling, association, and location. Although overall, the project will result in some diminished integrity of material, the elements that comprise the building's significant form, plan, and design, illustrating its important historic function and aesthetic value, will be retained; and the impact would be avoided and minimized.</p>	During development of the project design	WETA	Port	Documented as part of project design (Port)
MM CUL-4		<p><b>Mitigation Measure CUL-4: Plan for Protection Against, and Response to, Inadvertent Damage</b></p> <p><b>Protection and Monitoring to Avoid Effects.</b> To avoid and minimize adverse effects that would inadvertently cause damage to historic properties during project construction activities, the project construction zone will be clearly delineated using orange construction fencing or other similar suitable materials, and designated as a restricted area. Mitigation Measure NOISE-3 would also help reduce this impact.</p> <p><b>Response to and Repair of Inadvertent Damage.</b> Should project actions cause inadvertent damage to historic properties, project work will cease, and the response plan prepared prior to construction for repair of damage will be implemented. The plan and response will include input and review from an architectural historian who meets the Secretary of the Interior's Professional Qualification Standards (as defined in 36 CFR, Part 61). Inadvertent damage to the historic properties resulting from the project will be repaired in accordance with the Secretary of the Interior's <i>Standards for Rehabilitation</i>. The response plan will include photographic documentation of the condition of the portions of historic properties prior to project implementation, to establish the baseline condition for assessing damage. Prior to implementation, WETA will provide the plans for any repairs to SHPO for review and comment, to ensure conformance with the Secretary of the Interior's <i>Standards for Rehabilitation</i>.</p>	During construction	Construction Contractor, WETA, and a qualified-architectural historian, if necessary	Port and SHPO	Should inadvertent damage to historic properties occur, the response plan would be provided to the SHPO and Port

**Table 1  
Mitigation Monitoring and Reporting Program Matrix (Continued)**

Reference Number	Impact	Mitigation Measure	Timeframe/ Monitoring Milestone	Primary Responsible Monitoring Party (WETA/ Construction Contractor)	Other Responsible Monitoring Party (if applicable)	Reporting Requirements (if applicable)
MM CUL-5	<p><b>Impact 3.8-4: Adverse Effects to Unidentified Significant Paleontological Resources</b></p> <p>There are no known paleontological resources in the project area. However, the area is considered sensitive for paleontological resources. Implementation of Mitigation Measure CUL-5, would reduce potential impacts to unknown significant paleontological resources.</p>	<p><b>Mitigation Measure CUL-5: Stop Construction if Buried Paleontological Resources Are Discovered</b></p> <p>In the event that paleontological resources are discovered during construction, sediment-disturbing activities within 50 feet of the find will be temporarily halted or diverted until the discovery is examined by a qualified paleontologist (in accordance with Society of Vertebrate Paleontology [SVP] standards). The paleontologist will document the discovery as needed, evaluate the potential resource, and assess the significance of the find under the criteria set forth in CEQA Guidelines Section 15064.5. The paleontologist will notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find. If the project proponent determines that avoidance is not feasible, the paleontologist will prepare a salvage plan in accordance with the SVP and CEQA Guidelines for mitigating the effect of the project on the qualities that make the resource important. The plan will be submitted to WETA for review and approval prior to implementation.</p>	During construction	Construction Contractor and qualified paleontologist, if required	Port	If resource is discovered, documentation and reporting of the discovery
MM CUL-6	<p><b>Impact 3.8-5: Potential Indirect Effects of Visual or Noise and Vibration Elements on Historic Properties or Resources</b></p> <p>There is potential for the design of the project’s weather protection canopies to affect the adjacent historic properties within the APE. With implementation of Mitigation Measure CUL-6, indirect adverse visual effects from the Final Design of the weather protection canopy element of the proposed project would be avoided. Additionally, there is the potential that vibration from construction could indirectly affect the historic properties or resources in APE. These potential effects would be avoided by implementing Mitigation Measure NOISE-3.</p>	<p><b>Mitigation Measure CUL-6: Consultation with Local Agencies Regarding Final Design of Weather Protection Canopies and Secretary of the Interior’s Standards for Rehabilitation</b></p> <p>The final design of the weather protection canopies will be developed in consultation with the Port’s Waterfront Design Advisory Committee and the San Francisco Historic Preservation Commission, and consistent with the <i>Secretary of the Interior’s Standards for the Treatment of Historic Properties, Standards for Rehabilitation</i> (NPS, 2001). The basic scale and massing of these project features is described in Section 6.1, but the details of their appearance has not been finalized.</p> <p>Mitigation Measure CUL-6 requires consultation regarding final design of weather protection canopies, and application of the Secretary of the Interior’s Standards to the final design. Project compliance with the Secretary of the Interior’s Standards and applicable guidelines will ensure that the weather protection canopy element of the proposed project would not adversely affect any of the historic properties in the Architectural APE or Focused Architectural APE. The standards for rehabilitation recommend “designing new exterior additions to historic buildings or adjacent new construction which is compatible with the historic character of the site and which preserves the historic relationship between the building or buildings and the landscape” (NPS 2001, 105). The guidelines also state that new additions, exterior alterations, or related new construction should not destroy historic materials, features, and spatial relationships that characterize the historic property. The new work should be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment. New additions and adjacent or related new construction should be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and</p>	During development of the project design	WETA	Port and San Francisco Historic Preservation Commission	Documented as part of project design (Port)

