Final Environmental Impact Report

CANDLESTICK POINT–HUNTERS POINT SHIPYARD PHASE II DEVELOPMENT PLAN PROJECT

Volume I: Final EIR Executive Summary

SAN FRANCISCO REDEVELOPMENT AGENCY
File No. ER06.05.07

CITY AND COUNTY OF SAN FRANCISCO PLANNING DEPARTMENT
File No. 2007.0946E

State Clearinghouse No. 2007082168

San Francisco Redevelopment Agency
One South Van Ness Avenue, Fifth Floor, San Francisco, California 94103, and

City and County of San Francisco Planning Department
1650 Mission Street, Suite 400, San Francisco, California 94103

Draft EIR Publication Date: November 12, 2009
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August 2017

A dot (●) indicates material that has been revised since publication of the Draft EIR. Long changes are indicated with opening dots (❶) and closing dots (❶).

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Executive Summary

PURPOSE OF THE SUMMARY

This summary is intended to highlight the major areas of importance in the environmental analysis for the Project as required by Section 15123 of the *California Environmental Quality Act* (CEQA) Guidelines. The summary includes a brief description of the Project, the Project objectives, approval requirements, areas of controversy/issues to be resolved, and a summary of alternatives to the Project. In addition, this chapter provides a table summarizing (1) potential environmental impacts that would occur as a result of the Project; (2) the level of significance of the environmental impacts prior to implementation of any applicable mitigation measures; (3) the recommended mitigation measures that avoid or reduce significant environmental impacts; and (4) the level of significance after mitigation measures are implemented (refer to Table ES-2 [Summary of Environmental Effects and Project Requirements/Mitigation Measures] at the end of this chapter).

PROJECT DESCRIPTION

The Project is located on approximately 702-acres east of United States Route 101 (US-101) in the southeast area of the City and County of San Francisco (City). It occupies the waterfront area from south of India Basin to Candlestick Cove. Figure II-1 (Project Location) illustrates the regional location of the Project and the location of the Project within the City.

The Project proposed by Lennar Urban includes a mixed-use community with a wide range of residential, retail, office, research and development, civic and community uses, and parks and recreational open space. A major component would be a new stadium for the San Francisco 49ers National Football League (NFL) team. Additionally, new transportation and utility infrastructure would serve the Project including a bridge across Yosemite Slough.

Specifically, the Project proposes development of 10,500 residential units with an associated population of 24,465 residents; 885,000 gross square feet (gsf) of retail; 150,000 gsf of office; 2.5 million gsf of Research & Development (R&D) uses; a 220-room, 150,000 gsf hotel; 255,000 gsf of artist live/work space; 100,000 gsf of community services; 251.3 acres of new parks, sports fields, and waterfront recreation areas, as well as 84 acres of new and improved State parkland; a 69,000-seat 49ers stadium; and a 75,000 gsf performance arena. The permanent employee population associated with the Project would be 10,730.

In addition, a 300-slip marina would be provided. Shoreline improvements would also be provided to stabilize the shoreline. The Project would include structured and on-street parking and various infrastructure improvements to support the development.

The Project includes amendments of the Bayview Hunters Point and Hunters Point Shipyard Redevelopment Plans, and amendments of the San Francisco General Plan and *Planning Code*, consistent with the development project.

PROJECT OBJECTIVES

Project objectives are identified to both describe the underlying purpose of the Project and to guide the selection of potential Project alternatives. CEQA Guidelines Section 15126.6(a) requires that an EIR "describe a reasonable range of alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives but would avoid or substantially lessen any of the significant effects of the project." Typically, project objectives represent a combination of both the Lead Agency and the developer's intent and purpose in moving forward with the project.

In May 2007, the Board of Supervisors and the Mayor approved a resolution endorsing a Conceptual Framework for the integrated planning of both Hunters Point Shipyard and Candlestick Point. The Conceptual Framework was the result of a long planning process undertaken by the City and County of San Francisco, acting by and through the Mayor's Office of Economic and Workforce Development, the Redevelopment Agency of the City and County of San Francisco, and Lennar Urban.

The City's overarching goal for the Project is to revitalize the Bayview Hunters Point community by providing increased business and employment opportunities; housing options at a range of affordability levels; improved public recreation and open space amenities; an integrated transportation, transit, and infrastructure plan; and other economic and public benefits, all of which would collectively have no net negative impact on the City's General Fund.

Subsequently, and in response to the Conceptual Framework, the San Francisco voters approved Proposition G in June 2008, which is called the Bayview Jobs, Parks, and Housing Initiative ("the Initiative"). Proposition G repealed Proposition F, which had established a special use district for the Project site; instead, Proposition G proposed that new zoning be established along with a land use program (Proposition G is included as Appendix B to this EIR). The Initiative states that the Project must be consistent with the following objectives, which are also identified in this EIR as the Project's objectives:

1. The integrated development should produce tangible community benefits for the Bayview and the City, and in so doing should:
   - Improve the Candlestick Point State Recreation Area to enhance public access to the waterfront and enjoyment of the Bay
   - Create new public recreational and public open spaces in the Candlestick Point-Hunters Point Shipyard Development Plan (CP-HPS Development Plan)
   - Preserve the shoreline of the CP-HPS Development Plan site primarily for public park and public open space uses, including an extension of the Bay Trail along the waterfront
   - Create a range of job and economic development opportunities for local, economically disadvantaged individuals and business enterprises, particularly for residents and businesses located in the Bayview
   - Provide neighborhood-serving retail
   - Subsidize the creation of permanent space in the Shipyard for the existing artists
   - Transform the contaminated portions of the Shipyard Property into economically productive uses or public open space, as appropriate

- Implement the CP-HPS Development Plan with public benefits, whether or not the 49ers decide to remain in San Francisco, including developing alternate uses for the stadium site on the Shipyard Property that are consistent with the overall CP-HPS Development Plan objectives

2. The integrated development should re-connect Candlestick Point and the Hunters Point Shipyard site with the larger BVHP neighborhood and should maintain the character of the Bayview for its existing residents, and in so doing should:
   - Foster the creation of strong commercial, institutional, cultural and urban design ties between the development on Candlestick Point and the Hunters Point Shipyard and the Bayview in particular and the City in general
   - Provide automobile, public transportation, and pedestrian connections between the Shipyard, Candlestick Point, and the larger BVHP neighborhood
   - Create substantial affordable housing, jobs, and commercial opportunities for existing Bayview residents and businesses
3. The integrated development should include substantial new housing in a mix of rental and for-sale units, both affordable and market-rate, and encourages the rebuilding of Alice Griffith Housing, and in so doing should:
   - Provide new affordable housing that is targeted to the lower income levels of the Bayview population, including new units that are suitable for families, seniors, and young adults
   - Include housing at levels dense enough to create a distinctive urban form and at levels sufficient to make the CP-HPS Development Plan financially viable; attract and sustain neighborhood retail services and cultural amenities; create an appealing walkable urban environment served by transit; help pay for transportation and other infrastructure improvements; and achieve economic and public benefits for the Bayview in particular and the City generally
   - Upon consultation with Alice Griffith Housing residents and the receipt of all required governmental approvals, rebuild Alice Griffith Housing to provide one-for-one replacement units targeted to the same income levels as those of the existing residents and ensure that eligible Alice Griffith Housing residents have the opportunity to move to the new, upgraded units directly from their existing Alice Griffith Housing units without having to relocate to any other area
   - Include a mix of stacked flats, attached townhomes and—in appropriately selected locations—low-rise, mid-rise, and high-rise towers, to help assure the economic feasibility of the development and provide a varied urban form
4. The integrated development should incorporate environmental sustainability concepts and practices, and in so doing should:
   - Apply sustainability principles in the design and development of public open spaces, recreation facilities, and infrastructure including wastewater, storm water, utility, and transportation systems
   - Incorporate green building construction practices
   - Include energy efficiency and the use of renewable energy
   - Encourage green development projects, such as green office, research and development, or industrial projects, including a green technology, biotechnology, or digital media campus
5. The integrated development should encourage the 49ers—an important source of civic pride—to remain in San Francisco by providing a world-class site for a new waterfront stadium and necessary infrastructure, and in so doing should:
   - Provide the parking necessary to operate the stadium

- Provide the necessary transportation infrastructure, including automobile, public transit and pedestrian connections between Candlestick Point, Hunters Point Shipyard, and the larger BVHP neighborhood, to facilitate the efficient handling of game day traffic

6. The integrated development should be fiscally prudent, with or without a new stadium, and in so doing should:
   - Minimize any adverse impact on the General Fund relating to the development of the Project Site by relying to the extent feasible on the development to be self-sufficient
   - Encourage substantial private capital investment

APPROVAL REQUIREMENTS

Consistent with the intended uses of the EIR, implementation of the Project would require multiple approvals from City, regional, state, and federal agencies. Table ES-1 (Major Project Approvals) presents the major approval requirements.

Table ES-1 Major Project Approvals

CITY AND COUNTY SAN FRANCISCO APPROVAL PROCESS AND PERMITS

Redevelopment Agency Commission

- Certifies the Final EIR
- Adopts CEQA findings, a statement of overriding considerations, and a mitigation monitoring and reporting program
- Reports to the Board of Supervisors on the amendments to Redevelopment Plans
- Approves amendments to the *Hunters Point Shipyard Redevelopment Plan* and approves amendments to the Hunters Point Shipyard Design for Development
- Approves amendments to the *Bayview Hunters Point Redevelopment Plan* and approves a Design for Development for Candlestick Point
- Approves land transfer agreements with the Navy, City, and State agencies
- Approves land transfer agreements with Port Commission, State Lands Commission, and California Department of Parks and Recreation (CDPR)
- Approves Disposition and Development Agreements and Owner Participation Agreements

Port Commission

- Approves land transfer agreements with Agency, State Lands Commission, and CDPR

Planning Commission

- Certifies the Final EIR
- Adopts CEQA findings, a statement of overriding considerations, and mitigation monitoring and reporting program
- Approves shadow determinations/impacts
- Adopts amendments to the General Plan to accommodate the Project and to find the amendments for the *Hunters Point Shipyard Redevelopment Plan* and *Bayview Hunters Point Redevelopment Plan* in conformity with the General Plan
- Adopts resolution recommending to the Board of Supervisors approval of amendments to the Planning Code/Zoning Maps for the Project
- Authorizes cooperative agreement with Redevelopment Agency

Table ES-1 Major Project Approvals

Board of Supervisors

- Affirms certification of Final EIR
- Adopts CEQA findings, a statement of overriding considerations, and a mitigation monitoring and reporting program
- Approves General Plan amendments
- Approves amendments to the *Hunters Point Shipyard Redevelopment Plan* and the *Bayview Hunters Point Redevelopment Plan*
- Approves amendments to the Planning Code/Zoning Maps
- Approves other necessary code amendments
- Approves a Joint Facilities Agreement and Tax Allocation Agreements with the Redevelopment Agency
- Approves land transfer agreements

San Francisco Public Utilities Commission

- Approves Project infrastructure for water, sewer, stormwater, electricity

Department of Building Inspection

- Approves Project construction-related permits.

Department of Public Works

- Approves subdivision maps, public improvements, and infrastructure

Department of Public Health

- Recommends ordinance to Board related to oversight of environmental controls; oversees compliance with environmental controls

Municipal Transportation Authority

- Approves transit improvements

Department of Recreation and Parks

- Approves land transfers
- Recommends to Planning Commission shadow determinations/impacts

Art Commission

- Approves public art and the design of public structures on City property

San Francisco Housing Authority

- Approves replacement of Alice Griffith housing

REGIONAL, STATE, AND FEDERAL APPROVALS

Bay Conservation and Development Commission

- Approves amendments of the Bay Plan and Seaport Plan
- Approves permits for activities within BCDC's jurisdiction, including the proposed Yosemite Slough bridge
- Reviews Project land use plan for federal consistency under the Coastal Zone Management Act for activities not previously authorized in Consistency Determination No. CN 1-99

State Lands Commission

- Approves public trust land exchange agreement

California Department of Parks and Recreation

- Approves agreement for the reconfiguration of Candlestick Point State Recreation Area
- Approves General Plan Amendment for the reconfiguration of Candlestick Point State Recreation Area

California Department of Transportation

- Approves any necessary encroachment permits for the Project roadway improvements

Regional Water Quality Control Board

- Approves Section 401 water quality certification

Table ES-1 Major Project Approvals

Bay Area Air Quality Management District

- Approves any necessary air quality permits for individual uses

Navy

- Authorizes the execution of necessary transactional documents with the Redevelopment Agency to transfer property at Hunters Point Shipyard for the development of the Project

US Army Corps of Engineers

- Approves permit for fill related to the Yosemite Slough bridge, shoreline improvements, and other activities
- Consults with USFWS or NMFS regarding federally listed species prior to carrying out its discretionary authority under Section 404 of the CWA, pursuant to Section 7 of federal ESA
- Consults with NMFS regarding pile-driving and harbor seal and California sea lion prior to carrying out its discretionary authority under Section 404 of the CWA, pursuant to *Marine Mammal Protection Act*
- Consults with NMFS regarding modifying designated EFH prior to carrying out its discretionary authority under Section 404 of the CWA, pursuant to the *Magnuson-Stevens Act*

Department of the Interior

- Approves conversion of portions of Candlestick Point State Recreation Area reconfiguration improved with Land and Water Conservation Fund grants

US Coast Guard

- Issues determination regarding vessel navigability for the Yosemite Slough bridge

US Department of Housing and Urban Development

- Approves land transfer agreements involving Alice Griffith public housing site and funding approvals

SOURCE: Agency, Planning Department.

This Table is not intended to provide an exhaustive or exclusive list of the numerous public agency approvals that may be necessary to carry out the Project over its 20-year build-out. Instead, the Table provides a list of the major land use entitlements and related approvals anticipated from local and State agencies that may rely on this EIR. It is also anticipated that other permit and transactional approvals will be necessary as these major entitlements are implemented and that the approving public agencies, to the extent required by law, will rely on this EIR, in accordance with the requirements of CEQA and the CEQA Guidelines, in granting such approvals. This Table also lists federal agencies that would have jurisdiction over certain aspects of the Project.

AREAS OF CONTROVERSY/ISSUES TO BE RESOLVED

This EIR has been prepared by the Redevelopment Agency and the City (Planning Department) as co-lead agencies for the Project, in conformance with the substantive and procedural requirements of CEQA and the CEQA Guidelines (as amended through 2007),[1] Agency CEQA guidelines, Chapter 31 of the *San Francisco Administrative Code*, and Planning Department CEQA guidelines. In accordance with *Public Resources Code* Section 21002.1, the purpose of this EIR is to identify the significant environmental impacts of the Project, to identify alternatives to the Project, and to indicate the manner in which those significant effects could be mitigated or avoided.

This EIR evaluates the Project's environmental effects at a project level of detail and examines all phases of the Project, including planning, construction, and operation, as well as the direct, indirect, and cumulative impacts that might result. It is anticipated that each discretionary approval related to the implementation of the Project would rely on this EIR and would not require preparation of subsequent

[1] *California Environmental Quality Act*, (*Pub. Res. Code* Sec. 21000 et seq.; CEQA) and the CEQA Guidelines (*Cal. Code Regs.* Sec. 15000 et seq.).

environmental documentation, unless otherwise required by CEQA pursuant to *Public Resources Code* Section 21166 and CEQA Guidelines Sections 15162 through 15164.

Lennar Urban filed an Environmental Evaluation application (EE application) with the Planning Department on August 27, 2007. The filing of the EE application initiated the environmental review process as outlined below. The EIR process provides an opportunity for the public to review and comment upon the Project's potential environmental effects and to further inform the environmental analysis. As a first step in complying with the procedural requirements of CEQA, the Notice of Preparation (NOP) process was used to determine whether any aspect of the Project, either individually or cumulatively, may cause a significant effect on the environment and, if so, to narrow the focus (or scope) of the environmental analysis.

The Agency and the City filed the NOP with the California Office of Planning and Research, State Clearinghouse, as an indication that an EIR would be prepared. In turn, the State Clearinghouse distributed the NOP to public agencies and interested parties for a 30-day public review period beginning August 31, 2007. In addition, the NOP was also sent to organizations, companies, and/or individuals that the Agency and the City believed might have an interest in the Project. The purpose of the public review period was to solicit comments on the scope and content of the environmental analysis contained in the Draft EIR. In addition, in order to solicit further comments on the scope and content of the environmental analysis to be included in the EIR, the Agency and the City held two public scoping meetings.

A copy of the NOP is included as Appendix A to this EIR. The NOP included the India Basin Shoreline, which would be evaluated on a programmatic basis, as part of the Project; however, since publication of the NOP, the Agency and the City decided to remove the India Basin Shoreline area from the Project and will analyze development in that area as part of a separate EIR.

This EIR addresses environmental issues that are known or were raised by agencies or interested parties during the NOP public review period for the proposed project. In response to the NOP, nine comment letters were submitted to the Agency and the City by public agencies, organizations, and individuals. The NOP comment letters are summarized below:

- **California Department of Transportation (Caltrans)** provided comments pertaining to traffic volume and congestion on the State Highway System and recommended that a traffic impact analysis be prepared.
- **California Public Utilities Commission (CPUC)** provided comments identifying CPUC as a responsible agency if new at-grade rail crossings were proposed. The letter suggested that the unused railroad tracks leading to the Shipyard be removed as mitigation for development in the area.
- **California Department of Parks and Recreation** provided comments for the analysis of the Project in relation to the Candlestick Point State Recreation Area (CPSRA) and consistency with the adopted CPSRA General Plan. The comments also addressed public access to the shoreline, hazardous materials, proposed transportation improvements, and stormwater.
- **San Francisco Bay Conservation and Development Commission (BCDC)** provided a comment regarding BCDC's jurisdiction over the Project, including the 100-foot BCDC jurisdictional band and the BCDC priority use areas identified in the Bay Plan. The Bay Plan identifies Hunters Point Shipyard (HPS) as a "Port priority" use area and Candlestick Point as "Waterfront Park" and "Beach" priority areas.

- **The Bay Trail Project** provided comments on the proposed extension of the Bay Trail. The Bay Trail Project is a nonprofit organization administered by the Association of Bay Area Governments and is responsible for implementation of the Bay Trail Plan. The comments addressed consistency of the proposed Bay Trail improvements with the Bay Trail Plan and the relationship of the trail with proposed transportation improvements.
- **City of Brisbane** provided comments regarding the characterization of the US-101/Geneva/Harney interchange and Geneva Avenue extension and analysis of the Project in relation to future transportation improvements necessary to serve the Project.
- **Literacy for Environmental Justice** provided comments regarding the cleanup of the Shipyard, and stated that such actions must be to residential standards.
- **Arc Ecology** provided comments regarding Project alternatives, social and economic impacts, and the level of environmental review that was proposed for the Project. Additional concerns focused on the content of the NOP.
- An **individual** resident in Bayview Hunters point provided comments regarding accessibility to the waterfront, aesthetics and neighborhood character of the waterfront area, and traffic.