**Table 1  
Mitigation Monitoring and Reporting Program Matrix (Continued)**

Reference Number	Impact	Mitigation Measure	Timeframe/ Monitoring Milestone	Primary Responsible Monitoring Party (WETA/ Construction Contractor)	Other Responsible Monitoring Party (if applicable)	Reporting Requirements (if applicable)
		<p>its environment would be unimpaired. These guidelines, and others for historic setting, is and will continue to be incorporated in the design of the project features at the historic Ferry Building and the surrounding historic properties. The consultation and application of the Secretary of the Interior’s Standards would ensure that historic integrity is retained, and that the properties would remain eligible for listing in the NRHP and CRHR, therefore avoiding potential adverse effects.</p> <p>The final design for the project will include consultation and review by the Port’s Waterfront Design Advisory Committee and the San Francisco Historic Preservation Commission. Through the design review process, the Waterfront Design Advisory Committee is responsible for ensuring that project improvements comply with the Secretary of the Interior’s Standards for Historic Rehabilitation, and that projects would not adversely affect historic properties or districts along the waterfront. Given the resources in the project area, the San Francisco Historic Preservation Commission will be involved in the design review process. The public is also invited to participate in the design review process. WETA will submit the preliminary final design for the weather protection canopies to the Port’s Waterfront Design Advisory Committee and the San Francisco Historic Preservation Commission for review and comment; input received during this review will be incorporated in the final design plans. This process will ensure that the final design would also avoid adverse effects to historic properties or resources in either the Architectural APE or Focused Architectural APE.</p>				
		<p><b>Mitigation Measure NOISE-3: Pile-Driving Technique Selection, and Monitoring; and Corrective Measures to Minimize Noise and Vibration at Nearby Buildings</b></p>	See Impact 3.7-3	See Impact 3.7-3	See Impact 3.7-3	See Impact 3.7-3

**Table 1  
Mitigation Monitoring and Reporting Program Matrix (Continued)**

Reference Number	Impact	Mitigation Measure	Timeframe/ Monitoring Milestone	Primary Responsible Monitoring Party (WETA/ Construction Contractor)	Other Responsible Monitoring Party (if applicable)	Reporting Requirements (if applicable)
<b>Biological Resources</b>						
MM BIO-1	<p><b>Impact 3.9-1: Potential Adverse Effects of Maintenance Dredging on Special-Status or Commercially Valuable Marine Species</b></p> <p>The project's maintenance dredging activities have the potential to impact special-status and commercially valuable marine species, including their habitats. Mitigation Measure BIO-1 includes measures to reduce the impacts on special-status and commercially valuable marine species from maintenance dredging.</p>	<p><b>Mitigation Measure BIO-1: Dredging and Pile-Driving Measures</b></p> <p>The following measures will be implemented to reduce the impacts of dredging and pile driving on special-status fish and other aquatic species:</p> <ul style="list-style-type: none"> <li>▪ During impact pile driving of steel piles, the applicant will use a bubble curtain or other attenuation device to attenuate underwater sound levels;</li> <li>▪ Impact hammers will be cushioned using a 12-inch-thick wood cushion block;</li> <li>▪ Only a single impact hammer will be operated at a time; and</li> <li>▪ If a mechanical dredge is used, the applicant will use the smallest possible dredge head to reduce the likelihood of fish becoming entrained in the mechanical dredge.</li> </ul> <p>WETA plans to conduct all piling installation and dredging between approved work windows, between June 1 and November 30, when the likelihood of sensitive fish species being present in the work area is minimal (LTMS, 1998).</p> <p>The project sponsors will undertake formal FESA and CESA consultation with NOAA, NMFS, and CDFW to identify avoidance and minimization methods that will be implemented to reduce effects on sensitive marine resources. Methods may include monitoring by a qualified biologist, and halting of dredging or pile-driving activities for a specific period if spawning activity is noted within the construction area. In addition to the avoidance and minimization measures identified here, the project sponsors will comply with additional measures and requirements identified through consultation with NOAA, NMFS and CDFW.</p>	<p>Consultation prior to construction</p> <p>Implementation of measures during construction</p>	<p>Construction Contractor</p>	<p>NMFS and CDFW</p>	<p>Reporting as required by the Biological Opinion and Incidental Take Statement issued by NMFS, and Incidental Take Authorization issued by CDFW</p>
	<p><b>Impact 3.9-4: Potential Adverse Effect on Special-Status or Commercially Valuable Marine Species from Dredging Activities during Construction</b></p> <p>The project's construction dredging activities have the potential to impact special-status and commercially valuable marine species, including their habitats. With implementation of Mitigation Measure BIO-1, the impacts of construction dredging on special-status and commercially valuable marine species would be reduced and would not be adverse.</p>	<p><b>Mitigation Measure BIO-1: Dredging and Pile-Driving Measures</b></p>	<p>See Impact 3.9-1</p>	<p>See Impact 3.9-1</p>	<p>See Impact 3.9-1</p>	<p>See Impact 3.9-1</p>