PROJECT VARIANTS

Six variants of the Project were formulated by the Agency, the City, and Lennar Urban. These variants include the following:

- Variant 1: San Francisco 49ers move outside the project area (no football stadium constructed at HPS Phase II)—R&D Variant
- Variant 2: San Francisco 49ers move outside the project area (no football stadium constructed at HPS Phase II)—Housing Variant
- Variant 2A: San Francisco 49ers move outside the project area (no football stadium constructed at HPS Phase II)—Housing/R&D Variant
- Variant 3 (Tower Variants A, B, C, and D): Four Candlestick Point tower variants would have the same land use program and overall description as with the Project, but would have different locations and heights for residential towers at Candlestick Point
- Variant 4: A utilities variant would include an automated solid waste collection system, decentralized wastewater treatment, and district energy
- Variant 5: Shared stadium where both the San Francisco 49ers and Oakland Raiders would play at the stadium at HPS Phase II

Three variants (Variants 1, 2, and 2A) address the scenario of the San Francisco 49ers moving to the City of Santa Clara or elsewhere with no football stadium constructed at HPS Phase II. Each of those three variants includes a different land use program at the HPS Phase II site. Variant 1 (R&D Variant) would include increases in R&D space at the stadium location. Variant 2 (Housing Variant) would relocate 1,350 residential units from Candlestick Point to the stadium site. Variant 2A (Housing/R&D Variant) would relocate 1,650 housing units from Candlestick Point to the stadium site, and, in addition, includes an additional 500,000 sf of R&D compared to the Project (for a total of 3,000,000 sf of R&D); 500,000 sf of the total R&D for Variant 2A would be constructed on the stadium site along with the residential uses.

The Candlestick Point Tower Variant (Variant 3) would have the same land use program and overall description as the Project, but would have different locations, heights, and massing of residential towers at Candlestick Point (expressed as four options for this variant: Candlestick Point Tower Variant (Variant 3 [Tower Variants A, B, C, and D]).

A Utilities Variant (Variant 4) would include an automated solid waste collection system, decentralized wastewater treatment, and district energy. A 49ers/Raiders Shared Stadium Variant (Variant 5) would include the scenario of a shared stadium, where both the 49ers and Oakland Raiders would play at a new stadium at HPS Phase II.

None of the variants would alter the Project Objectives, which are provided in detail in Chapter II (Project Description) of this EIR. The variants are analyzed at a project level of detail, which is equal to the Project analysis included in Chapter III (Environmental Setting, Impacts, and Mitigation Measures), Section III.A through Section III.S of this EIR. The environmental impacts that would result from implementation of the variants are presented following the description of each variant. A comparison of the variant development programs to the Project is presented in Table ES-1a (Comparison of Variants to the Project). Table ES-1b (Impact Comparison of Project Variants) summarizes the effects of the Variants compared to the Project.

Table ES-1a Comparison of Variants to the Project

Differences	*Project*	*Variant 1: R&D Variant (No Stadium, Additional R&D)*	*Variant 2: Housing Variant (No Stadium, Housing)*	*Variant 2A: Housing/ R&D Variant (No Stadium)*	*Variant 3: Candlestick Point Tower Variants (Different Tower Heights and Locations, Larger Floor Plates)*	*Variant 4: Utilities Variant (Additional On-Site Infrastructure)*	*Variant 5: 49ers/Raiders Shared Stadium*
						Same overall development plan as Project, but with minor shifts in building locations to accommodate 570,000 gsf for the proposed utility systems (with 330,000 gsf located below ground).	Same development plan as Project
Land Use Plan							
Residential (units)—Candlestick Point	7,850	7,850	6,500	6,225[a]	7,850	7,850	7,850
Residential (units)—Hunters Point Phase II	2,650	2,650	4,000	4,275[a]	2,650	2,650	2,650
					Same number of residential units, but different placement of towers		
Office	150,000	150,000	150,000	150,000	150,000	150,000	150,000
Research & Development (gsf)	2,500,000	5,000,000	2,500,000	3,000,000	2,500,000	2,500,000	2,500,000
Regional Retail	635,000	635,000	635,000	635,000	635,000	635,000	635,000
Neighborhood Retail	250,000	250,000	250,000	250,000	250,000	250,000	250,000
			Same overall amount of neighborhood retail as Project, but different distribution within HPS Phase II (refer to text for a description)	Same overall amount of neighborhood retail as Project, but different distribution within HPS Phase II (refer to text for a description]			
Tower Floor Plates	10,000 sf	10,000 sf	10,000 sf	10,000 sf	12,500 sf	N/A	N/A
Football Stadium (seats)	69,000 Stadium built by 2017	0	0	0	69,000 Stadium built by 2017	69,000 Stadium built by 2017	69,000 Shared stadium with 49ers and Oakland Raiders Stadium site built by 2017
Yosemite Slough Bridge	Auto/BRT/Ped	BRT/Ped	BRT/Ped	BRT/Ped	Auto/BRT/Ped	Auto/BRT/Ped	Auto/BRT/Ped
Parks, Open Space, and Recreation Uses							
Total Parks, Open Space, and Recreational Uses	336.4	327.0	349.4	326.6	336.4	336.4	337.5

Table ES-1a Comparison of Variants to the Project

Differences	*Project*	*Variant 1: R&D Variant (No Stadium, Additional R&D)*	*Variant 2: Housing Variant (No Stadium, Housing)*	*Variant 2A: Housing/ R&D Variant (No Stadium)*	*Variant 3: Candlestick Point Tower Variants (Different Tower Heights and Locations, Larger Floor Plates)*	*Variant 4: Utilities Variant (Additional On-Site Infrastructure)*	*Variant 5: 49ers/Raiders Shared Stadium*
New Parks	148.1	160.5	158	159	148.1	148.1	148.6
Sports Fields and Active Recreation	91.6	69.8	96.7	70.9	91.6	91.6	91.6
State Parklands (acres)	96.7	96.7	96.7	96.7	96.7	96.7	96.7

SOURCE: Lennar Urban, 2010.

a. The bridge would be open to automobiles only on game days.

Table ES-1b Impact Comparison of Project Variants to Project

		Impacts								
					Variant 3: Candlestick Point Tower Variants					
	Topic	*Variant 1: R&D Variant (No Stadium, Additional R&D)*	*Variant 2: Housing Variant (No Stadium, Housing)*	*Variant 2A: Housing Variant with R&D (No Stadium)*	*Tower Variant A*	*Tower Variant B*	*Tower Variant C*	*Tower Variant D*	*Variant 4: Utilities Variant (Additional On-Site Infrastructure)*	*Variant 5: 49ers/Raiders Shared Stadium*
III.B	Land Use and Plans	=	=	=	=	=	=	=	=	=
III.C	Population, Housing, and Employment	=	=	=	=	=	=	=	=	=
III.D	Transportation and Circulation	>	<	>	=	=	=	=	=	=
III.E	Aesthetics	=	<	<	>	>	>	>	=	=
III.F	Shadows	<	<	<	>	=	<	<	=	=
III.G	Wind	<	<	<	=	=	=	=	=	=
III.H	Air Quality	=	=	=	=	=	=	=	=	=
III.I	Noise	>	<	=	=	=	=	=	=	=
III.J	Cultural Resources and Paleontological Resources	=	=	=	=	=	=	=	=	=
III.K	Hazards and Hazardous Materials	=	=	=	=	=	=	=	=	=
III.L	Geology and Soils	=	=	=	=	=	=	=	=	=
III.M	Hydrology and Water Quality	>	<	=	=	=	=	=	<	=
III.N	Biological Resources	=	=	=	=	=	=	=	=	=
III.O	Public Services	>	<	=	=	=	=	=	=	=
III.P	Recreation	=	=	=	=	=	=	=	=	=
III.Q	Utilities	=	=	=	=	=	=	=	<	=
III.R	Energy	=	=	=	=	=	=	=	=	=
III.S	Greenhouse Gas Emissions	>	=	=	=	=	=	=	=	=

SOURCE: PBS&J,2010.

NOTE: Each topic is compared to the Project and for each impact area, impacts are equal to (=), greater than (>), or less than (<) the Project impacts.

ALTERNATIVES

A number of alternatives were analyzed that would avoid or substantially lessen some of the significant effects of the project. These alternatives, which are fully addressed in Chapter 6 (Alternatives) of this document, include the following:

- **Alternative 1: No Project**—Consistent with Section 15126.6(e)(1) of the CEQA Guidelines, this alternative assumes that no new development would occur at Candlestick Point and HPS Phase II would be developed with new uses consistent with the existing *Hunters Point Shipyard Redevelopment Plan* (HPS Redevelopment Plan).

  This alternative was selected in accordance with CEQA Guidelines Section 15126.6(e)(3)(A), which states that when the project is the revision of an existing land use or regulatory plan, policy, or ongoing operation, the "no project" alternative would be the continuation of the existing plan, policy, or operation into the future. This discussion would allow the decision-makers to compare the impacts of approving the Project with the impacts of not approving the Project.

- **Alternative 2: CP-HPS Phase II Development Plan; No Yosemite Slough Bridge**—Alternative 2 would have the same land use program proposed with the Project, including the State Parks agreement. Alternative 2 would not include the Yosemite Slough bridge. The main roadway connection between Candlestick Point and HPS Phase II would be via Ingalls Street. A bus rapid transit route would be constructed along an abandoned railroad right-of-way to provide access between Candlestick Point and HPS Phase II. This alternative assumes that the 49ers Stadium is relocated to HPS Phase II and the Agency enters into an agreement with CPSRA to reconfigure CPSRA land in the same way as for the Project.

  This alternative was selected to avoid impacts to biological resources associated with bridge construction and operation. Significant traffic, noise, and air quality impacts would not be reduced. This alternative would result in greater transportation-related impacts on game days because vehicular ingress and egress to and from the stadium would be delayed and traffic levels would be increased on local streets, including Innes Avenue, Evans Avenue, and Ingalls Street.

- **Alternative 3: Reduced CP-HPS Phase II Development; San Francisco 49ers Stay at Existing Candlestick Park Stadium; Limited State Parks Agreement; Yosemite Slough Bridge Serving Only Transit, Bicycles, and Pedestrians**—Alternative 3 would be a reduced development alternative. Total housing with this alternative would be 5,210 units, about half of the units proposed with the Project. At Candlestick Point, residential development would be decreased and retail and arena uses would not be developed. Replacement of the Alice Griffith Public Housing site would occur and consist of 1,210 housing units. Minor improvements would be made to the CPSRA under the Limited State Parks Agreement. At HPS Phase II, housing would be increased; other uses at HPS Phase II would be similar to the Project. A new Yosemite Slough bridge serving only transit, bike and pedestrian traffic would extend Arelious Walker Drive from Candlestick Point to HPS Phase II. This alternative assumes that the 49ers football team would continue to use the existing Candlestick Park stadium. At HPS Phase II, the alternative would not include a new 49ers Stadium.

  This alternative was selected to provide an alternative to the Project that reduces construction-related impacts generally and operational impacts associated with traffic, air quality, noise, demand for public services, biological resources, and other growth-related impacts. The development program of this alternative would be reduced compared to the Project and would generate fewer vehicle trips and reduce the area subject to development. This alternative would reduce traffic and noise impacts associated with an increase in vehicle trips and air quality impacts associated with Project

construction and operation. This alternative would reduce impacts to biological resources associated with bridge construction and operation as a result of the narrower bridge footprint and reduced bridge traffic. Construction and/or operational impacts related to the amount of development and the development footprint, such as soil erosion and stormwater runoff, as well as operational impacts related to population and employment growth, such as police and fire services, would also be reduced by this alternative.

- **Alternative 4: Reduced CP-HPS Phase II Development; Historic Preservation; No HPS Phase II Stadium, Marina, or Yosemite Slough Bridge**—Alternative 4 would also be a reduced development alternative. Total housing with this alternative would be 7,350 units, about 30 percent less than proposed with the Project. The proposed floor areas for most uses would be approximately 30 percent smaller at full build-out in comparison to build-out of the Project. No improvements would be made in the CPSRA. This alternative includes preservation of five potentially historic structures at HPS Phase II. This alternative does not include construction of a bridge over Yosemite Slough.

  This alternative was selected to include historic preservation of the five eligible structures on HPS and to provide a reduced development alternative to the Project. This alternative would reduce the area subject to development and would avoid significant impacts to historic resources at HPS Phase II. Reduced development would result in fewer vehicle trips. This alternative would reduce traffic and noise impacts associated with the increase in vehicle trips and air quality impacts associated with Project operation and construction. This alternative would also avoid impacts to biological resources associated with bridge construction and operation. Construction and/or operational impacts related to the amount of development and the development footprint, such as soil erosion and stormwater runoff, as well as operational impacts related to population and employment growth, such as police and fire services, would also be reduced by this alternative.

  - **Subalternative 4A: CP-HPS Phase II Development Plan with Historic Preservation**—This subalternative to Alternative 4 retains all of the historic buildings, but includes the same land use plan as described for the Project rather than a reduced development plan as under Alternative 4. This subalternative would preserve the same five historically eligible structures (Buildings 208, 211, 224, 231, and 253) as Alternative 4. The Project's land use plan would be implemented under this subalternative in terms of total square footage of land uses and district locations. However, unlike the Project, Buildings 211, 224, 231, and 253 would be retained and not demolished. The displaced R&D that, under the Project, would be built at the location of Buildings 211, 224, 231, and 253 would be distributed throughout the remainder of the HPS Phase II development and total floor area for R&D would remain the same as the Project, at 2,500,000 sf. However, the building heights in the R&D District on HPS Phase II would increase to accommodate the displaced square footage. Buildings 211, 231, and 253 would be rehabilitated under the Secretary of Interior's Standards to accommodate approximately 338,000 gsf of R&D and 1,000 parking spaces. Building 224, the air raid shelter, would be rehabilitated to provide museum space. Subalternative 4A would also retain existing grades, allowing railroad spurs and other historic elements to remain. A wave protection berm is proposed to accommodate a 36-inch sea level rise. The Bay Trail would run on top of the berm, which would be designed to include seat steps. All other components of Subalternative 4A would remain the same as under the Project.

- **Alternative 5: Reduced CP-HPS Phase II Development; No HPS Phase II Stadium, State Parks Agreement, or Yosemite Slough Bridge**—Alternative 5 would have the same land use program proposed with the Project, except that the new stadium at HPS Phase II and the Yosemite Slough bridge would not be constructed. The total number of housing units would be the same as for the Project; however, because this alternative would not include the CPSRA boundary

reconfiguration, the land area available for development would be smaller. Approximately 1,350 units would be shifted from Candlestick Point to HPS Phase II. This alternative assumes a State Parks agreement does not occur and there is no agreement with the 49ers for a stadium at the Project site.

This alternative was selected to reduce construction impacts generally and to avoid impacts to biological resources associated with bridge construction and operation. Significant traffic, noise, and air quality impacts would not be reduced. Construction impacts that relate to the size of the development footprint would also be reduced by this alternative.

Other alternatives were considered, but eliminated from further analysis in this EIR, including:

- Alternative San Francisco 49ers stadium locations (City of Brisbane or Port of San Francisco sites)
- Alternative land use plans and locations for the 49ers Stadium on HPS Phase II
- Alternative land use plan for Candlestick Point
- Develop Candlestick Point for parks and open space only
- Alternative locations for the Project within the City of San Francisco
- Alternative locations for the Project outside the City of San Francisco

Table ES-1c (Summary of Project Alternatives) provides an overview of how the land uses of the Alternatives compare to the land uses of the Project. Table ES-1d (Comparison of the Significant and Unavoidable Impacts of the Project to Each of the Alternatives) provides a summary comparison of the significant and unavoidable impacts of the Project compared to each of the Alternatives.