**Table 1  
Mitigation Monitoring and Reporting Program Matrix (Continued)**

Reference Number	Impact	Mitigation Measure	Timeframe/ Monitoring Milestone	Primary Responsible Monitoring Party (WETA/ Construction Contractor)	Other Responsible Monitoring Party (if applicable)	Reporting Requirements (if applicable)
MM BIO-2	<p><b>Impact 3.9-5: Potential Adverse Effects to Special-Status Fish and Marine Mammals From Underwater Sound Generated During Pile Driving</b></p> <p>Underwater sound and acoustic pressure resulting from pile driving could affect aquatic resources (e.g., fish and marine mammals) by causing behavioral avoidance of the construction area and/or injury to sensitive species. To minimize the effect of project construction noise on fish and marine mammals (i.e., avoidance behavior, fleeing responses, temporary hearing impairment, or the temporary cessation of feeding), Mitigation Measures BIO-1 and BIO-2 will be implemented.</p>	<p><b>Mitigation Measure BIO-1: Dredging and Pile-Driving Measures</b></p>	See Impact 3.9-1	See Impact 3.9-1	See Impact 3.9-1	See Impact 3.9-1
		<p><b>Mitigation Measure BIO-2: Hydroacoustic and Biological Monitoring and Avoidance Measures</b></p> <p>WETA will minimize sound level exposure from the project to marine mammals and fish. The performance standards for these minimization efforts are described later in this measure. To provide the final implementation level details, WETA will develop a Hydroacoustic and Biological Monitoring Plan in consultation with NMFS and CDFW, prior to the start of construction. This plan will provide details on the methods used to monitor and verify sound levels during pile-driving activities. The plan will include specific measures to minimize exposure of marine mammals and fish to high sound levels. At a minimum, avoidance and minimization measures will meet the following performance standards and include the following methods:</p> <ul style="list-style-type: none"> <li>▪ Underwater noise levels will be measured during pile-driving activities to determine the distance at which sound levels do not exceed injury thresholds for fish (206 dB) or marine mammals (Level A thresholds [180 dB RMS or 190 dB RMS]).</li> <li>▪ A “soft start” technique shall be employed in all pile driving to give marine mammals an opportunity to vacate the area.</li> <li>▪ If an activity produces underwater sound levels that exceed the injury threshold for fish or marine mammals, work will be stopped and sound levels will be reduced through noise control measures such as the installation of NMFS-approved attenuation devices (e.g., bubble curtains) or modification of construction methods (such as using cushioning between the hammer and pile).</li> <li>▪ An NMFS-approved biological monitor will monitor the installation of at least 10 percent of the 24- to 42-inch-diameter steel piles that will be installed by impact hammer. During initial impact pile-driving efforts, a default exclusion zone at a distance of 500 feet from the pile will be monitored for the presence of marine mammals. The area will be monitored for 30 minutes prior to impact driving. No driving will be conducted until the area has been free of marine mammal sightings for 30 minutes. If no marine mammals are sighted, driving will begin and hydroacoustic monitoring will be conducted.</li> </ul>	Prior to construction, develop Hydroacoustic and Biological Monitoring Plan During construction, implement monitoring and measures outlined in Plan	WETA Construction Contractor; noise monitor and NMFS-qualified biologist, as required	NMFS and CDFW	Reporting as required by the Biological Opinion and Incidental Take Statement issued by the NMFS, and Incidental Take Authorization issued by CDFW
<b>Aesthetics and Visual Resources</b>						
No mitigation necessary.						
<b>Hydrology and Water Quality</b>						
No mitigation necessary.						

**Table 1  
Mitigation Monitoring and Reporting Program Matrix (Continued)**

Reference Number	Impact	Mitigation Measure	Timeframe/ Monitoring Milestone	Primary Responsible Monitoring Party (WETA/ Construction Contractor)	Other Responsible Monitoring Party (if applicable)	Reporting Requirements (if applicable)
<b>Hazards and Hazardous Materials</b>						
MM HAZ-1	<p><b>Impact 3.12-5: Upset and Accidents Involving Hazardous Materials Use and Storage During Construction Activities</b></p> <p>Hazardous materials (e.g., diesel fuel, hydraulic oil, lubricants, paints, or other hazardous materials) would be transported and used on site for proposed construction activities. In addition, construction vehicles and equipment would be used on site that could accidentally release hazardous materials, such as oils, grease, or fuels. Demolition activities would require the removal and potential temporary storage of piles that have been treated with creosote, or that contain other potentially hazardous substances. Accidental releases of hazardous materials could result in adverse health effects to construction workers, the public, and the environment. Implementation of Mitigation Measure HAZ-1, Prepare a Hazardous Materials Management Plan, would reduce this impact.</p>	<p><b>Mitigation Measure HAZ-1: Prepare a Hazardous Materials Management Plan</b></p> <p>WETA will prepare an HMMP for review and approval by the Port prior to moving equipment to the project site for construction and demolition activities. The requirements of the HMMP for the project will govern the onsite management of hazardous materials, including spill prevention; and the offsite disposal of hazardous wastes. The HMMP, at a minimum, will include the following requirements:</p> <ul style="list-style-type: none"> <li>▪ <b>Hazardous Materials Storage and Disposal.</b> The construction contractor will be responsible for the proper storage and disposal of any hazardous materials or wastes in accordance with all federal, state, and local laws and regulations. This may involve obtaining permits from the local regulatory agency for the storage of hazardous materials, and obtaining a Waste Generators Identification Number from the state for disposal of any hazardous wastes generated at the site. The HMMP shall include requirements for appropriate material storage; spill control, containment, and cleanup; vehicle and construction equipment inspections; emergency preparedness; and worker training.</li> <li>▪ <b>Lead and Asbestos Management.</b> Prior to any demolition activities, a lead-based paint and asbestos survey of the structures shall be conducted. Based on the results of the survey, it will be determined if any lead-based paint or asbestos is present that requires abatement prior to demolition of the structures. Results of this survey shall be included in the HMMP. Any abatement required shall be completed in accordance with all federal, state, and local regulatory requirements by properly licensed abatement contractors, before demolition of the structures.</li> <li>▪ <b>Wood Waste Management.</b> Procedures for implementation of DTSC’s Alternative Management Standards for Treated Wood Waste will be included in the HMMP, including employee training in waste management, segregation of the wood waste from other wastes, appropriate storage and labeling, and transportation to an authorized treated wood waste facility.</li> <li>▪ <b>Universal Waste Management.</b> A survey of common items that are regulated as “universal wastes” by the State of California (e.g., fluorescent lighting tubes and ballasts, and mercury thermometers) shall also be conducted. Provisions for abatement and removal of these materials prior to demolition in accordance with Cal/OSHA regulations shall be addressed in the HMMP.</li> <li>▪ <b>Reporting.</b> The findings of the hazardous materials abatement activities shall be documented by a qualified environmental professional, and submitted to the Port and the SFDPH prior to the issuance of construction and demolition permits.</li> </ul>	<p>Develop plan prior to construction</p> <p>Implement measures during construction</p>	<p>Construction Contractor</p>	<p>Port and SFDPH</p>	<p>The findings of the hazardous materials abatement activities shall be documented by a qualified environmental professional, and submitted to the Port and the SFDPH prior to the issuance of construction and demolition permits</p>

**Table 1  
Mitigation Monitoring and Reporting Program Matrix (Continued)**

Reference Number	Impact	Mitigation Measure	Timeframe/ Monitoring Milestone	Primary Responsible Monitoring Party (WETA/ Construction Contractor)	Other Responsible Monitoring Party (if applicable)	Reporting Requirements (if applicable)
	<p><b>Impact 3.12-6: Demolition, Transport, and Disposal of Structures and Dredge Material Containing Hazardous Materials</b></p> <p>Demolition activities would require the removal and potential temporary storage of piles that have been treated with creosote, or that contain other potentially hazardous substances, and dredging of potentially contaminated sediment. Implementation of Mitigation Measure HAZ-1, Prepare a Hazardous Material Management Plan, would reduce this impact.</p>	<p><b>Mitigation Measure HAZ-1: Prepare a Hazardous Materials Management Plan</b></p>	See Impact 3.12-5	See Impact 3.12-5	See Impact 3.12-5	See Impact 3.12-5
<b>Geology, Soils, and Seismicity</b>						
No mitigation necessary.						
<b>Energy Consumption</b>						
No mitigation necessary.						
<b>Utilities and Public Services</b>						
MM UTIL-1	<p><b>Impact 3.15-6: Potential to Adversely Impact Existing Underground Utilities During Construction Activities</b></p> <p>Project construction could disrupt or damage underground utilities in the project area, a potentially significant impact. Implementation of Mitigation Measure UTIL-1 would reduce this potential impact.</p>	<p><b>Mitigation Measure UTIL-1: Consultation and Coordination with Utility Providers</b></p> <p>Prior to the start of construction activities, WETA will consult with public utility providers who have infrastructure in the immediate vicinity of the proposed project improvements, to determine the exact location and depth of utility lines.</p>	Prior to construction	Construction Contractor		
<b>Socioeconomics</b>						
No mitigation necessary.						
<b>Environmental Justice</b>						
No mitigation necessary.						