Table ES-1c Summary of Project Alternatives

Use	*Project*	*Alternative 1 No Project*[a]	*Alternative 2 No Bridge Alt*	*Alternative 3 49ers at Candlestick*	*Alternative 4 Lesser Build with Historic Preservation*	*Subalternative 4A: CP-HPS Phase II Development Plan with Historic Preservation*	*Alternative 5 No Park Agreement*
Candlestick Point							
Residential (units)	7,850	0	7,850	1,210	5,495	7,850	6,500
Retail (gsf):							
Regional Retail	635,000	0	635,000	0	444,500	635,000	635,000
Neighborhood Retail	125,000	0	125,000	0	87,500	125,000	125,000
Retail Subtotal (gsf)	*760,000*	*0*	*760,000*	*0*	*532,000*	*760,000*	*760,000*
Community Services (gsf)	50,000	0	50,000	0	50,000	50,000	50,000
Hotel (gsf)[a]	150,000	0	150,000	0	105,000	150,000	150,000
Office (gsf)	150,000	0	150,000	0	105,000	150,000	150,000
10,000-seat Arena (gsf)	75,000	0	75,000	0	75,000	75,000	75,000
Football Stadium (seats)	0	70,000	0	70,000	0	0	70,000
HPS Phase II							
Residential (units)	2,650	1,800[b]	2,650	4,000	1,855	2,650	4,000

Table ES-1c Summary of Project Alternatives

Use	*Project*	*Alternative 1 No Project*[a]	*Alternative 2 No Bridge Alt*	*Alternative 3 49ers at Candlestick*	*Alternative 4 Lesser Build with Historic Preservation*	*Subalternative 4A: CP-HPS Phase II Development Plan with Historic Preservation*	*Alternative 5 No Park Agreement*
Neighborhood Retail (gsf)	125,000	570,000	125,000	125,000	87,500	125,000	125,000
Research & Development (gsf)	2,500,000	1,087,000	2,500,000	2,500,000	1,750,000	2,500,000	2,500,000
Artists' Studios (gsf):							
1:1 Studio Renovation and Replacement (gsf)[c]	225,000	225,000	225,000	225,000	225,000	225,000	225,000
New Artist Center (gsf)	30,000	0	30,000	30,000	30,000	30,000	30,000
Artist Studio Subtotal (gsf)	*255,000*	*225,000*	*255,000*	*255,000*	*255,000*	*255,000*	*255,000*
Community Services (gsf)	50,000	0	50,000	50,000	50,000	50,000	50,000
Football Stadium (seats)	69,000	0	69,000	0	0	69,000	0
Mixed-Use	0	580,000	0	0	0	0	0
Cultural and Education	0	330,600	0	0	0	0	0
Marina (slips)	300	0	300	300	0	300	300
Other Elements							
Yosemite Slough bridge	Bridge	No bridge	No bridge	BRT/Pedestrian bridge	No bridge	Bridge	No bridge
Shoreline Improvements	Yes	No	Yes	Yes	Yes	Yes	Yes
State Parks Agreement/ total acres of State Parkland	Yes/96.7	No/120.2	Yes/96.7	Yes/117.2[d]	Yes/96.7	Yes/96.7	No/120.2

SOURCE: Lennar Urban, PBS&J, 2009.

a. Hotel uses include 220 rooms at the proposed Regional Retail Center.
b. 1,800 housing units on the entire Shipyard including the Phase I site.
c. Existing artist studios would be replaced at a one-to-one ratio under all alternatives.
d. Limited exchange of 3.03 acres to construct BRT/pedestrian only Yosemite Slough bridge and Alice Griffith Public Housing

Table ES-1d Comparison of the Significant and Unavoidable Impacts of the Project to Each of the Alternatives

	Alternative 1 No Project[a]	*Alternative 2 No Bridge Alt*[b]	*Alternative 3 49ers at Candlestick*[c]	*Alternative 4 Lesser Build with Historic Preservation*[d]	*Alternative 5 No Park Agreement*[e]
TRANSPORTATION					
Impact TR-1 The Project would result in construction-related transportation impacts in the Project vicinity due to construction vehicle traffic and roadway construction and would contribute to cumulative construction impacts in the Project vicinity. Mitigation measure MM TR-1 would reduce but not avoid construction-related transportation impacts during construction activities. Therefore, construction transportation impacts would remain significant.					
Significance of Alternative Compared to Project	<	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/LTS	SU/SU	SU/SU	SU/SU	SU/SU
Impact TR-2 Implementation of the Project would cause an increase in traffic that would be substantial relative to the existing and proposed capacity of the street system, and result in significant and unavoidable impacts. Although implementation of a Travel Demand Management Plan was assumed in developing Project travel demand estimates, and would be essential to ensure that impacts at additional locations do not occur, traffic congestion caused by the Project and the Project's contribution to cumulative impacts would still be significant.					
Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
Impact TR-3 The Project would result in significant impacts and would contribute to significant cumulative impacts at intersections in the Project vicinity where no feasible traffic mitigation measures have been identified.					
Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
Impact TR-4 At the intersection of Tunnel/Blanken, the Project would result in significant Project AM peak hour traffic impacts, and contribute to cumulative PM peak hour traffic impacts, for which a feasible mitigation measure has been identified. The identified mitigation measure would improve traffic operations, but not to acceptable levels of service.					
Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
Impact TR-5 Project contributions at some study area intersections that would operate at LOS E or LOS F under 2030 No Project conditions were determined to be significant, and no feasible mitigation measures have been identified.					
Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
Impact TR-6 Project contributions at the intersections of Geneva/US-101 Southbound Ramps and Harney/US-101 Northbound Ramps, which would operate at LOS F under 2030 No Project conditions, were determined to be significant, and a mitigation measure has been identified to avoid this impact. However, implementation of mitigation measure MM TR-6 is uncertain, and this impact would remain significant.					
Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Table ES-1d Comparison of the Significant and Unavoidable Impacts of the Project to Each of the Alternatives

	Alternative 1 No Project[a]	*Alternative 2 No Bridge Alt*[b]	*Alternative 3 49ers at Candlestick*[c]	*Alternative 4 Lesser Build with Historic Preservation*[d]	*Alternative 5 No Park Agreement*[e]
Impact TR-8 Project contributions at the intersections of Bayshore/Geneva, which would operate at LOS F under 2030 No Project conditions, were determined to be significant, and a mitigation measure has been identified to avoid this impact. However, implementation of mitigation measure MM TR-8 is uncertain, and this impact would remain significant.					
Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
Impact TR-10 The Project would result in significant Project traffic spillover impacts and contribute to cumulative traffic spillover impacts. The identified mitigation measures would reduce, but not avoid, traffic spillover impacts.					
Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/LTS	SU/SU	SU/SU	SU/SU	SU/SU
Impact TR-11 The Project would contribute to significant cumulative traffic impacts at four freeway segments. No feasible mitigation is available.					
Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
Impact TR-12 The Project would result in significant impacts at four freeway on-ramp locations. No feasible traffic mitigation is available.					
Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
Impact TR-13 The Project would contribute to significant cumulative traffic impacts at 12 freeway ramp locations. No feasible traffic mitigation is available.					
Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
Impact TR-14 The Project would result in significant impacts related to freeway diverge queue storage at the Harney/US-101 Northbound Off-ramp. Mitigation measure MM TR-6 has been identified to avoid this impact, but its implementation is uncertain. Therefore, this impact would remain significant.					
Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
Impact TR-15 The Project would contribute to significant cumulative traffic impacts related to freeway diverge queue storage at some off-ramp locations. Mitigation measure MM TR-6 has been identified to avoid this impact at the US-101 Northbound off-ramp to Harney Way, and US-101 Southbound Off-ramp to Harney Way/Geneva Avenue. However, implementation is uncertain. For the other ramps, no feasible mitigations have been identified. Therefore, this impact would remain significant.					
Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Table ES-1d Comparison of the Significant and Unavoidable Impacts of the Project to Each of the Alternatives

	Alternative 1 No Project[a]	*Alternative 2 No Bridge Alt*[b]	*Alternative 3 49ers at Candlestick*[c]	*Alternative 4 Lesser Build with Historic Preservation*[d]	*Alternative 5 No Park Agreement*[e]
Impact TR-21 The Project would increase congestion and contribute to cumulative conditions at intersections along San Bruno Avenue, which would increase travel times and impact operations of the 9-San Bruno. Implementation of mitigation measures MM TR-21.1 and MM TR-21.2 could reduce impacts to transit operations. However, since feasibility of MM TR-21.1 is uncertain, and since MM TR-21.2, without MM TR-21.1, would reduce, but not completely avoid, impacts on the 9-San Bruno, Project impacts and Project contributions to cumulative impacts on the 9-San Bruno would remain significant.					
Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
Impact TR-22 The Project would increase congestion and contribute to cumulative conditions at intersections along Palou Avenue, which would increase travel times and impact operations of the 23-Monterey, 24-Divisadero, and the 44-O'Shaughnessy. Implementation of mitigation measure MM TR-22.1 and MM TR-22.2 would reduce impacts to transit operations. However, since feasibility of MM TR-22.1 is uncertain, and since MM TR-22.2, without MM TR-22A, would reduce, but not completely avoid, impacts on the 23-Monterey, 24-Divisadero, and 44-O'Shaughnessy, Project impacts and Project contributions to cumulative impacts on the these lines would remain significant.					
Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
Impact TR-23 The Project would increase congestion at intersections along Gilman Avenue and Paul Avenue, which would increase travel times and would impact operations of the 29-Sunset. Implementation of mitigation measures MM TR-23.1 and MM TR-23.2 would reduce impacts to transit operations. However, since feasibility of MM TR-23.1 is uncertain, and since MM TR-23.2, without MM TR-23.1, would reduce, but not completely avoid, impacts on the 29-Sunset, Project impacts and Project contributions to cumulative impacts on the 29-Sunset would remain significant.					
Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
Impact TR-24 The Project would increase congestion at intersections along Evans Avenue, which would increase travel times and impact operations of the 48-Quintara-24th Street. Implementation of mitigation measures MM TR-24.1 and MM TR-24.2 would reduce impacts to transit operations. However, since feasibility of MM TR-24.1 is uncertain, and since MM TR-24.2, without MM TR-24.1, would reduce, but not completely avoid, impacts on the 48-Quintara-24th Street, Project impacts and Project contributions to cumulative impacts on the 48-Quintara-24th Street would remain significant.					
Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
Impact TR-25 The Project would increase congestion at intersections in the study area, and make a considerable contribution to cumulative impacts that would increase travel times and impact operations of the 54-Felton. Implementation of mitigation measure MM TR-25 would reduce, but not avoid impacts.					
Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Table ES-1d Comparison of the Significant and Unavoidable Impacts of the Project to Each of the Alternatives

	Alternative 1 No Project[a]	*Alternative 2 No Bridge Alt*[b]	*Alternative 3 49ers at Candlestick*[c]	*Alternative 4 Lesser Build with Historic Preservation*[d]	*Alternative 5 No Park Agreement*[e]
Impact TR-26 The Project would increase congestion at intersections along Third Street, and make a considerable contribution to cumulative impacts that would increase travel times and impact operations of the T-Third. Implementation of mitigation measures MM TR-26.1 and MM TR-26.2 would reduce impacts to transit operations. However, since feasibility of MM TR-26.1 is uncertain, and since MM TR-26.2, without MM TR-26.1, would reduce, but not completely avoid, impacts on the T-Third, Project impacts and Project contributions to cumulative impacts on the T-Third would remain significant.					
Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
Impact TR-27 The Project would increase congestion at the intersection of Geneva Avenue and Bayshore Boulevard. This would increase travel times and impact operations of the 28L-19th Avenue/Geneva Limited. Implementation of mitigation measures MM TR-27.1 and MM TR-27.2 would reduce impacts to transit operations. However, since feasibility of MM TR-27.1 is uncertain, and since MM TR-27.2, without MM TR-27.1, would reduce, but not completely avoid, impacts on the 28L-19th Avenue/Geneva Limited, Project impacts and Project contributions to cumulative impacts on the 28L-19th Avenue/Geneva Limited would remain significant.					
Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
Impact TR-28 The Project would increase congestion on US-101 mainline and ramps, which would increase travel times and impact operations of the 9X, 9AX, 9BX-Bayshore Expresses, and 14X-Mission Express. The Project would also contribute to cumulative impacts on these transit routes on US-101. No feasible mitigation has been identified.					
Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
Impact TR-30 The Project would increase congestion and contribute to cumulative congestion on US-101 and on Bayshore Boulevard, which would increase travel times and adversely affect operations of SamTrans bus lines on these facilities. No feasible mitigation has been identified.					
Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
Impact TR-32 The Project's proposed transit preferential treatments and significant increases in traffic volumes on Palou Avenue would result in impacts on bicycle travel on Bicycle Routes #70 and #170 between Griffith Street and Third Street. The effectiveness of mitigation is uncertain. Therefore, the impact would remain significant.					
Significance of Alternative Compared to Project	<	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/NI	SU/SU	SU/SU	SU/SU	SU/SU
Impact TR-38 For as many as 12 times a year 49ers games at the proposed stadium would result in significant impacts on study area roadways and intersections. Implementation of mitigation measure MM TR-38 would lessen game-day impacts; however, traffic impacts would remain significant.					
Significance of Alternative Compared to Project	<	=	<	<	<
Level of Significance after Mitigation (Project/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/NI

Table ES-1d Comparison of the Significant and Unavoidable Impacts of the Project to Each of the Alternatives

	Alternative 1 No Project[a]	*Alternative 2 No Bridge Alt*[b]	*Alternative 3 49ers at Candlestick*[c]	*Alternative 4 Lesser Build with Historic Preservation*[d]	*Alternative 5 No Park Agreement*[e]
Impact TR-39 The existing game day service and Project transit improvements would not be adequate to accommodate projected transit demand. Implementation of mitigation measure MM TR-39 would reduce game-day impacts on transit capacity; however, traffic impacts on transit operations would remain significant.					
Significance of Alternative Compared to Project	<	=	<	<	<
Level of Significance after Mitigation (Project/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/NI
Impact TR-46 Weekday evening secondary events at the stadium would result in increased congestion at intersections, freeway mainline, and freeway ramps already operating at unacceptable LOS under Project conditions without a secondary event, and result in significant impacts at nine additional intersections and one additional freeway off-ramp. Implementation of mitigation measure MM TR-46 would reduce but not avoid impacts.					
Significance of Alternative Compared to Project	<	=	<	<	<
Level of Significance after Mitigation (Project/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/NI
Impact TR-47 The existing transit service and Project improvements would not be adequate to accommodate projected transit demand during secondary events with attendance of 37,500 spectators. In addition, transit lines serving the area would experience additional delays due to traffic generated by the secondary event.					
Significance of Alternative Compared to Project	<	=	<	<	<
Level of Significance after Mitigation (Project/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/NI
Impact TR-51 Weekday evening events at the arena would exacerbate congestion at intersections, freeway mainline, and freeway ramps already operating at unacceptable LOS under Project conditions without an arena event, and result in significant traffic impacts at Harney Way and Jamestown Avenue, which was operating acceptably under Project conditions without an arena event. Mitigation measure MM TR-51 would reduce but not avoid impacts.					
Significance of Alternative Compared to Project	<	=	<	<	=
Level of Significance after Mitigation (Project/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/SU
Impact TR-52 Sell-out weekday evening events at the arena could impact existing and proposed transit service. However, traffic congestion would impact transit operations. Implementation of mitigation measure MM TR-23.1 would reduce impacts to less than significant. Due to the uncertainty of this mitigation the impact would remain significant.					
Significance of Alternative Compared to Project	<	=	<	<	=
Level of Significance after Mitigation (Project/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/SU
AIR QUALITY					
Impact AQ-4 Operation of the Project would violate BAAQMD CEQA significance thresholds for mass criteria pollutant emissions from mobile and area sources and contribute substantially to an existing or projected air quality violation at full build-out in the year 2029.					
Significance of Alternative Compared to Project	<	=	<	<	=
Level of Significance after Mitigation (Project/Alternative)	SU/LTS	SU/SU	SU/SU	SU/SU	SU/SU

Table ES-1d Comparison of the Significant and Unavoidable Impacts of the Project to Each of the Alternatives

	Alternative 1 No Project[a]	*Alternative 2 No Bridge Alt*[b]	*Alternative 3 49ers at Candlestick*[c]	*Alternative 4 Lesser Build with Historic Preservation*[d]	*Alternative 5 No Park Agreement*[e]
NOISE					
Impact NO-2 Construction activities associated with the Project would create excessive groundborne vibration levels in existing residential neighborhoods adjacent to the Project site and at proposed on-site residential uses should the latter be occupied before Project construction activity on adjacent parcels is complete. Although the Project's construction vibration impacts would be temporary, would not occur during recognized sleep hours, and would be consistent with the requirements for construction activities that exist in Sections 2907 and 2908 of the *Municipal Code*, vibration levels would still be significant.					
Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
Impact NO-3 Construction activities associated with the Project would result in a substantial temporary or periodic increase in ambient noise levels.					
Significance of Alternative Compared to Project	<	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/LTS	SU/SU	SU/SU	SU/SU	SU/SU
Impact NO-6 Operation of the Project would generate increased local traffic volumes that could cause a substantial permanent increase in ambient noise levels in existing residential areas along the major Project site access routes.					
Significance of Alternative Compared to Project	<	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/LTS	SU/SU	SU/SU	SU/SU	SU/SU
Impact NO-7 Noise during football games and concerts at the proposed stadium would result in temporary increases in ambient noise levels that could adversely affect surrounding residents for the duration of a game or concert.					
Significance of Alternative Compared to Project	<	=	<	<	<
Level of Significance after Mitigation (Project/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/NI
CULTURAL RESOURCES					
Impact CP-1 Construction activities associated with the Project could result in a substantial adverse change in the significance of a historical resource.					
Significance of Alternative Compared to Project	=	=	=	<	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/LTS	SU/SU

< Alternative does lessen the severity of the impact
> Alternative increases the severity of the impact
= Alternative impact is similar to the Project impact
NI = No Impact
LTS = Less-Than-Significant impact
SU = Significant and Unavoidable Impact

a. No Project
b. CP-HPS Phase II Development Plan, HPS Phase II Stadium, State Parks Agreement, and without the Yosemite Slough Bridge
c. Reduced CP-HPS Phase II Development, San Francisco 49ers Stay at Existing Candlestick Park Stadium, with Limited State Parks Agreement, and Yosemite Slough Bridge Serving Only Transit, Bicycles, and Pedestrians
d. Reduced CP-HPS Phase II Development; Historic Preservation; State Parks Agreement; No HPS Phase II Stadium, Marina, or Yosemite Slough Bridge
e. Reduced CP-HPS Phase II Development, No HPS Phase II Stadium, No State Parks Agreement, and without the Yosemite Slough Bridge

SUMMARY OF IMPACTS

Table ES-2, which is provided below, summarizes the (1) potential environmental impacts that would occur as a result of the proposed project, provided in the form of an "impact statement"; (2) the level of significance of the environmental impact prior to implementation of any applicable mitigation measures; (3) the recommended mitigation measures that avoid or reduce significant environmental impacts; and (4) the level of significance after mitigation measures are implemented.

There are generally two ways that the impact analysis is structured and then presented in Table ES-2. In most cases, there are three impact statements, with the first one reflecting the combined impact of Candlestick Point and HPS Phase II (i.e., Impact XX-#, such as Impact PH-2); the second addressing the impact at Candlestick Point (i.e., Impact XX-#a, such as Impact PH-2a); and the third addressing the impact at HPS Phase II (i.e., Impact XX-#b, such as Impact PH-2b). Where impacts could occur as a result of construction of the Yosemite Slough bridge, the marina, or the shoreline improvements, those impacts are usually discussed separately, resulting in four or more impact discussions, which would be numbered Impact PH-2c, Impact PH-2d, and Impact PH-2e, using the numbering sequence of the preceding example. In these cases, the impacts are still summarized with a combined impact of the Project. In some instances, the analyses for Candlestick Point and Hunters Point Shipyard Phase II are similar, and, therefore, are discussed together as the Project (i.e., Impact XX-#, such as Impact LU-2); in these cases, the analysis is not differentiated by area. One exception to this general format is in Section III.N (Biological Resources), where Project impacts are presented after the discussion of individual impacts at Candlestick Point and HPS Phase II. Project impacts begin with Impact BI-22 and conclude with Impact BI-26.

The impact statements provided in Table ES-2 (in the first column) reflect whether the impact is caused by construction of the Project; implementation of the Project (meaning the conditions that would exist after the Project were constructed, which is generally related to the development pattern); or operation of the Project (reflecting conditions that would exist during actual operational activities, such as additional motor vehicle trips resulting from uses at the Project site). In a few instances, the impact statement is factual, such as "The Project would conform to the current regional air quality plan." In all cases, the impact statement reflects the condition that would result after the implementation of all of the identified mitigation measures.