**Mitigation Monitoring and Reporting Program**

**Table 1  
Mitigation Monitoring and Reporting Program Matrix (Continued)**

Reference Number	Impact	Mitigation Measure	Timeframe/ Monitoring Milestone	Primary Responsible Monitoring Party (WETA/ Construction Contractor)	Other Responsible Monitoring Party (if applicable)	Reporting Requirements (if applicable)
<b>Regional Growth</b>						
No mitigation necessary.						

Notes:

AB = Assembly Bill  
 AEP = Archaeological Evaluation Plan  
 APE = area of potential effect  
 BAAQMD = Bay Area Air Quality Management District  
 BART = Bay Area Rapid Transit  
 BCDC = Bay Conservation and Development Commission  
 Cal/OSHA = California Department of Industrial Relations, Division of Occupational Safety and Health  
 CARB = California Air Resources Board  
 CDFW = California Department of Fish and Wildlife  
 CEQA = California Environmental Quality Act  
 CESA = California Endangered Species Act  
 CFR = Code of Federal Regulations  
 CRHR = California Register of Historic Resources  
 dB = decibel  
 dBA = A-weighted decibel  
 DTSC = Department of Toxic Substances Control  
 EIR = Environmental Impact Report  
 EIS = Environmental Impact Statement  
 FESA = Federal Endangered Species Act  
 HMMP = Hazardous Materials Management Plan  
 LOS = level of service  
 MLD = most likely descendant

NAHC = Native American Heritage Commission  
 NMFS = National Marine Fisheries Service  
 NOAA = National Oceanic and Atmospheric Administration  
 NO<sub>x</sub> = oxides of nitrogen  
 NRHP = National Register of Historic Places  
 PM = particulate matter  
 PM<sub>10</sub> = particulate matter less than 10 µm in diameter  
 PM<sub>2.5</sub> = particulate matter less than 2.5 µm in diameter  
 Port = Port of San Francisco  
 PPV = peak particle velocity  
 PRC = Public Resources Code  
 RMS = root-mean-square  
 ROG = reactive organic gas  
 SFFD = San Francisco Fire Department  
 SFDPH = San Francisco Department of Public Health  
 SFDPW = San Francisco Department of Public Works  
 SFMTA = San Francisco Municipal Transportation Agency  
 SHPO = State Historic Preservation Office  
 SVP = Society of Vertebrate Paleontology  
 VdB = velocity in decibels  
 WETA = Water Emergency Transportation Authority

**Table 2  
Project Requirements**

Reference Number	Requirement	Reference	Timeframe/ Monitoring Milestone	Primary Responsible Monitoring Party	Reporting Requirements (if applicable)
PR-1	Provide additional bike rack space in proximity of each of the new gates.	Section 2.3.3 of the EIS/EIR.	During development of the project design.	WETA	
PR-2	Maintain existing vehicular access to the Ferry Plaza south of the Ferry Building; incorporate placement and design of seatwalls, benches, or bollards to ensure that increased pedestrian activity in the project area does not inhibit BART’s ability to access its facilities.	Section 2.3.4 of the EIS/EIR and Response to Comments Appendix.	During development of the project design.	WETA	
PR-3	Develop passenger wayfinding and information signage, including directions for cyclists to walk bicycles when on the water side of The Embarcadero.	Section 2.3.4 of the EIS/EIR.	During development of the project design.	WETA	
PR-4	Develop stormwater management plan in compliance with the City and County of San Francisco’s and the Port’s stormwater management guidelines.	Section 2.3.5 of the EIS/EIR.	During development of the project design.	WETA	Reporting as required by the Port of San Francisco and San Francisco Bay Regional Water Quality Control Board.
PR-5	Incorporate sustainable construction materials and methods as required by the San Francisco Green Building Ordinance, Chapter 13 of the San Francisco Building Code.	Section 2.3.5 of the EIS/EIR.	During development of the project design.	WETA	
PR-6	Procure new or repowered/refurbished vessels that are Tier 2-compliant, with add-on control devices—such as selective catalytic reduction and particulate traps—that reduce NO <sub>x</sub> and PM <sub>10</sub> emissions to 10 percent and 5 percent, respectively, of U.S. EPA Tier 2 levels; or vessels that meet the current marine engine emissions standards at the time of purchase if more stringent than described above.	Section 2.3.6 of the EIS/EIR and Response to Comments Appendix.	At the time of vessel procurement.	WETA	
PR-7	Provide U.S. Coast Guard with information pertaining to project construction and operations that could impact navigation. Apply for Anchor Waiver pursuant to 33 CFR 110.224.	Section 2.3.6 and Section 2.6 of the EIS/EIR.	Prior to construction and during operations,	Construction Contractor	
PR-8	Coordinate dredging and disposal of dredged materials with the San Francisco DMMO.	Section 2.3.6 and Section 2.4.3 of the EIS/EIR.	Prior to construction.	WETA	DMMO application and other reporting as required by dredging permits issued.
PR-9	Minimizing artificial lighting of San Francisco Bay waters by using shielded, low-mounted, and low-light-intensity fixtures and bulbs.	Section 2.3.6 of the EIS/EIR.	During development of the project design.	WETA	

**Table 2  
Project Requirements (Continued)**

Reference Number	Requirement	Reference	Timeframe/ Monitoring Milestone	Primary Responsible Monitoring Party	Reporting Requirements (if applicable)
PR-10	Develop a Site Maintenance Plan. The Plan would designate responsibility and schedule for regular maintenance and cleaning of new facilities, as well as for general site maintenance activities (e.g., wash down, litter removal, and trash receptacle management).	Section 2.3.6 of the EIS/EIR.	Before construction is completed.	WETA and the Port of San Francisco	
PR-11	General best management practices for pollution prevention and construction management would be employed during construction. For example, best management practices would include activities such as maintaining a clean and orderly construction site, and erecting wayfinding signage to assist water transit passengers and other users of the project area in navigating the project area.	Section 2.4 of the EIS/EIR.	During construction.	Construction Contractor	
PR-12	Use onsite power, provided by the Port, to power construction equipment where feasible.	Section 2.4.4 of the EIS/EIR.	During construction.	Construction Contractor	
PR-13	Locate all construction equipment and staging within areas shown on Figure 2-9 of the EIS/EIR.	Section 2.4.5 of the EIS/EIR.	During construction.	Construction Contractor	
PR-14	Conduct construction between 7:00 AM and 8:00 PM. No nighttime construction.	Section 2.4.6 of the EIS/EIR.	During construction.	Construction Contractor	

Notes:

- BART = Bay Area Rapid Transit
- CFR = Code of Federal Regulations
- DMMO = Dredged Material Management Office
- EIR = Environmental Impact Report
- EIS = Environmental Impact Statement
- NO<sub>x</sub> = oxides of nitrogen
- PM<sub>10</sub> = particulate matter less than 10 µm in diameter
- Port = Port of San Francisco
- U.S. EPA = U.S. Environmental Protection Agency
- WETA = Water Emergency Transportation Authority

## **REFERENCES**

LTMS (LTMS Agencies), 1998. Long-Term Management Strategy (LTMS) for the Placement of Dredged Material in the San Francisco Bay Region, Final Policy Environmental Impact Statement/Programmatic Environmental Impact Report. Volume I.

NPS (National Park Service), 2001. *The Secretary of Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings*. U.S. Department of the Interior. Available online at: <http://www.nps.gov/hps/tps/standguide/> Accessed on August 30, 2012.