The Draft EIR uses the following terms to describe the level of significance of impacts identified during the course of the environmental analysis:

- **Significant Impact (S)**—A "significant effect" is defined by Section 15382 of the CEQA Guidelines as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment … [but] may be considered in determining whether the physical change is significant." As defined in this EIR, a significant impact exceeds the defined significance criteria and will result in significant and unavoidable impacts, either with or without feasible mitigation. If there are no feasible mitigation measures to reduce the impact, including compliance with existing local, State, and federal laws and regulations, it is considered significant and unavoidable (SU) at the conclusion of the analysis. If there are feasible mitigation measures to reduce the impact, including compliance with existing local, State, and federal laws and

regulations, it is considered significant and unavoidable with mitigation (SU/M) at the conclusion of the analysis

- **Potentially Significant Impact (PS)**—Impact that could exceed the defined significance criteria, but can be eliminated or reduced to a less-than-significant level through implementation of the identified mitigation measures.
- **Less-Than-Significant Impact (LTS)**—Impact that does not exceed the defined significance criteria or would be eliminated or reduced to a less-than-significant level through compliance with existing local, State, and federal laws and regulations.
- **No Impact (NI)**—No adverse changes (or impacts) to the environment are expected.
- **Significant and Unavoidable Impact (SU)**—Impact that exceeds the defined significance criteria and cannot be eliminated or reduced to a less-than-significant level through compliance with existing local, State, and federal laws and regulations and/or implementation of all feasible mitigation measures.
- **Significant and Unavoidable Impact with Mitigation (SU/M)**— Impact that exceeds the defined significance criteria and can be reduced through compliance with existing local, State, and federal laws and regulations and/or implementation of all feasible mitigation measures, but cannot be reduced to a less-than-significant level.
- **Less-Than-Significant Impact with Mitigation (LTS/M)**—Impact that is reduced to a less-than-significant level through implementation of the identified mitigation measures.

Project impacts are assessed in light of existing regulatory requirements that would serve to mitigate potential impacts. The effectiveness of existing regulations to mitigate potential impacts is often affected by discretionary requirements, site characteristics, and project features and design-level considerations that are not yet detailed. Because there is some discretion in how these regulations can be applied, for some impacts, these requirements are included as mitigation measures to outline the specific process by which the Project will comply with these regulations.

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
SECTION III.B(LAND USE AND PLANS)			
Impact LU-1 Implementation of the Project would not physically divide an established community.	**NI**	No mitigation is required.	**NI**
Impact LU-2 Implementation of the Project would not conflict with land use plans, policies, or regulations adopted to avoid or mitigate an environmental effect.	**LTS**	No mitigation is required.	**LTS**
Impact LU-3 Implementation of the Project would not have a substantial adverse impact on the existing character of the vicinity.	**LTS**	No mitigation is required.	**LTS**
SECTION III.C (POPULATION, HOUSING, AND EMPLOYMENT)			
Impact PH-1 Construction of the Project would not induce substantial direct population growth.	**LTS**	No mitigation is required.	**LTS**
Impact PH-2 Operation of the Project would not induce substantial direct or indirect population growth.	**LTS**	No mitigation is required.	**LTS**
Impact PH-2a Operation of Candlestick Point would not induce substantial direct or indirect population growth.	**LTS**	No mitigation is required.	**LTS**
Impact PH-2b Operation of HPS Phase II would not induce substantial direct or indirect population growth.	**LTS**	No mitigation is required.	**LTS**
Impact PH-3 The Project would not displace existing housing units or residents, necessitating the construction of new units elsewhere.	**NI**	No mitigation is required.	**NI**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact PH-3a Implementation of the Project would not displace existing housing units and residents at Candlestick Point, necessitating the construction of new units elsewhere.	**NI**	No mitigation is required.	**NI**
Impact PH-3b Implementation of the Project would not displace existing housing units or residents at HPS Phase II, necessitating the construction of new units elsewhere.	**NI**	No mitigation is required.	**NI**
		SECTION III.D (TRANSPORTATION AND CIRCULATION)	
Impact TR-1 Construction of the Project would result in transportation impacts in the Project vicinity due to construction vehicle traffic and roadway construction and would contribute to cumulative construction impacts in the Project vicinity.	**PS**	**MM TR-1** Candlestick Point–Hunters Point Shipyard Phase II Construction Traffic Management Program. The Project Applicant shall develop and implement a Candlestick Point–Hunters Point Shipyard Phase II Construction Traffic Management Program to minimize impacts of the Project and its contribution to cumulative impacts related to construction activities and construction traffic. The program shall provide necessary information to various contractors and agencies as to how to maximize the opportunities for complementing construction management measures and to minimize the possibility of conflicting impacts on the roadway system, while safely accommodating the traveling public in the area. The program shall supplement and expand, rather than modify or supersede any manual, regulations, or provisions set forth by SFMTA, DPW or other City departments and agencies. Preparation of the Construction Management Program shall be the responsibility of the Project Applicant, and shall be reviewed and approved by SFMTA and DPW prior to initiation of construction. The Project Applicant shall update the program prior to approval of development plans for Phase 2, Phase 3, and Phase 4 of construction to reflect any change to Project development schedule, reflect transportation network changes, to update status of other development construction activities, and to reflect any changes to City requirements. The program shall: ■ Identify construction traffic management practices in San Francisco, as well as other jurisdictions that although not being implemented in the City could provide useful guidance for a project of this size and characteristics. ■ Describe procedures required by different departments and/or agencies in the City for implementation of a construction management plan, such as reviewing agencies, approval process, and estimated timelines. ■ Describe coordination efforts associated with the Navy remediation efforts and scheduling regarding construction vehicle routing via the Crisp gate.	**SU/MM**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
		■ Identify construction traffic management strategies and other elements for the Project, and present a cohesive program of operational and demand management strategies designed to maintain acceptable levels of traffic flow during periods of construction activities in the Bayview Hunters Point area. These could include construction strategies, demand management strategies, alternate route strategies, and public information strategies. ■ Coordinate with other projects in construction in the immediate vicinity, so that they can take an integrated approach to construction-related traffic impacts. ■ Present guidelines for selection of construction traffic management strategies.	
Impact TR-2 Implementation of the Project would cause an increase in traffic that would be substantial relative to the existing and proposed capacity of the street system, even with implementation of a Travel Demand Management Plan.	**PS**	**MM TR-2** TDM Plan. The Project Applicant shall prepare and implement a final TDM plan, which shall include the following elements: ■ Visitor Variable, Market-Rate Parking Pricing ■ Maximum Permitted Parking Ratios ■ Flexible Parking Management Strategies ■ Unbundled Residential Parking ■ Transit Strategies and Support Strategies ■ Central Transit Hub ■ Enhanced Transit Service and Bicycle Facilities ■ Bicycle Support Facilities ■ Wayfinding Signs ■ EcoPass for Residents ■ Carshare Services ■ Employee TDM Programs > Information Boards/Kiosks > In-building Real-Time transit monitors with sightlines of transit hubs > Commuter Benefits > Employee EcoPass > Carpool/Vanpools > Guaranteed Ride Home Program > Compressed Work Weeks, Flex Time, and Telecommuting ■ CP-HPS Transportation Management Association ■ On-site Transportation Coordinator and Website ■ Targeted Marketing	**SU/MM**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
		■ Monitoring of Transportation Demand ■ Monitoring Effectiveness of Congestion-Reducing and Traffic-Calming Efforts The final TDM plan shall be approved as part of the Disposition and Development Agreement (DDA).	
Impact TR-3 Implementation of the Project would contribute traffic to significant cumulative impacts at intersections in the Project vicinity.	**PS**	No feasible mitigation is identified.	**SU**
Impact TR-4 At the intersection of Tunnel/Blanken, implementation of the Project would result in significant Project AM peak hour traffic impacts, and would contribute to cumulative PM peak hour traffic impacts.	**PS**	**MM TR-4** Restripe the northbound and southbound approaches of the intersection of Tunnel/Blanken to provide dedicated left-turn lanes adjacent to shared through/right-turn lanes. The restriping would require prohibition of parking for 160 feet in the southbound approach (loss of eight parking spaces) and for 100 feet in the northbound approach (loss of five parking spaces). Implementation of the intersection restriping shall be the responsibility of SFMTA, and shall be implemented when intersection improvements associated with the Visitacion Valley Redevelopment Plan (i.e., signalization) are no longer sufficient to maintain acceptable intersection level of service conditions.	**SU/MM**
Impact TR-5 Implementation of the Project would contribute traffic at some study area intersections that would operate at LOS E or LOS F under 2030 No Project conditions.	**PS**	No feasible mitigation is identified.	**SU**
Impact TR-6 Implementation of the Project could contribute traffic at the intersections of Geneva/US-101 Southbound Ramps and Harney/US-101 Northbound Ramps, which would operate at LOS F under 2030 No Project conditions.	**PS**	**MM TR-6** Mitigations and associated fair-share funding measures for cumulative regional roadway system impacts. The City of Brisbane and Caltrans, as part of the Harney Interchange Project, shall account for existing traffic, background traffic growth, and the most recent forecasts of traffic expected to be associated with each of several adjacent development projects, including the Project. The San Francisco County Transportation Authority (SFCTA) shall coordinate with the City of Brisbane and Caltrans to ensure Project-generated vehicle trips are accounted for in the Harney Interchange analyses and design. Mitigations and associated fair-share funding measures for cumulative regional roadway system impacts, including freeway segment impacts, shall be formulated through the current interjurisdictional Bi-County Transportation Study effort being led by the SFCTA or its equivalent. The Project Applicant shall contribute its fair share to the Harney Interchange Project.	**SU/MM**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact TR-7 Implementation of the Project could contribute traffic to the intersections of Amador/Cargo/Illinois, which would operate at LOS E under 2030 No Project.	**PS**	**MM TR-7** Feasibility study of reconfiguring the southbound approach on Illinois Street to provide a dedicated southbound left turn lane and a dedicated right-turn lane. SFMTA shall conduct a feasibility study with the Port of San Francisco to determine the feasibility of reconfiguring the southbound approach on Illinois Street to provide a dedicated southbound left turn lane and a dedicated right-turn lane. Sufficient right-of-way is available to implement this improvement; however, provision of two southbound lanes would require narrowing a portion of the island to the west of the southbound approach to Cargo Way. Implementation of the intersection improvements shall be the responsibility of SFMTA and the Port of San Francisco, and shall be implemented when traffic operating conditions with the existing intersection configuration worsens to unacceptable levels. If determined feasible, the Project Applicant shall contribute its fair share to the intersection improvements.	**SU/MM**
Impact TR-8 Implementation of the Project could contribute traffic to the intersections of Bayshore/Geneva, which would operate at LOS F under 2030 No Project.	**PS**	**MM TR-8** Mitigations and associated fair-share funding measures for cumulative regional roadway system impacts. The City of Brisbane, as part of the Geneva Avenue Extension Project, shall account for existing traffic, background traffic growth, and the most recent forecasts of traffic expected to be associated with each of several adjacent development projects, including the Project. The San Francisco County Transportation Authority (SFCTA) and SFMTA shall coordinate with the City of Brisbane to ensure projected traffic volumes are accounted for in the design of the Geneva Avenue Extension. Mitigations and associated fair-share funding measures for cumulative regional roadway system impacts, including freeway segment impacts, shall be formulated through the current interjurisdictional Bi-County Transportation Study effort being led by the SFCTA or its equivalent. The Project Applicant shall contribute its fair share to the Geneva Avenue Extension Project.	**SU/MM**
Impact TR-9 Implementation of the Project would have less-than-significant Project and cumulative impacts at some study area intersections that would operate at LOS E or LOS F under 2030 No Project conditions.	**LTS**		**LTS**
Impact TR-10 Implementation of the Project would result in significant Project traffic spillover impacts and contribute to cumulative traffic spillover impacts.	**PS**	MM TR-2 and MM TR-17 would apply to this impact.	**SU/MM**
Impact TR-11 Implementation of the Project would contribute to significant cumulative traffic impacts at four freeway segments.	**PS**	No feasible mitigation is identified.	**SU**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact TR-12 Implementation of the Project would result in significant impacts at four freeway on-ramp locations.	**PS**	No feasible mitigation is identified.	**SU**
Impact TR-13 Implementation of the Project would contribute to significant cumulative traffic impacts at 12 freeway ramp locations.	**PS**	No feasible mitigation is identified.	**SU**
Impact TR-14 Implementation of the Project could result in significant impacts related to freeway diverge queue storage at the Harney/US-101 Northbound Off-ramp.	**PS**	MM TR-6 would apply to this impact.	**SU/MM**
Impact TR-15 Implementation of the Project could contribute to significant cumulative traffic impacts related to freeway diverge queue storage at some off-ramp locations (US-101 Northbound off-ramp to Harney Way, and US-101 Southbound Off-ramp to Harney Way/Geneva Avenue).	**PS**	MM TR-6 would apply to this impact.	**SU/MM**
Impact TR-16 Implementation of the Project would increase traffic volumes and would not make a considerable contribution to cumulative traffic volumes on Harney Way.	**PS**	**MM TR-16** Widen Harney Way as shown in Figure 5 in the Transportation Study. Prior to issuance of the grading permit for Development Phase 2 of the Project, the Project Applicant shall widen Harney Way as shown in Figure 5 in the Transportation Study. Prior to the issuance of grading permits for Phases 2, 3 and 4, the Project Applicant shall fund a study to evaluate traffic conditions on Harney Way and determine whether additional traffic associated with the next phase of development would result in the need to modify Harney Way to its ultimate configuration, as shown in Figure 6 in the Transportation Study, unless this ultimate configuration has already been built. This study shall be conducted in collaboration with the SFMTA, which would be responsible for making final determinations regarding the ultimate configuration. The ultimate configuration would be linked to intersection performance, and it would be required when study results indicate intersection LOS at one or more of the three signalized intersection on Harney Way at mid-LOS D (i.e., at an average delay per vehicle of more than 45 seconds per vehicle). If the study and SFMTA conclude that reconfiguration would be necessary to accommodate traffic demands associated with the next phase of development, the Project Applicant shall be responsible to fund and complete construction of the improvements prior to occupancy of the next phase.	**LTS/MM**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures

Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact TR-17 Implementation of the Project would not exceed available transit capacity, because the Project and the Project's contribution to cumulative demand would be accommodated within the existing transit service, proposed TEP service, plus the service proposed as part of the Project.	**PS**	**MM TR-17** Implement the Project's Transit Operating Plan. The Project Applicant shall work with SFMTA to develop and implement the Project's Transit Operating Plan. Elements of the Project Transit Operating Plan shall include: ■ Extension of the 24-Divisadero, the 44-O'Shaughnessy, and the 48-Quintara-24th Street into Hunters Point Shipyard. ■ Increased frequency on the 24-Divisadero to 6 minutes in the AM and PM peak periods. Extension of the 29-Sunset from its current terminus near the Alice Griffith housing development, near Gilman Avenue and Giants Drive, into the proposed Candlestick Point retail area. The 29-Sunset would operate a short line between Candlestick Point and the Balboa Park BART station. This would increase frequencies on the 29-Sunset by reducing headways between buses from 10 minutes to 5 minutes during the AM and PM peak periods between Candlestick Point and the Balboa BART station. Every other bus would continue to serve the Sunset District (to the proposed terminus at Lincoln Drive and Pershing Drive in the Presidio) at 10-minute headways. ■ Convert T-Third service between Bayview and Chinatown via the Central Subway from one-car to two-car trains or comparable service improvement. Extension of the 28L-19th Avenue Limited from its TEP-proposed terminus on Geneva Avenue, just east of Mission Street, into the Hunters Point Shipyard transit center. The 28L-19th Avenue Limited would travel along Geneva Avenue across US-101 via the proposed Geneva Avenue extension and new interchange with US-101, to Harney Way. East of Bayshore Boulevard, the 28L-19th Avenue Limited would operate as BRT, traveling in exclusive bus lanes into the Candlestick Point area. The BRT route would travel through the Candlestick Point retail corridor, and cross over Yosemite Slough into the Hunters Point Shipyard transit center. ■ The 28L-19th Avenue Limited would operate a short line to the Balboa Park BART station. This would increase frequencies on the 28L-19th Avenue Limited by reducing headways between buses from 10 minutes to 5 minutes for the segment between Hunters Point Shipyard and the Balboa Park BART station. Every other bus would continue to the Sunset District (to the proposed terminus at North Point Street and Van Ness Avenue) at 10-minute headways. If the TEP-proposed extension of the 28L has not been implemented by the SFMTA by the time implementation of this measure is called for in the Transportation Study (Appendix D), the Project Applicant shall fund the extension of that line between its existing terminus and Bayshore Boulevard. ■ New CPX-Candlestick Express to downtown serving the Candlestick Point site, traveling along Harney Way (with potential stops at Executive Park), before traveling on US-101 toward downtown, terminating at the Transbay Terminal. ■ New HPX-Hunters Point Shipyard Express to downtown serving the Hunters Point Shipyard site, traveling from the Hunters Point Shipyard Transit Center, along Innes Avenue, with stops at the India Basin and Hunters View areas, before continuing along Evans Avenue to Third Street, eventually entering I-280 northbound at 25th/Indiana. The HPX would continue non-stop to the Transbay Terminal in Downtown San Francisco.	**LTS/MM**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact TR-18 With full implementation of the Project with proposed transit improvements, the Project demand and the Project's contribution to cumulative demand would not exceed the proposed transit system's capacity at the study area cordons.	**PS**	MM TR-17 would apply to this impact.	**LTS/MM**
Impact TR-19 Implementation of the Project would add transit trips and the Project's contribution to cumulative transit trips to the Downtown Screenlines would not increase demands in excess of available capacity.	**LTS**	No mitigation is required.	**LTS**
Impact TR-20 Implementation of the Project would add transit trips and the Project's contribution to cumulative transit trips would not contribute significantly to Regional Screenlines conditions where overall ridership is projected to exceed available capacity.	**LTS**	No mitigation is required.	**LTS**
● **Impact TR-21** Implementation of the Project could increase congestion and contribute to cumulative conditions at intersections along San Bruno Avenue, which would increase travel times and impact operations of the 9-San Bruno.	**PS**	**MM TR-21.1** Maintain the proposed headways of the 9-San Bruno. To address Project impacts to the 9-San Bruno, prior to issuance of a grading permit for Development Phase 1, the Project Applicant in cooperation with SFMTA shall conduct a study to evaluate the effectiveness and feasibility of the following improvements which could reduce Project impacts on transit operations along the San Bruno Avenue corridor, generally between Campbell Avenue and Silver Avenue. The study shall create a monitoring program to determine the implementation extent and schedule (as identified below) to maintain the proposed headways of the 9-San Bruno. ■ Install a transit-only lane on northbound San Bruno Avenue for the one-block section (400 feet) between Silliman Street and Silver Avenue. This would involve removal of five metered spaces on the east side of San Bruno Avenue, just south of Silver Avenue. Treatment for transit-only lanes can range from striping to physical elevation changes or barriers to protect transit right-of-way from mixed-flow traffic. ■ Install a transit-only lane on southbound San Bruno Avenue at the approach to Dwight Street/Paul Avenue. This lane would function as a so-called "queue-jump" lane, allowing buses to bypass queues on southbound San Bruno Avenue at the intersection. The lane should begin approximately 200 feet north of Dwight Street and extend one block (about 300 feet) south of Paul Avenue to Olmstead Street. This would involve the removal of up to 20	**SU/MM**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures

Impact(s)	Level of Significance Prior to Mitigation	Mitigation Measure(s) and/or Project Requirements	Level of Significance After Mitigation
		on-street parking spaces on the west side of San Bruno Avenue. This treatment could be limited to peak hours only, which would minimize the impact of the parking loss. The segment of San Bruno Avenue between Dwight Street and Olmstead Street is designated as Bicycle Routes #705 and 5 (Class III signed routes). ■ At the intersection of San Bruno/Silver install signal priority treatments on westbound Silver Avenue, where buses waiting to turn left from Silver Avenue onto southbound San Bruno Avenue must currently wait through almost an entire signal cycle due to the heavy oncoming traffic on eastbound Silver Avenue. Installation of a transit signal pre-emption at this location that provides a "green" signal for westbound vehicles but holds eastbound vehicles when buses are present would allow transit vehicles to turn left onto San Bruno Avenue without having to wait for opposing eastbound through traffic to clear. The Project Applicant shall fully fund the costs of implementing the transit priority improvements (either the improvements identified above, or alternative improvements of equal or greater effectiveness and comparable cost) as determined by the study and the monitoring program. Other options to be evaluated in the study could include comprehensive replacement of stop-controlled intersections with interconnected traffic signals equipped with transit priority elements. **MM TR-21.2** Purchase additional transit vehicles as necessary to mitigate the Project impacts and Project contribution to cumulative impacts to headways on the 9-San Bruno. Should mitigation measure MM TR-21.1 not be feasible or effective, the Project Applicant shall work with SFMTA to purchase additional transit vehicles as necessary to mitigate the Project impacts and Project contribution to cumulative impacts to headways on the 9-San Bruno. Funds for the implementation of this mitigation measure are expected to be generated from a combination of Project revenues that accrue to the City, and other funding sources.	
● **Impact TR-22** Implementation of the Project would contribute traffic to cumulative conditions at intersections along Palou Avenue, which would increase travel times and impact operations of the 23-Monterey, 24-Divisadero, and the 44-O'Shaughnessy.	**PS**	**MM TR-22.1** Maintain the proposed headways of the 23-Monterey, 24-Divisidero and the 44-O'Shaughnessy. To address Project impacts to the 23-Monterey, 24-Divisidero and the 44-O'Shaughnessy, prior to issuance of a grading permit for Development Phase 1, the Project Applicant in cooperation with SFMTA shall conduct a study to evaluate the effectiveness and feasibility of the following improvements which could reduce Project impacts on transit operations along the Palou Avenue corridor, generally between Griffith Street and Newhall Street. The study shall create a monitoring program to determine the implementation extent and schedule (as identified below) to maintain the proposed headways of the 23-Monterey, 24-Divisidero and the 44-O'Shaughnessy. ■ Convert one of the two westbound travel lanes on Palou Avenue between Keith Street and Newhall Street (three blocks) to a transit-only lane at all times. Treatment for transit-only lanes can range from striping to physical elevation changes to protect right-of-way from mixed-flow traffic. Because the westbound lanes between Third Street and Newhall Street are relatively narrow, parking would likely need to be prohibited on the north side of Palou Avenue between Third Street and Newhall Street (approximately 600 feet) during peak periods to maximize the effectiveness of the transit-only lane. ■ Convert one of the two eastbound travel lanes on Palou Avenue between Newhall Street and Third Street (one block) to a transit-only lane at all times. Because the eastbound travel lanes between Newhall Street are relatively narrow, parking would likely need to be prohibited on the south side of Palou Avenue between	**SU/MM**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures

Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*

Newhall Street and Third Street (approximately 600 feet) during peak periods to maximize the effectiveness of the transit-only lane. In the eastbound direction, east of Third Street, buses would re-enter the single mixed-flow traffic lane at the bus stop on the far (east) side of Third Street.

- There are currently pedestrian corner bulbs on the northwest and southwest corners of the intersection of Palou Avenue and Third Street. In order to accommodate the transit-only lanes west of Third Street, these bulbouts would be reconfigured or removed. Although removing pedestrian bulb-outs may increase pedestrian crossing distances and is generally inconsistent with the City's desire to prioritize pedestrian activity, in this case, the improvement would offer substantial benefits to transit travel times by allowing a transit-only lane through a congested intersection. This would be consistent with the City's transit-first policy.
- During the PM peak period only, prohibit parking on westbound Palou Avenue for the four-block segment between Griffith Street/Crisp Avenue and Keith Street, to provide for a PM peak period curb transit-only lane along this segment. This would create a continuous westbound transit-only lane on Palou Avenue between Griffith Street/Crisp Avenue and Newhall Street during the PM peak period.
- As an alternative to the bulleted measures above, narrow the existing sidewalks on Palou Avenue from Third Street to Crisp Avenue (seven blocks) from 15 feet to 12 feet in width. The pedestrian bulb-outs on the west side of Third Street would be removed. The resulting 12-foot-wide sidewalks would be consistent with the Better Streets Plan guidelines. The reduction in sidewalk width would allow for the provision of a 7-foot-wide on-street parking lane, an 11-foot-wide transit-only lane, and a 10-foot-wide mixed-flow lane in each direction on Palou Avenue. This would preserve on-street parking along the corridor and provide a seven-block transit-only lane on Palou Avenue between Griffith Street/Crisp Avenue and Newhall Street. Treatment for transit-only lanes can range from striping to physical elevation changes to protect right-of-way from mixed-flow traffic. Subsequent to publication of the Draft EIR, SFMTA and the Project Applicant conducted an evaluation of this alternative measure and determined that it is a feasible and viable alternative to the four bulleted items above.

The Project Applicant shall fully fund the costs of implementing the transit priority improvements (either the improvements identified above, or alternative improvements of equal or greater effectiveness and comparable cost) as determined by the study and the monitoring program. Other options to be evaluated in the study could include signal priority treatments at other signalized intersections including at Bayshore/Cortland, Bayshore/Industrial, and Bayshore/Oakdale.

MM TR-22.2 Purchase additional transit vehicles as necessary to mitigate the Project impacts and Project contribution to cumulative impacts to headways on the 23-Monterey, the 24-Divisadero and the 44-O'Shaughnessy. Should mitigation measure MM TR-22.1 not be feasible or effective, the Project Applicant shall work with SFMTA to purchase additional transit vehicles as necessary to mitigate the Project impacts and Project contribution to cumulative impacts to headways on the 23-Monterey, the 24-Divisadero and the 44-O'Shaughnessy. Funds for the implementation of this mitigation measure are expected to be generated from a combination of Project revenues that accrue to the City, and other funding sources.

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact TR-23 Implementation of the Project would increase congestion at intersections along Gilman Avenue and Paul Avenue, which would increase travel times and would impact operations of the 29-Sunset.	**PS**	**MM TR-23.1** Maintain the proposed headways of the 29-Sunset. To address Project impacts to the 29-Sunset, prior to issuance of a grading permit for Development Phase 1, the Project Applicant in cooperation with SFMTA shall conduct a study to evaluate the effectiveness and feasibility of the following improvements which could reduce Project impacts on transit operations along the Gilman Avenue and Paul Avenue corridor, generally between Arelious Walker Drive and Bayshore Boulevard. The study shall create a monitoring program to determine the implementation extent and schedule (as identified below) to maintain the proposed headways of the 29-Sunset. ■ For the five-block segment of Gilman Avenue between Arelious Walker Drive and Third Street, prohibit on-street parking on westbound Gilman Avenue during the AM and PM peak periods to provide for three westbound travel lanes. During the peak periods convert one of the three westbound travel lanes to transit-only. During off-peak periods, parking would be allowed, and buses would travel in one of the two mixed-flow lanes. The peak period transit lanes would impact 90 parking spaces. ■ For the same five-block segment of Gilman Avenue between Arelious Walker Drive and Third Street, restripe the eastbound direction to provide two travel lanes, one of which would accommodate on-street parking and one of which would be a mixed-flow travel lane. During the AM and PM peak periods, prohibit on-street parking in the eastbound direction, and operate one of the two eastbound lanes as transit-only lanes. The peak period transit lanes would impact 80 parking spaces. ■ As an alternative to the two bulleted measures above, convert one of the travel lanes in each direction on Gilman Avenue from Third Street to Griffith Street to transit-only. This would allow for the provision of a 7-foot-wide on-street parking lane, an 11-foot-wide transit-only lane, and a 10-foot-wide mixed-flow lane in each direction on Gilman Avenue. This would preserve on-street parking along the corridor and provide four-block transit-only lanes on Gilman Avenue between Griffith Street and Third Street. Treatment for transit-only lanes can range from striping to physical elevation changes to protect right-of-way from mixed-flow traffic. Subsequent to publication of the Draft EIR, SFMTA and the Project Applicant conducted an evaluation of this alternative measure and determined that is a feasible and viable alternative to the two bulleted items above, ■ Prohibit on-street parking on the north side of Paul Avenue, between Third Street and Bayshore Boulevard to create two westbound through lanes. Convert one westbound through lane to transit-only in the AM and PM peak periods. The peak period transit-only lane would impact 40 parking spaces. At the intersection of Paul Avenue and Bayshore Avenue, provide transit signal priority treatment (i.e., queue jump) to allow transit vehicles to maneuver into the mixed flow left-hand lane, facilitating a left-turn movement immediately west of Bayshore Boulevard from westbound Paul Avenue to southbound San Bruno. The Project Applicant shall fully fund the costs of implementing the transit priority improvements (either the improvements identified above, or alternative improvements of equal or greater effectiveness and comparable cost) as determined by the study and the monitoring program. Other options to be evaluated in the study could include transit priority treatments on San Bruno Avenue, on the portions where the 29-Sunset travels.	**SU/MM**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures

Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
		MM TR-23.2 Purchase additional transit vehicles as necessary to mitigate the Project impacts and Project contribution to cumulative impacts to headways on the 29-Sunset. Should mitigation measure MM TR-23.1 not be feasible or effective, the Project Applicant shall work with SFMTA to purchase additional transit vehicles as necessary to mitigate the Project impacts and Project contribution to cumulative impacts to headways on the 29-Sunset. Funds for the implementation of this mitigation measure are expected to be generated from a combination of Project revenues that accrue to the City, and other funding sources.	
Impact TR-24 Implementation of the Project would increase congestion at intersections along Evans Avenue, which would increase travel times and impact operations of the 48-Quintara-24th Street.	**PS**	**MM TR-24.1** Maintain the proposed headways of the 48-Quintara-24th Street. To address Project impacts to the 48-Quintara-24th Street, prior to issuance of a grading permit for Development Phase 1, the Project Applicant in cooperation with SFMTA shall conduct a study to evaluate the effectiveness and feasibility of the following improvements which could reduce Project impacts on transit operations along the Evans Avenue corridor, generally between Hunters Point Boulevard and Napoleon Street. The study shall create a monitoring program to determine the implementation extent and schedule (as identified below) to maintain the proposed headways of the 48-Quintara-24th Street. ■ On Evans Avenue, between Jennings Street and Napoleon Street (a nine-block segment—about 6,000 feet), convert one of the two travel lanes in each direction to a transit-only lane at all times. Treatment for transit-only lanes can range from striping to physical elevation changes or barriers to protect transit right-of-way from mixed-flow traffic. The Project Applicant shall fully fund the costs of implementing the transit priority improvements (either the improvements identified above, or alternative improvements of equal or greater effectiveness and comparable cost) as determined by the study and the monitoring program. Other options to be evaluated in the study could include extension of transit only lanes in one or both directions between Napoleon Street and Cesar Chavez Street or onto Hunters Point Boulevard and Innes Avenue. **MM TR-24.2** Purchase additional transit vehicles as necessary to mitigate the Project impacts and Project contribution to cumulative impacts to headways on the 48-Quintara-24th Street. Should mitigation measure MM TR-24.1 not be feasible or effective, the Project Applicant shall work with SFMTA to purchase additional transit vehicles as necessary to mitigate the Project impacts and Project contribution to cumulative impacts to headways on the 48-Quintara-24th Street. Funds for the implementation of this mitigation measure are expected to be generated from a combination of Project revenues that accrue to the City, and other funding sources.	**SU/MM**
Impact TR-25 Implementation of the Project would increase congestion at intersections in the study area, and make a considerable contribution to cumulative impacts that would increase travel times and impact operations of the 54-Felton.	**PS**	**MM TR-25** Purchase additional transit vehicles to mitigate the Project impacts and Project contribution to cumulative impacts to headways on 54-Felton. SFMTA shall purchase additional transit vehicles to mitigate the Project impacts and Project contribution to cumulative impacts to headways on 54-Felton. Funds for the implementation of this mitigation measure are expected to be generated from a combination of Project revenues that accrue to the City, and other funding sources.	**SU/MM**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact TR-26 Implementation of the Project would increase congestion at intersections along Third Street, and make a considerable contribution to cumulative impacts that would increase travel times and impact operations of the T-Third.	**PS**	**MM TR-26.1** Maintain the proposed headways of the T-Third. To address Project impacts to the T-Third, prior to issuance of a grading permit for Development Phase 1, the Project Applicant in cooperation with SFMTA shall conduct a study to evaluate the effectiveness and feasibility of the following improvement that could reduce Project impacts on transit operations along Third Street between Thomas Avenue and Kirkwood Avenue. The study shall create a monitoring program to determine the implementation extent and schedule (as identified below) to maintain the proposed headways of the T-Third. ■ Reconfigure the section of Third Street between Thomas Avenue and Kirkwood Avenue (9 blocks) where the light rail vehicles currently share the travel lane with auto traffic to provide a dedicated transit right-of-way, consistent with the rest of the route. This would require either removal of one travel lane in each direction on Third Street, or removal of on-street parking and some sidewalk bulbouts. In addition, left-turns from Third Street in this segment would be restricted in both directions. Treatment for transit-only lanes can range from striping to physical elevation or barriers to protect transit right-of-way from mixed-flow traffic. Implementation of the roadway reconfiguration shall be the responsibility of SFMTA, and shall be implemented when the results of the study described above indicate transit improvements are necessary. The Project Applicant shall fully fund the costs of implementing the transit priority improvements prior to approval of subsequent phases of development. **MM TR-26.2** Purchase additional transit vehicles as necessary to mitigate the Project impacts and Project contribution to cumulative impacts to headways on the T-Third. Should mitigation measure MM TR-26.1 not be feasible or effective, the Project Applicant shall work with SFMTA to purchase additional transit vehicles as necessary to mitigate the Project impacts and Project contribution to cumulative impacts to headways on the T-Third. Funds for the implementation of this mitigation measure are expected to be generated from a combination of Project revenues that accrue to the City, and other funding sources.	**SU/MM**
Impact TR-27 Implementation of the Project could increase congestion at the intersection of Geneva Avenue and Bayshore Boulevard. This would increase travel times and impact operations of the 28L-19th Avenue/Geneva Limited.	**PS**	**MM TR-27.1** Ensure transit preferential treatment is accounted for in the design of the Geneva Avenue Extension. The City of Brisbane, as part of the Geneva Avenue Extension Project, shall account for existing traffic, background traffic growth, and the most recent forecasts of traffic expected to be associated with each of several adjacent development projects, including the Project. The San Francisco County Transportation Authority (SFCTA) and SFMTA shall coordinate with the City of Brisbane to ensure transit preferential treatment is accounted for in the design of the Geneva Avenue Extension. **MM TR-27.2** Purchase additional transit vehicles as necessary to mitigate the Project impacts and Project contribution to cumulative impacts to headways on the 28L-19th Avenue/Geneva Limited. Should mitigation measure MM TR-27.1 not be feasible or effective, the Project Applicant shall work with SFMTA to purchase additional transit vehicles as necessary to mitigate the Project impacts and Project contribution to cumulative impacts to headways on the 28L-19th Avenue/Geneva Limited. Funds for the implementation of this mitigation measure are expected to be generated from a combination of Project revenues that accrue to the City, and other funding sources.	**SU/MM**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact TR-28 Implementation of the Project would increase congestion on US-101 mainline and ramps, which would increase travel times and impact operations of the 9X, 9AX, 9BX-Bayshore Expresses, and 14X-Mission Express. The Project would also contribute to cumulative impacts on these transit routes on US-101.	**PS**	No feasible mitigation is identified.	**SU**
Impact TR-29 Implementation of the Project would not contribute to cumulative impacts on the 14X-Mission Express transit route when on I-280.	**LTS**	No mitigation is required.	**LTS**
Impact TR-30 Implementation of the Project would increase congestion and contribute to cumulative congestion on US-101 and on Bayshore Boulevard, which would increase travel times and adversely affect operations of SamTrans bus lines on these facilities. No feasible mitigation has been identified.	**PS**	No feasible mitigation is identified.	**SU**
Impact TR-31 During implementation of the Project, bicycle facilities would be expanded to serve additional users. This would be a beneficial impact of the Project.	**NI**	No mitigation is required.	**NI**
Impact TR-32 Implementation of the Project's proposed transit preferential treatments and significant increases in traffic volumes on Palou Avenue could result in impacts on bicycle travel on Bicycle Routes #70 and #170 between Griffith Street and Third Street.	**PS**	**MM TR-32** Determine the feasibility of relocating Bicycle Routes #70 and #170. Prior to issuance of the grading permit for Development Phase 1, the Project Applicant shall fund a study to determine the feasibility of relocating Bicycle Routes #70 and #170. The study of the bicycle route relocation, necessary environmental clearance documentation, and implementation shall be the responsibility of SFMTA.	**SU/MM**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact TR-33 During implementation of the Project, pedestrian facilities would be expanded to serve additional users. This would be a beneficial impact of the Project.	**NI**	No mitigation is required.	**NI**
Impact TR-34 Implementation of the Project would result in traffic volumes on area roadways that would not substantially affect pedestrian circulation and safety in the Project vicinity.	**LTS**	No mitigation is required.	**LTS**
Impact TR-35 Implementation of the Project would not result in significant impacts associated with a lack of an adequate supply of parking that could not be accommodated within alternative modes.	**LTS**	No mitigation is required.	**LTS**
Impact TR-36 Implementation of the Project roadway improvements would displace on-street parking spaces, and the existing demand could be accommodated in the nearby vicinity.	**LTS**	No mitigation is required.	**LTS**
Impact TR-37 Implementation of the Project would not result in significant impacts associated with a lack of adequate supply of loading spaces.	**LTS**	No mitigation is required.	**LTS**
Impact TR-38 For as many as 12 times a year, 49ers games at the proposed stadium would result in significant impacts on study area roadways and intersections.	**PS**	**MM TR-38** Transportation Management Plan (TMP) for the stadium. The stadium operators shall develop and maintain a Transportation Management Plan (TMP) for the stadium. The stadium operator shall work with representatives from the SFMTA, the State Highway Patrol, the Police Department, private charter operators, Caltrain and others on a continuing basis to develop and refine the TMP, as determined appropriate by SFMTA. The final stadium TMP shall be approved by SFMTA. Preparation of the TMP shall be fully funded by the stadium operator, and shall be completed in time for implementation on opening day of the stadium. The following actions shall be included in the TMP: ■ Information on transportation options to the stadium, including game day service by the various regional service providers shall be distributed to season ticket holders, employees, and other patrons if possible.	**SU/MM**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures

	Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
			■ A brochure, information packet, and/or web page providing full information on transit access to the stadium, similar to that currently offered at the 49ers website, shall be updated and maintained. ■ The use of charter buses to the stadium shall be encouraged and expanded. A number of measures shall be considered that could be implemented at low-cost to expand the use of group charters, including reduced parking costs, publicize the groups in 49ers publications and mailings, provide priority parking, provide lounges for bus drivers and provide support services for rooter clubs. ■ Residential Permit Parking Program and/or additional parking restrictions, such as time limits, during game days, particularly in the Bayview Hunters Point areas, shall be explored with residents to reduce potential for intrusion of stadium vehicles into the adjacent neighborhood during a football game or secondary event. ■ The stadium operator shall implement measures to encourage carpools of 4-plus persons per vehicle. ■ The stadium operator shall charge a higher parking cost for low occupancy vehicles. ■ The stadium operator shall develop a separate TDM plan for employees of the stadium and concessionaires. The plan shall consider measures such as providing employees and concessionaires with free or subsidized transit passes to encourage transit use and reduce vehicular travel to the stadium. Employees shall not receive preferential parking. ■ The stadium operator shall develop measures with CPSRA to ensure that game day spectators do not park in CPSRA day use parking lots. Strategies to be explored include limiting parking in CPSRA lots to a limited duration during game days (e.g., to a two-hour period), or an increase in parking fees equivalent to game day parking, and ticketing and enforcement. ■ The TMP shall ensure that regular transit routes operate acceptably near the stadium. The plan should consider providing alternate routes for those transit lines that do not have exclusive right-of-way on game days (48-Quintara-24th Street, 44-O'Shaughnessy, 29-Sunset) onto transit-only facilities such as the BRT right-of-way to the south and Palou Avenue to the north (which would be a transit-only facility on game days).	
●	**Impact TR-39** Implementation of the Project with existing game day service and Project transit improvements would not be adequate to accommodate projected transit demand.	**PS**	**MM TR-39** *Transit Service during Game Days.* SFMTA shall increase frequency on regularly scheduled Muni routes serving the stadium area on game days. In addition, the stadium operator shall fund additional Muni shuttle service between the stadium and regional transit service, including BART (Balboa Park and/or Glen Park Station) and Caltrain (Bayshore Station). Although the specific frequencies of individual routes should be determined based on patron characteristics that may evolve over time, the increased transit service, taken as an aggregate, should generally compensate for the projected shortfall of 3,600 passengers per hour on the existing and proposed transit lines. Prior to opening day at the new stadium, the City and stadium operator shall determine costs associated with the increased service and determine funding sources. Examples of funding sources that shall be considered include a surcharge on game tickets or other such revenue mechanism. Implementation of increased transit service would be the responsibility of SFMTA and the stadium operator, and would be implemented when projected attendance warrants additional service.	**SU/MM**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact TR-40 For as many of 12 times per year during game days, bicycle access in the vicinity of the proposed stadium would be constrained, however, accommodations for bicycle access and circulation would be provided.	**LTS**	No mitigation is required.	**LTS**
Impact TR-41 For as many of 12 times per year during game days, pedestrian access in the vicinity of the proposed stadium would be constrained, however, accommodations for pedestrian access and circulation would be provided.	**LTS**	No mitigation is required.	**LTS**
Impact TR-42 For as many as 12 times per year during game days, access to state park facilities for vehicles, bicyclists and pedestrians would be constrained, and heavy traffic congestion could discourage use of the park. However, access for vehicles, bicyclists, and pedestrians would be maintained.	**LTS**	No mitigation is required.	**LTS**
Impact TR-43 For as many of 12 times per year during game days, parking demand associated with sell-out events would exceed the proposed on-site supply, resulting in a parking supply shortfall. The shortfall would be accommodated within other on-street and off-street parking facilities, and some patrons may elect to take transit to the stadium.	**LTS**	No mitigation is required.	**LTS**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact TR-44 Implementation of the Project would result in stadium game day loading demand that would be accommodated within the proposed on-site supply.	**LTS**	No mitigation is required.	**LTS**
Impact TR-45 During game days, accommodation for emergency access would be provided.	**LTS**	No mitigation is required.	**LTS**
● **Impact TR-46** Weekday evening secondary events at the stadium would result in increased congestion at intersections, freeway mainline, and freeway ramps already operating at unacceptable LOS under Project conditions without a secondary event, and result in significant impacts at nine additional intersections and one additional freeway off-ramp.	**PS**	**MM TR-46** Traffic Control Officers. The stadium operator shall develop as part of a stadium Transportation Management Plan (TMP), a strategy for coordinating with representatives of SFMTA and the SF Police Department for deploying traffic control officers in the Project vicinity to increase efficiency of pre- and post- event traffic, similar to what would be in place for football game days. The secondary event component of the stadium TMP shall be approved by SFMTA. The stadium operator shall fully fund implementation of the secondary event (i.e., non-49ers football events) measures.	**SU/MM**
● **Impact TR-47** With implementation of the Project, the existing transit service and Project improvements would not be adequate to accommodate projected transit demand during secondary events with attendance of 37,500 spectators. In addition, transit lines serving the area would experience additional delays due to traffic generated by the secondary event.	**PS**	**MM TR-47** Transit Service during Secondary Events. SFMTA shall increase frequency on regularly scheduled Muni routes serving the stadium area prior to large special events. In addition, the stadium operator shall fund additional Muni shuttle service between the stadium and regional transit service, including BART (Balboa Park and/or Glen Park stations) and Caltrain (Bayshore station). ■ Routes 24-Divisadero, 28L-19th Avenue Limited, and 44-O'Shaughnessey would already be operating near their maximum frequency. Therefore, this mitigation measure primarily applies to the 48-Quintara-24th Street route and the new HPX service. If each of these routes were increased to have five-minute frequencies (typically considered the maximum frequency that can be regularly maintained), the transit capacity toward the stadium would increase by 828 passengers per hour, for a total of 3,928 passengers. Even with the additional service on these two lines, there would be a shortfall of 1,797 passengers per hour in transit capacity. ■ Additional express service to key regional transit destinations and regional charter express service, similar to what is offered on football game days, would offset a portion of the shortfall in transit capacity. The amount and nature of special service to special stadium events would depend on the type and size of the special event. Generally, the capacity of the express service should compensate for the shortfall of 1,797 passengers per hour for a 37,500-person event (transit supply, would of course, be designed on a case-by-case basis depending on the expected size of the secondary event).	**SU/MM**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
		■ SFMTA and the stadium operator shall implement a stadium transportation systems plan similar to that developed for game-day operations (except that the Yosemite Slough bridge shall not be available for private automobiles), on a case-by-case basis depending on the expected size of the secondary event. Prior to opening day at the new stadium, the City and the stadium operator shall determine costs associated with the increased service and determine funding requirements. Examples of funding sources that shall be considered include a surcharge on game tickets, parking or admission surcharge, or other such revenue mechanism. Implementation of increased transit service would be the responsibility of SFMTA and the stadium operator, and would be implemented when projected attendance warrants additional service.	
Impact TR-48 With implementation of the Project, bicycle circulation would not be impeded during secondary events at the stadium.	**LTS**	No mitigation is required.	**LTS**
Impact TR-49 With implementation of the Project, pedestrian circulation would not be impeded during arena events.	**LTS**	No mitigation is required.	**LTS**
Impact TR-50 With implementation of the Project, parking demand associated with a secondary event with an attendance of 37,500 spectators would be accommodated within the proposed supply.	**LTS**	No mitigation is required.	**LTS**
Impact TR-51 With implementation of the Project, weekday evening events at the arena would exacerbate congestion at intersections, freeway mainline, and freeway ramps already operating at unacceptable LOS under Project conditions without an arena event, and result in significant traffic impacts at Harney Way and Jamestown Avenue, which was operating acceptably under Project conditions without an arena event.	**PS**	**MM TR-51** Transportation Management Plan (TMP). The arena operator shall develop a Transportation Management Plan (TMP) for coordinating with representatives of SFMTA and the SF Police Department for deploying traffic control officers in the Project vicinity to increase efficiency of pre- and post- event traffic, and for developing incentives to increase transit ridership to the arena. If Variants 1, 2, or 2A are implemented the TMP shall provide for SFMTA to increase the frequency on regularly scheduled Muni routes (primarily the CPX-Candlestick Express) serving the arena area prior to large events at the arena and for the arena operator to provide additional shuttle service to key regional transit destinations, such as BART, Caltrain, and the T-Third light-rail route. Implementation of this mitigation measure would likely speed vehicle entrance and exit to the arena site as well as maintain orderly traffic and transit operations and reduce intrusion onto minor routes to and from the arena. Traffic control officers would facilitate traffic flow at the intersection of Harney/Jamestown which would operate at LOS F conditions with a sell-out arena event. The final arena TMP shall be approved by SFMTA. Preparation of the TMP Plan shall be fully funded by the arena operator, and shall be completed in time for implementation on opening day of the arena.	**SU/MM**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact TR-52 With implementation of the Project, sell-out weekday evening events at the arena could impact existing and proposed transit service.	**PS**	MM TR-23.1 would apply to this impact.	**SU/MM**
Impact TR-53 With implementation of the Project, bicycle circulation would not be impeded during arena events.	**LTS**	No mitigation is required.	**LTS**
Impact TR-54 With implementation of the Project, pedestrian circulation would not be impeded during arena events.	**LTS**	No mitigation is required.	**LTS**
Impact TR-55 With implementation of the Project, arena parking demand would be accommodated on street and within proposed off-street parking facilities.	**LTS**	No mitigation is required.	**LTS**
Impact TR-56 Implementation of the Project would not impact air traffic.	**NI**	No mitigation is required.	**NI**
Impact TR-57 Implementation of the Project would not create hazards due to any proposed design features.	**LTS**	No mitigation is required.	**LTS**
Impact TR-58 Implementation of the Project would not result in significant emergency access impacts.	**LTS**	No mitigation is required.	**LTS**
		SECTION III.E (AESTHETICS)	
Impact AE-1 Construction activities associated with the Project would not have a substantial adverse effect on a scenic vista or scenic resources.	**LTS**	No mitigation is required.	**LTS**

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Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact AE-2 Construction activities associated with the Project would not result in temporary degradation of the visual character or quality of the site.	**PS**	**MM AE-2** Mitigation for Visual Character/Quality Impacts During Construction. Construction documents shall require all construction contractors to strictly control the staging of construction equipment and the cleanliness of construction equipment stored or driven beyond the limits of the construction work area. Construction equipment shall be parked and staged on the Project site. Staging areas shall be screened from view at street level with solid wood fencing or green fence. Prior to the issuance of building permits, the Project Applicant (through the construction contractor[s]) shall submit a construction staging, access, and parking plan to the San Francisco Department of Building Inspection for review and approval. On-street parking of construction worker vehicles shall be prohibited. Vehicles shall be kept clean and free of mud and dust before leaving the Project site. Project contractors shall sweep surrounding streets used for construction access daily and maintain them free of dirt and debris.	**LTS/M**
Impact AE-3 Construction activities associated with the Project would not create a new source of substantial light or glare that would adversely affect day or night views in the area or that would substantially impact other people or properties.	**LTS**	No mitigation is required.	**LTS**
Impact AE-4 Implementation of the Project would not have a substantial adverse effect on a scenic vista.	**LTS**	No mitigation is required.	**LTS**
Impact AE-5 Implementation of the Project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and other features of the built or natural environment that contribute to a scenic public setting.	**LTS**	No mitigation is required.	**LTS**
Impact AE-5a Implementation of the Project at Candlestick Point would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and other features of the built or natural environment that contribute to a scenic public setting.	**LTS**	No mitigation is required.	**LTS**

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Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact AE-5b Implementation of the Project at HPS Phase II would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and other features of the built or natural environment that contribute to a scenic public setting.	**LTS**	No mitigation is required.	**LTS**
Impact AE-6 Implementation of the Project would not substantially degrade the existing visual character or quality of the site or its surroundings.	**LTS**	No mitigation is required.	**LTS**
Impact AE-6a Implementation of the Project at Candlestick Point would not substantially degrade the existing visual character or quality of the site or its surroundings.	**LTS**	No mitigation is required.	**LTS**
Impact AE-6b Implementation of the Project at HPS Phase II would not substantially degrade the visual character or quality of the site or its surroundings.	**LTS**	No mitigation is required.	**LTS**
Impact AE-7 Implementation of the Project would not create a new source of substantial light or glare that would adversely affect day or night views in the area or that would substantially impact other people or properties.	**PS**	**MM AE-7a.1**, **MM AE-7a.2**, **MM AE-7a.3**, **MM AE-7a.4**, **MM AE-7b.1**, and **MM AE-7b.2** would apply to this impact.	**LTS/M**

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Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact AE-7a Implementation of the Project at Candlestick Point would not create a new source of substantial light or glare that would adversely affect day or night views in the area or that would substantially impact other people or properties.	**PS**	**MM AE-7a.1** Lighting Direction/Fixtures and Screening Walls to Minimize Glare and Light Spill. The Project Applicant shall ensure that all parking lot and other security lighting shall be directed away from surrounding land uses and towards the specific location intended for illumination. State-of-the-art fixtures shall be used, and all lighting shall be shielded to minimize the production of glare and light spill onto surrounding use. All parking structures shall be constructed with screening walls of sufficient height to block spill light from vehicle headlights. **MM AE-7a.2** Low-level/Unobtrusive Light Fixtures. The Project Applicant shall ensure that landscape illumination and exterior sign lighting shall be accomplished with low-level, unobtrusive fixtures. **MM AE-7a.3** Lighting Plan. The Project Applicant shall prepare a lighting plan for each phase of the Project and submit it for review and approval to the San Francisco Police Department and the Agency prior to the issuance of building permits. Outdoor lighting shall maintain a minimum required illumination, as determined appropriate by the San Francisco Police Department and the Planning Department, for all parking and pedestrian areas. In addition, the plan shall include details such as beam spreads and/or photometric calculation, location and type of fixtures, exterior colors, details on foundations, and arrangement of exterior lighting such that it does not create glare, hazardous interference on adjacent streets, or properties or result in spill light that would adversely impact sensitive receptors in the project area. **MM AE-7a.4** Non-reflective Exterior Surfaces to Minimize Glare Impacts. The Project Applicant shall ensure that design of the proposed structures shall include the use of textured or other nonreflective exterior surfaces and nonreflective glass.	**LTS/M**
Impact AE-7b Implementation of the Project at HPS Phase II would not create a new source of substantial light or glare that would adversely affect day or night views in the area or that would substantially impact other people or properties.	**PS**	**MM AE-7b.1** Testing of the Field-Lighting System. Prior to opening the stadium, the Stadium Operator shall test the installed field-lighting system to ensure that lighting meets operating requirements in the stadium and minimizes obtrusive spill lighting in the ballpark facility. Testing shall include light-meter measurements at selected locations in the vicinity to measure spill lighting from stadium field-lighting fixtures, permit adjustment of lighting fixtures, and confirm that spill-lighting effects shall be within an acceptable range and compatible with typical street lighting fixtures. **MM AE-7b.2** Stadium Lighting Orientation and Cut-Off Shields. Prior to opening the stadium, the Stadium Operator shall ensure that stadium lighting is oriented in such a manner to reduce the amount of light shed onto sensitive receptors and incorporate "cut-off" shields as appropriate to minimize any increase in lighting at adjacent properties, providing that it still meets the standard of lighting for football operations.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
		SECTION III.F (SHADOWS)	
Impact SH-1 Implementation of the Project would not result in new structures with the potential to cast shadows on existing or proposed parks and open space in a manner that would have an adverse effect on the use of the open space.	**LTS**	No mitigation is required.	**LTS**
Impact SH-1a Implementation of the Project at Candlestick Point would not result in new structures with the potential to cast shadows on existing or proposed parks and open space in a manner that would have an adverse effect on the use of the open space.	**LTS**	No mitigation is required.	**LTS**
Impact SH-1b Implementation of the Project at HPS Phase II would not result in new structures with the potential to cast shadows on existing or proposed parks and open space in a manner that would have an adverse effect on the use of the open space.	**LTS**	No mitigation is required.	**LTS**
		SECTION III.G (WIND)	
Impact W-1 Implementation of the Project would not include tall structures that would result in ground-level-equivalent wind speed exceeding 26 mph for a single hour of the year in pedestrian corridors and public spaces.	**PS**	**MM W-1(a)** would apply to this impact.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact W-1a Implementation of the Project at Candlestick Point would not include tall structures that would result in ground-level-equivalent wind speed exceeding 26 mph for a single hour of the year in pedestrian corridors and public spaces.	**PS**	**MM W-1a** Building Design Wind Analysis. Prior to design approval of Project buildings, for high-rise structures above 100 feet, the Project Applicant shall retain a qualified wind consultant to provide a wind review to determine if the exposure, massing, and orientation of the building would result in wind impacts that could exceed the threshold of 26-mph-equivalent wind speed for a single hour during the year. The wind analysis shall be conducted to assess wind conditions for the proposed building(s) in conjunction with the anticipated pattern of development on surrounding blocks to determine if the Project building(s) would cause an exceedance of the wind hazard standard. The analysis shall be conducted as directed by the City's wind study guidelines, including, if required, wind tunnel modeling of potential adverse effects relating to hazardous wind conditions. The Agency shall require the Project Applicant to identify design changes that would mitigate the adverse wind conditions to below the threshold of 26-mph-equivalent wind speed for a single hour of the year. These design changes could include, but are not limited to, wind-mitigating features, such as placing towers on podiums with a minimum 15-foot setback from street edges, placement of awnings on building frontages, street and frontage plantings, articulation of building facades, or the use of a variety of architectural materials.	**LTS/M**
Impact W-1b Implementation of the Project at HPS Phase II would not include tall structures that would result in ground-level-equivalent wind speed exceeding 26 mph for a single hour of the year in pedestrian corridors and public spaces.	**PS**	**MM W-1(a)** would apply to this impact.	**LTS/M**
		SECTION III.H (AIR QUALITY)	
Impact AQ-1 Construction activities associated with the Project would not result in short-term increases in emission of criteria air pollutants and precursors that exceed BAAQMD CEQA significance criteria.	**PS**	**MM HZ-15** would apply to this impact.	**LTS/M**
Impact AQ-2 Construction activities associated with the Project would not result in impacts to on-site and off-site populations from Project-generated emissions of DPM.	**PS**	**MM AQ-2.1** and **MM AQ-2.2** would apply to this impact	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact AQ-2a Construction at Candlestick Point would not result in impacts to off-site populations from Project-generated emissions of DPM.	**PS**	**MM AQ 2.1** Implement Emission Control Device Installation on Construction. To reduce DPM emissions during Project construction, the Project Applicant shall require construction equipment used for the Project to utilize emission control technology such that 50% of the fleet will meet USEPA Tier 2 standards outfitted with California ARB Level 3 VDECS (Verified Diesel Emission Control Strategies) for particulate matter control (or equivalent) during the first two years of construction activities, increasing to 75% of the fleet in the third year and 100% of the fleet starting in the fourth year and for the duration of the Project.	**LTS/M**
Impact AQ-2b Construction at HPS Phase II would not result in impacts to off-site populations from Project-generated emissions of DPM.	**PS**	**MM AQ-2.1** would apply to this impact.	**LTS/M**
Impact AQ-2c Construction activities associated with the Project would not result in impacts to the existing Alice Griffith Public Housing from Project-generated emissions of DPM.	**PS**	**MM AQ-2.1** would also apply to this impact. **MM AQ-2.2** Implement Accelerated Emission Control Device Installation on Construction Equipment Used for Alice Griffith Parcels. In addition to mitigation measure MM AQ-2.1, in order to minimize the potential impacts to residents living in Alice Griffith from the construction activities in that area, the Project Applicant will require that all construction equipment used in the Alice Griffith parcels (CP01 though CP06) utilize equipment which meets the USEPA Tier 2 standards outfitted with California ARB Level 3 VDECS (Verified Diesel Emission Control Strategies) for particulate matter control (or equivalent) throughout the entire duration of construction activities on those parcels.	**LTS/M**
Impact AQ-3 Construction activities associated with the Project would not result in impacts to off-site and Alice Griffith populations from emissions of TACs bound to soil-PM_{10}.	**PS**	**MM HZ-15** would apply to this impact.	**LTS/M**
Impact AQ-3a Construction at Candlestick Point would not result in impacts to off-site and Alice Griffith populations from emissions of TACs bound to soil-PM_{10}.	**PS**	**MM HZ-15** would apply to this impact.	**LTS/M**
Impact AQ-3b Construction at HPS Phase II would not result in impacts to off-site and Alice Griffith populations from emissions of TACs bound to soil-PM_{10}.	**PS**	**MM HZ-15** would apply to this impact.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact AQ-4 Operation of the Project would violate BAAQMD CEQA significance thresholds for mass criteria pollutant emissions from mobile and area sources and contribute substantially to an existing or projected air quality violation at full buildout.	**S**	No feasible mitigation is available.	**SU**
Impact AQ-5 Operation of the Project would not cause local concentrations of CO to exceed State and federal ambient air quality standards due to motor vehicles trips.	**LTS**	No mitigation is required.	**LTS**
Impact AQ-6 Implementation of HPS Phase II would not expose nearby receptors to an increase in local concentrations of toxic air contaminants due to the operation of Research and Development uses.	**PS**	**MM AQ-6.1** If a facility with sources of TAC emission wishes to locate on a plot size smaller than 1 acre, an analysis will be required to show the facility, in conjunction with all other TAC emitting facilities in the R&D areas, will not cause these thresholds of a residential cancer risk of 10 in one million and a chronic noncancer HI of 1.0 to be exceeded at the nearest residential locations. **MM AQ-6.2** Each facility with sources of TAC emissions on a plot of 1 acre or larger will limit their emissions such that residential cancer risk and chronic non-cancer hazard index evaluated at the facility boundary does not exceed 10 in one million or 1.0, respectively. If these thresholds are exceeded at the boundary, an analysis will be required to show the facility, in conjunction with all other TAC emitting facilities in the R&D areas, will not cause these thresholds to be exceeded at the nearest residential locations.	**LTS/M**
Impact AQ-7 Operation of the Project would not expose receptors to concentrations of $PM_{2.5}$ above a 0.2 $\mu g/m^3$ action level for $PM_{2.5}$ and, therefore, would not substantially affect the health of nearby receptors as a result of an increase in local concentrations of vehicle emissions ($PM_{2.5}$) associated with vehicle use attributable to operation of the Project.	**LTS**	No mitigation is required.	**LTS**
Impact AQ-8 Implementation of the Project would not generate objectionable odors affecting a substantial number of people.	**LTS**	No mitigation is required.	**LTS**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact AQ-9 The Project would conform to the current regional air quality plan.	**LTS**	No mitigation is required.	**LTS**
		SECTION III.I (NOISE AND VIBRATION)	
Impact NO-1 Construction activities associated with the Project would generate increased noise levels for both off-site and on-site sensitive receptors; however, the Project's construction noise impacts would occur primarily in noise-sensitive areas adjacent or near to active construction sites (which would vary in location and duration over the entire period the proposed Project would be under construction); they would also not occur during recognized sleep hours, and would be consistent with the requirements for construction noise that exist in Sections 2907 and 2908 of the *Municipal Code*.	**PS**	**MM NO.1a.1** and **MM NO-1a.2** would apply to this impact.	**LTS/M**
Impact NO-1a Construction at Candlestick Point would generate increased noise levels for both off-site and on-site sensitive receptors; however, the Project's construction noise impacts would occur primarily in noise-sensitive areas adjacent or near to active construction sites (which would vary in location and duration over the entire period the proposed Project would be under construction), they would not occur during recognized sleep	**PS**	**MM NO-1a.1** Construction Document Mitigation to Reduce Noise Levels during Construction. The Project Applicant shall incorporate the following practices into the construction documents to be implemented by the Project contractor: ■ Provide enclosures and mufflers for stationary equipment, shrouding or shielding for impact tools, and barriers around particularly noisy operations on the site ■ Use construction equipment with lower noise emission ratings whenever possible, particularly air compressors ■ Provide sound-control devices on equipment no less effective than those provided by the manufacturer ■ Locate stationary equipment, material stockpiles, and vehicle staging areas as far as practicable from sensitive receptors ■ Prohibit unnecessary idling of internal combustion engines	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures

Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
hours, and would be consistent with the requirements for construction noise that exist in Sections 2907 & 2908 of the *Municipal Code*.		■ Require applicable construction-related vehicles and equipment to use designated truck routes to access the Project site ■ Implement noise attenuation measures to the extent feasible, which may include, but are not limited to, noise barriers or noise blankets. The placement of such attenuation measures will be reviewed and approved by the Director of Public Works prior to issuance of development permits for construction activities. ■ Designate a Noise Disturbance Coordinator who shall be responsible for responding to complaints about noise during construction. The telephone number of the Noise Disturbance Coordinator shall be conspicuously posted at the construction site and shall be provided to the City. Copies of the construction schedule shall also be posted at nearby noise-sensitive areas. **MM NO-1a.2** Noise-reducing Pile Driving Techniques and Muffling Devices. The Project Applicant shall require its construction contractor to use noise-reducing pile driving techniques if nearby structures are subject to pile driving noise and vibration. These techniques include pre-drilling pile holes (if feasible, based on soils) to the maximum feasible depth, installing intake and exhaust mufflers on pile driving equipment, vibrating piles into place when feasible, and installing shrouds around the pile driving hammer where feasible. Contractors shall be required to use construction equipment with state-of-the-art noise shielding and muffling devices. In addition, at least 48 hours prior to pile-driving activities, the Project Applicant shall notify building owners and occupants within 500 feet of the Project site of the dates, hours, and expected duration of such activities.	
Impact NO-1b Construction at HPS Phase II would generate increased noise levels for both off-site and on-site sensitive receptors; however, the Project's construction noise impacts would be temporary, they would also not occur during recognized sleep hours, and would be consistent with the requirements for construction noise that exist in Sections 2907 and 2908 of the *Municipal Code*.	**PS**	**MM NO-1a.1** and **MM NO-1a.2** would apply to this impact.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact NO-2 Construction activities associated with the Project would create excessive groundborne vibration levels in existing residential neighborhoods adjacent to the Project site and at proposed on-site residential uses should the latter be occupied before Project construction activity on adjacent parcels is complete. Although the Project's construction vibration impacts would be temporary, would not occur during recognized sleep hours, and would be consistent with the requirements for construction activities that exist in Sections 2907 & 2908 of the *Municipal Code*, vibration levels would still be significant.	**S**	**MM NO-1a.1, MM NO-1a.2,** and **MM NO-2a** would apply to this impact.	**SU/M**
Impact NO-2a Construction activities at Candlestick Point would create excessive groundborne vibration levels in existing residential neighborhoods adjacent to the Project site and at proposed on-site residential uses should the latter be occupied before Project construction activity on adjacent parcels is complete. Although the Project's construction vibration impacts would be temporary, would not occur during recognized sleep hours, and would be consistent with the requirements for construction activities that exist in Sections 2907 & 2908 of the *Municipal Code*, vibration levels would still be significant.	**S**	**MM NO-2a** Pre-construction Assessment to Minimize Pile Driving Impacts. The Project Applicant shall require its geotechnical engineering contractor to conduct a pre-construction assessment of existing subsurface conditions and the structural integrity of nearby buildings subject to pile driving impacts prior to receiving a building permit. If recommended by the geotechnical engineer, for structures or facilities within 50 feet of pile driving, the Project Applicant shall require groundborne vibration monitoring of nearby structures. Such methods and technologies shall be based on the specific conditions at the construction site such as, but not limited to, the following: ■ Pre-pile driving surveying of potentially affected structures. ■ Underpinning of foundations of potentially affected structures, as necessary. ■ The construction plan shall include a monitoring program to detect ground settlement or lateral movement of structures in the vicinity of an excavation. Monitoring results shall be submitted to DBI. In the event of unacceptable ground movement, as determined by DBI inspections, all pile driving work shall cease and corrective measures shall be implemented. The pile driving program and ground stabilization measures shall be reevaluated and approved by DBI. **MM NO-1a.1** and **MM NO-1a.2** would apply to this impact.	**SU/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact NO-2b Rock removal in the Alice Griffith and Jamestown districts would result in vibration levels that exceed the FTA threshold of 80 VdB or could cause damage to structures from vibration caused by the fracturing of bedrock for excavation.	**S**	**MM NO-1a.1** and **MM GE-3a** would apply to this impact.	**SU/M**
Impact NO-2c Construction at HPS Phase II would create excessive groundborne vibration levels in existing residential neighborhoods adjacent to the Project site and at proposed on-site residential uses should the latter be occupied before Project construction activity on adjacent parcels is complete. Although the Project's construction vibration impacts would be temporary, would not occur during recognized sleep hours, and would be consistent with the requirements for construction activities that exist in Sections 2907 & 2908 of the *Municipal Code*, vibration levels would be significant.	**S**	**MM NO-1a.1, MM NO-1a.2,** and **MM NO-2a** would apply to this impact.	**SU/M**
Impact NO-3 Construction activities associated with the Project would result in a substantial temporary or periodic increase in ambient noise levels.	**S**	**MM NO-1a.1, MM NO-1a.2,** and **MM NO-2a** would apply to this impact.	**SU/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact NO-4 Implementation of the Project, including the use of mechanical equipment or the delivery of goods, would not expose noise-sensitive land uses on or off site to noise levels that exceed the standards established by the City.	**LTS**	No mitigation is required.	**LTS**
Impact NO-5 Implementation of the Project would not generate or expose persons on or off site to excessive groundborne vibration.	**LTS**	No mitigation is required.	**LTS**
Impact NO-6 Operation of the Project would generate increased local traffic volumes that could cause a substantial permanent increase in ambient noise levels in existing residential areas along the major Project site access routes.	**S**	No feasible mitigation is available.	**SU**
Impact NO-7 Noise during football games and concerts at the proposed stadium would result in temporary increases in ambient noise levels that could adversely affect surrounding residents for the duration of a game or concert.	**S**	**MM NO-7.1** Mitigation to Minimize Game/Concert-related Temporary Increases in Ambient Noise Levels at Nearby Residences. To ensure that stadium game-and event-induced interior L_{max} noise levels do not exceed an interior noise level of 60 dBA and interfere with speech and other indoor activities in the existing Hunters Point Hill residential community closest to and north of the proposed Stadium (i.e., as identified by the R3 stadium noise model receiver), the Stadium Operator shall: ■ After Stadium Operator enters into lease agreement with Agency, send notification of the establishment of a stadium noise mitigation program (SNMP) to the residential property owners in the identified neighborhood potentially affected by noise from the proposed Stadium ■ Allow property owners an appropriate time after the date of notification about the SNMP to apply for the program, with a reminder sent to the owners before the end of the application period ■ Determine if responding property owners meet qualifications ■ Compile for property-owners reference and send to them a summary of standard types of structural acoustical mitigations ■ Choose a qualified acoustical consultant to survey the potentially affected residential units and recommend sound reduction measures appropriate to offset the modeled stadium noise impacts, which may include: > Acoustical upgrades to windows and doors	**SU/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
		> Acoustical stripping around doors and other openings > Ventilation improvements ■ Estimates cost of recommended sound reduction measures, which shall include labor and materials, permit fees, and City inspections; material costs will, as much as possible, be based on "like-for-like", that is, for replacement of existing materials similar in quality or appearance ■ Pay each qualifying property owner the amount of this estimate after obtaining a release from future claims for stadium event noise impacts at each property with each property owner responsible for implementing the sound reduction improvements ■ Establish an ad hoc community working group of neighbors to develop a mediation process should any future disputes arise over the effectiveness of the SNMP in eliminating stadium noise intrusions **MM NO-7.2** Residential Use Plan Review by Qualified Acoustical Consultant. To ensure that stadium game-and event-induced interior L_{max} noise levels do not exceed an interior noise level of 60 dBA and interfere with speech and other indoor activities in the proposed on-site residential uses closest to the proposed Stadium, the Project Applicant shall choose a qualified acoustical consultant to review plans for the new residential uses planned for areas closest to the proposed Stadium and follow their recommendations to provide acoustic insulation or other equivalent measures to ensure that interior peak noise events would not exceed 60 dBA L_{max}.	
Impact NO-8 Implementation of the Project would not expose residents and visitors to excessive noise levels from flights from San Francisco International Airport such that the noise would be disruptive or cause annoyance.	**LTS**	No mitigation is required.	**LTS**
SECTION III.J (CULTURAL RESOURCES AND PALEONTOLOGICAL RESOURCES)			
Impact CP-1 Construction activities associated with the Project could result in a substantial adverse change in the significance of a historical resource.	**S**	**MM CP-1b.1** and **MM CP-1b.2** apply to this impact.	**SU/M**
Impact CP-1a Construction at Candlestick Point would not result in a substantial adverse change in the significance of an historical resource.	**LTS**	No mitigation is required.	**LTS**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact CP-1b Construction at HPS Phase II could result in a substantial adverse change in the significance of an historical resource.	**S**	**MM CP-1b.1** Mitigation to Minimize Impacts on Historic Resources at HPS Phase II. To reduce the adverse effect on historical resources, prior to any structural demolition and removal activities, the Project Applicant shall retain a professional who meets the Secretary of the of the Interior's Professional Qualifications Standards for Architectural History to prepare written and photographic documentation of the potential Hunters Point Commercial Dry Dock and Naval Shipyard Historic District, as identified in the report titled *Bayview Waterfront Plan Historic Resources Evaluation, Volume II: Draft Historic Resources Survey and Technical Report*, July 2009, prepared by Circa Historic Property Development. The documentation for the property shall be prepared based on the National Park Services' (NPS) Historic American Building Survey (HABS) / Historic American Engineering Record (HAER) Historical Report Guidelines. This type of documentation is based on a combination of both HABS/HAER standards (Levels II and III) and NPS new policy for NR-NHL photographic documentation as outlined in the National Register of Historic Places and National Historic Landmarks Survey Photo Policy Expansion (March 2005). The written historical data for this documentation shall follow HABS / HAER Level I standards. The written data shall be accompanied by a sketch plan of the property. Efforts should also be made to locate original construction drawings or plans of the property during the period of significance. If located, these drawings should be photographed, reproduced, and included in the dataset. If construction drawings or plans cannot be located as-built drawings shall be produced. Either HABS / HAER standard large format or digital photography shall be used. If digital photography is used, the ink and paper combinations for printing photographs must be in compliance with NR-NHL photo expansion policy and have a permanency rating of approximately 115 years. Digital photographs will be taken as uncompressed .TIF file format. The size of each image will be 1600x1200 pixels at 300 ppi (pixels per inch) or larger, color format, and printed in black and white. The file name for each electronic image shall correspond with the index of photographs and photograph label. Photograph views for the dataset shall include *(a)* contextual views; *(b)* views of each side of each building and interior views, where possible; *(c)* oblique views of buildings; and *(d)* detail views of character-defining features, including features on the interiors of some buildings. All views shall be referenced on a photographic key. This photograph key shall be on a map of the property and shall show the photograph number with an arrow indicate the direction of the view. Historic photographs shall also be collected, reproduced, and included in the dataset. All written and photographic documentation of the potential Hunters Point Commercial Dry Dock and Naval Shipyard Historic District shall be approved by the SFRA, in consultation with the ERO, prior to any demolition and removal activities. **MM CP-1b.2** Interpretive Displays Depicting History of HPS. Interpretive displays related to the history of HPS shall be installed at Heritage Park at Dry Dock Nos. 2 and 3. The number and type of displays shall be approved by the SFRA, in consultation with the ERO.	**SU/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact CP-2 Construction activities associated with the Project would not result in a substantial adverse change in the significance of archaeological resources, including prehistoric Native American resources, Chinese fishing camps, and maritime related resources.	**PS**	**MM CP-2a** would apply to this impact.	**LTS/M**
Impact CP-2a Construction at Candlestick Point would not result in a substantial adverse change in the significance of archaeological resources, including prehistoric Native American, Chinese fishing camp, and maritime-related archaeological remains.	**PS**	**MM CP-2a** Mitigation to Minimize Impacts to Archaeological Resources at Candlestick Point. Based on a reasonable presumption that archaeological resources may be present within the Project site, the following measures shall be undertaken to avoid any potentially significant adverse effect from the Project on buried or submerged historical resources. Overview: The Project Applicant shall retain the services of a qualified archaeological consultant having expertise in California prehistoric and urban historical archeology. The archaeological consultant shall undertake an archaeological testing program as specified herein. In addition, the archaeological consultant shall be available to conduct an archaeological monitoring and/or data recovery program if required pursuant to this measure. The archaeological consultant's work shall be conducted in accordance with this measure and with the requirements of the Project Archaeological Research Design and Treatment Plan (Archeo-Tec. Archaeological Research Design and Treatment Plan for the Bayview Waterfront Project, San Francisco, California, 2009) at the direction of the City's Environmental Review Officer (ERO). In instances of inconsistency between the requirement of the Project Archaeological Research Design and Treatment Plan and of this archaeological mitigation measure, the requirement of this archaeological mitigation measure shall prevail. All plans and reports prepared by the consultant as specified herein shall be submitted first and directly to the ERO for review and comment, and shall be considered draft reports subject to revision until final approval by the ERO. Archaeological monitoring and/or data recovery programs required by this measure could suspend construction of the Project for up to a maximum of four weeks. At the direction of the ERO, the suspension of construction can be extended beyond four weeks only if such a suspension is the only feasible means to reduce potential effects on a significant archaeological resource as defined in CEQA Guidelines Section 15064.5(a)(c) to a less-than-significant level. Archaeological Testing Program: The archaeological consultant shall prepare and submit to the ERO for review and approval an archaeological testing plan (ATP). The archaeological testing program shall be conducted in accordance with the approved ATP. The ATP shall identify the property types of the expected archaeological resource(s) that potentially could be adversely affected by the Project, the testing method to be used, and the locations recommended for testing. The purpose of the archaeological testing program will be to determine to the extent possible the presence or absence of archaeological resources and to identify and to evaluate whether any archaeological resource encountered on the site constitutes an historical resource under CEQA.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures

Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*

At the completion of the archaeological testing program, the archaeological consultant shall submit a written report of the findings for submittal to the ERO. If, based on the archaeological testing program, the archaeological consultant finds that significant archaeological resources may be present, the ERO (in consultation with the archaeological consultant) shall determine if additional measures are warranted. Additional measures that may be undertaken include, but are not necessarily limited to, additional archaeological testing, archaeological monitoring, and/or an archaeological data recovery program. If the ERO determines that a significant archaeological resource is present and that the resource could be adversely affected by the Project, the Project Applicant shall either:

a. Re-design the Project so as to avoid any adverse effect on the significant archaeological resource; or

b. Implement a data recovery program, unless the ERO determines that the archaeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible.

Archaeological Monitoring Program: If the ERO, in consultation with the archaeological consultant, determines that an Archaeological Monitoring Program (AMP) shall be implemented, the AMP shall include the following provisions, at a minimum:

- The archaeological consultant, Project Applicant, and ERO shall meet and consult on the scope of the AMP prior to the commencement of any Project-related soils disturbing activities. The ERO, in consultation with the archaeological consultant, shall determine what Project activities shall be archaeologically monitored. In most cases, any soils- disturbing activities, such as demolition, foundation removal, excavation, grading, utilities installation, foundation work, driving of piles (foundation, shoring, etc.), and site remediation, shall require archaeological monitoring because of the risk these activities pose to potential archaeological resources and to their depositional context.
- The archaeological consultant shall train all Project construction personnel who could reasonably be expected to encounter archaeological resources of the expected resource(s), how to identify the evidence of the expected resource(s), and the appropriate protocol in the event of apparent discovery of an archaeological resource.
- The archaeological monitor(s) shall be present on the Project site according to a schedule agreed upon by the archaeological consultant and the ERO until the ERO has, in consultation with the archaeological consultant, determined that Project construction activities could have no effects on significant archaeological deposits.
- The archaeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis.
- If an intact archaeological deposit is encountered, all soil-disturbing activities in the vicinity of the deposit shall cease. The archaeological monitor shall be authorized to temporarily halt demolition/excavation/pile driving/construction activities and equipment until the deposit is evaluated. If, in the case of pile driving activity (foundation, shoring, etc.), the archaeological monitor has cause to believe that the pile driving activity may affect an archaeological resource, the pile driving activity shall be terminated until an

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures

Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*

appropriate evaluation of the resource has been made in consultation with the ERO. The archaeological consultant shall immediately notify the ERO of any encountered archaeological deposit. The archaeological consultant shall make a reasonable effort to assess the identity, integrity, and significance of the encountered archaeological deposit and present the findings of this assessment to the ERO as expeditiously as possible.

- Whether or not significant archaeological resources are encountered, the archaeological consultant shall submit a written report of the findings of the monitoring program to the ERO.

Archaeological Data Recovery Program: The archaeological data recovery program shall be conducted in accord with an Archaeological Data Recovery Plan (ADRP). The archaeological consultant, Project Applicant, and ERO shall meet and consult on the scope of the ADRP prior to preparation of a draft ADRP. The archaeological consultant shall submit a draft ADRP to the ERO. The ADRP shall identify how the proposed data recovery program will preserve the significant information the archaeological resource is expected to contain. That is, the ADRP will identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the Project. Destructive data recovery methods shall not be pursued if nondestructive methods are practical.

The scope of the ADRP shall include the following elements:

- Field Methods and Procedures. Descriptions of proposed field strategies, procedures, and operations.
- Cataloguing and Laboratory Analysis. Description of selected cataloguing system and artifact analysis procedures.
- Discard and Deaccession Policy. Description of and rationale for field and post-field discard and deaccession policies.
- Interpretive Program. Consideration of an on-site/off-site public interpretive program during the course of the archaeological data recovery program.
- Security Measures. Recommended security measures to protect the archaeological resource from vandalism, looting, and other potentially damaging activities.
- Final Report. Description of proposed report format and distribution of results.
- Curation. Description of the procedures and recommendations for the curation of any recovered data having potential research value, identification of appropriate curation facilities, and a summary of the accession policies of the curation facilities.

Human Remains and Associated or Unassociated Funerary Objects: The treatment of human remains and associated or unassociated funerary objects discovered during any soil-disturbing activity shall comply with applicable state and federal laws. This shall include immediate notification of the Coroner of the City and County of San Francisco and in the event of the Coroner's determination that the human remains are Native American

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
		remains, notification of the California State Native American Heritage Commission (NAHC), which shall appoint a Most Likely Descendant (MLD) (PRC Sec. 5097.98). The archaeological consultant, Project Applicant, and MLD shall make all reasonable efforts to develop an agreement for the treatment of human remains and associated or unassociated funerary objects with appropriate dignity (CEQA Guidelines Sec. 15064.5(d)). The agreement shall take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. Final Archaeological Resources Report: The archaeological consultant shall submit a Draft Final Archaeological Resources Report (FARR) to the ERO that evaluates the historical significance of any discovered archaeological resource and describes the archaeological and historical research methods employed in the archaeological testing/monitoring/data recovery program(s). Information that may put at risk any archaeological resource shall be provided in a separate removable insert within the final report. Once approved by the ERO, copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. The Major Environmental Analysis division of the Planning Department shall receive three copies of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest in or the high interpretive value of the resource, the ERO may require a different final report content, format, and distribution than presented above.	
Impact CP-2b Construction at HPS Phase II would not result in a substantial adverse change in the significance of archaeological resources, including prehistoric Native American resources, Chinese fishing camps, and maritime related resources.	**PS**	**MM CP-2a** would apply to this impact.	**LTS/M**
Impact CP-3 Construction activities associated with the Project would not result in a substantial adverse change in the significance of a paleontological resource.	**PS**	**MM CP-3a** would apply to this impact.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures

Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact CP-3a Construction at Candlestick Point would not result in a substantial adverse change in the significance of a paleontological resource.	**PS**	**MM CP-3a** Paleontological Resources Monitoring and Mitigation Program: The Project Applicant shall retain the services of a qualified paleontological consultant having expertise in California paleontology to design and implement a Paleontological Resources Monitoring and Mitigation Program (PRMMP). The PRMMP shall include a description of when and where construction monitoring would be required; emergency discovery procedures; sampling and data recovery procedures; procedures for the preparation, identification, analysis, and curation of fossil specimens and data recovered; preconstruction coordination procedures; and procedures for reporting the results of the monitoring program. The PRMMP shall be consistent with the Society for Vertebrate Paleontology (SVP) Standard Guidelines for the mitigation of construction-related adverse impacts to paleontological resources and the requirements of the designated repository for any fossils collected. During construction, earth-moving activities shall be monitored by a qualified paleontological consultant having expertise in California paleontology in the areas where these activities have the potential to disturb previously undisturbed native sediment or sedimentary rocks. Monitoring need not be conducted in areas where the ground has been previously disturbed, in areas of artificial fill, in areas underlain by nonsedimentary rocks (serpentinite, greenstone), or in areas where exposed sediment would be buried, but otherwise undisturbed. The consultant's work shall be conducted in accordance with this measure and at the direction of the City's Environmental Review Officer (ERO). Plans and reports prepared by the consultant shall be submitted first and directly to the ERO for review and comment, and shall be considered draft reports subject to revision until final approval by the ERO. Paleontological monitoring and/or data recovery programs required by this measure could suspend construction of the Project for up to a maximum of four weeks. At the direction of the ERO, the suspension of construction can be extended beyond four weeks only if such a suspension is the only feasible means to reduce potential effects on a significant paleontological resource as previously defined to a less-than-significant level.	**LTS/M**
Impact CP-3b Construction at HPS Phase II would not result in a substantial adverse change in the significance of a paleontological resource.	**PS**	**MM CP-3a** would apply to this impact.	**LTS/M**
Impact CP-3c Construction of the Yosemite Slough bridge, shoreline improvements, and the marina improvements activities, including in-water activities, would not result in a substantial adverse change in the significance of a paleontological resource.	**PS**	**MM CP-3a** would apply to this impact.	**LTS/M**

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Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact CP-3d Pile driving associated with construction of the Yosemite Slough bridge, shoreline improvements, and the marina improvements would not result in a substantial adverse change in the significance of a paleontological resource.	**PS**	**MM CP-3a** would apply to this impact.	**LTS/M**
		SECTION III.K (HAZARDS AND HAZARDOUS MATERIALS)	
Impact HZ-1 Construction activities associated with the Project would not expose construction workers, the public, or the environment to unacceptable levels of hazardous materials as a result of the disturbance of soil and/or groundwater with known contaminants from historic uses.	**PS**	**MM HZ-1a** and **MM HZ-1b** would apply to this impact.	**LTS/M**
Impact HZ-1a Construction at Candlestick Point bayward of the historic high tide line would not expose construction workers, the public, or the environment to unacceptable levels of hazardous materials as a result of the disturbance of soil and/or groundwater with known contaminants from historic uses.	**PS**	**MM HZ-1a** Article 22A Site Mitigation Plans. (Applies only to Candlestick Point.) Prior to obtaining a site, building or other permit from the City for development activities involving subsurface disturbance at portions of Candlestick Point bayward of the high tide line, the Project Applicant shall comply with the requirements of San Francisco Health Code Article 22A. If the site investigation required by Article 22A (or, in the case of development activity in CPSRA, which is not subject to Article 22A, a comparable site investigation that is carried out to comply with this measure, and which involves notification to California State Parks if a site mitigation plan is prepared), indicates the presence of a hazardous materials release, a site mitigation plan must be prepared. The site mitigation plan must specify the actions that will be implemented to mitigate the significant environmental or health and safety risks caused or likely to be caused by the presence of the identified release of hazardous materials. The site mitigation plan shall identify, as appropriate, such measures as excavation, containment, or treatment of the hazardous materials, monitoring and follow-up testing, and procedures for safe handling and transportation of the excavated materials, or for protecting the integrity of the cover or for addressing emissions from remedial activities, consistent with the requirements set forth in Article 22A. To the extent that Article 22A does not apply to state-owned land at CPSRA, prior to undertaking subsurface disturbance activities at CPSRA, the Agency and the California Department of Parks and Recreation shall enter into an agreement to follow procedures equivalent to those set forth in Article 22A for construction and development activities conducted at Candlestick Point State Recreation Area.	**LTS/M**

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Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact HZ-1b Construction at HPS Phase II would not expose construction workers, the public, or the environment to unacceptable levels of hazardous materials as a result of the disturbance of soil and/or groundwater with known contaminants from historic uses.	**PS**	**MM HZ-1b** Compliance with Requirements Imposed by Cleanup Decision Documents and Property Transfer Documents. (Applies only to HPS Phase II) Prior to obtaining a grading, excavation, site, building or other permit from the City for development activity at HPS Phase II involving subsurface disturbance, the Project Applicant shall submit documentation acceptable to the San Francisco Department of Public Health that the work will be undertaken in compliance with all notices, restrictions, and requirements imposed pursuant to a CERCLA ROD, Petroleum Corrective Action Plan, FOST, FOSET or FOSL, including notices, restrictions, and requirements imposed in deeds, covenants, leases, easements, and LIFOCs, and requirements set forth in Land Use Control Remedial Design Documents, Risk Management Plans, Community Involvement Plans, and health and safety plans. Such restrictions, imposed by federal and state regulatory agencies as a condition on the Navy transfer of the property to the Agency, will ensure that the property after transfer will be used in a manner that is protective of the environment and human health. The City/Agency may choose to implement this measure by requiring these actions as part of amendments to San Francisco Health Code Article 31, which currently sets forth procedural requirements for development in HPS Phase I, or through an equivalent process established by the City or Agency.	**LTS/M**
Impact HZ-2 Construction activities associated with the Project would not expose construction workers, the public, or the environment to unacceptable levels of hazardous materials as a result of the disturbance of soil and/or groundwater with previously unidentified subsurface contaminants from historic uses.	**PS**	**MM HZ-2a.1** and **MM HZ-2a.2** would apply to this impact.	**LTS/M**
Impact HZ-2a Construction at Candlestick Point would not expose construction workers, the public, or the environment to unacceptable levels of hazardous materials as a result of the disturbance of soil and/or groundwater with previously unidentified subsurface contaminants from historic uses.	**PS**	**MM HZ-2a.1** Unknown Contaminant Contingency Plan. (Applies to Candlestick Point, HPS Phase II, and off-site improvements.) Prior to obtaining the first site, building or other permit for development activities involving subsurface disturbance, the Project Applicant shall prepare and the San Francisco Department of Public Health shall approve a contingency plan to address unknown contaminants encountered during development activities. This plan, the conditions of which shall be incorporated into the first permit and any applicable permit thereafter, shall establish and describe procedures for implementing a contingency plan, including appropriate notification to nearby property owners, schools, and residents and appropriate site control procedures, in the event unanticipated subsurface hazards or hazardous material releases are discovered during construction. Control procedures would include, but would not be limited to, further investigation and, if necessary remediation of such hazards or releases, including off-site removal and disposal, containment or treatment. In the event unanticipated subsurface hazards or hazardous material releases are discovered during construction, the requirements of this unknown contaminant contingency plan shall be followed. The contingency plan shall be amended, as necessary, in the event new information becomes available that could affect the implementation of the plan. This measure	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
		shall be implemented for HPS Phase II through additions to Article 31 or through an equivalent process established by the City or Agency as explained in MM HZ-1b. **MM HZ-2a.2** Site-Specific Health and Safety Plans. (Applies to Candlestick Point, HPS Phase II, and off-site improvements.) Prior to obtaining the first site, building or other permit for the Project from the City for development activities involving subsurface disturbance, the Project Applicant shall prepare and submit to SFDPH a site-specific health and safety plan (HASP) in compliance with applicable federal and state OSHA requirements and other applicable laws to minimize impacts to public health and the environment. development of the plan shall be required as a condition of any applicable permit. The plan shall include identification of chemicals of concern, potential hazards, personal protective equipment and devices, and emergency response procedures. The HASP shall be amended, as necessary, in the event new information becomes available that could affect the implementation of the plan. This measure shall be implemented for HPS Phase II through additions to Article 31 or through an equivalent process established by the City or Agency as explained in MM HZ-1b.	
Impact HZ-2b Construction at HPS Phase II would not expose construction workers, the public, or the environment to unacceptable levels of hazardous materials as a result of the disturbance of soil and/or groundwater with previously unidentified subsurface contaminants from historic uses.	**PS**	**MM HZ-2a.1** and **MM HZ-2a.2** would apply to this impact.	**LTS/M**
Impact HZ-3 Construction activities associated with the Project would not expose construction workers, the public, or the environment to unacceptable levels of hazardous materials as a result of off-site transport and disposal of contaminated soil and groundwater.	**PS**	**MM HZ-1b** and **MM HY-1a.3** would apply to this impact	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures

Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact HZ-3a Construction at Candlestick Point would not expose construction workers, the public, or the environment to unacceptable levels of hazardous materials as a result of off-site transport and disposal of contaminated soil and groundwater.	**PS**	**MM HY-1a.3** would apply to this impact.	**LTS/M**
Impact HZ-3b Construction at HPS Phase II would not expose construction workers, the public, or the environment to unacceptable levels of hazardous materials as a result of off-site transport and disposal of contaminated soil and groundwater.	**PS**	**MM HZ-1b** and **MM HY-1a.3** would apply to this impact	**LTS/M**
Impact HZ-4 Construction activities associated with the Project would not expose construction workers, the public, or the environment to unacceptable levels of hazardous materials as a result of improvements to existing and installation of new underground utilities.	**PS**	**MM HZ-1a, MM HZ-1b, MM HZ-2a.1**, and **MM H2-2a.2** would apply to this impact.	**LTS/M**
Impact HZ-4a Construction at Candlestick Point would not expose construction workers, the public, or the environment to unacceptable levels of hazardous materials as a result of improvements to existing and installation of new underground utilities.	**PS**	**MM HZ-1a** and **MM HZ-2a.1** would apply to this impact.	**LTS/M**

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Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact HZ-4b Construction at HPS Phase II would not expose construction workers, the public, or the environment to unacceptable levels of hazardous materials as a result of improvements to existing and installation of new underground utilities.	**PS**	**MM HZ-1b, MM HZ-2a.1**, and **MM HZ-2a.2** would apply to this impact.	**LTS/M**
Impact HZ-5 Construction activities associated with the Project would not create vertical conduits for hazardous materials that could contaminate groundwater as a result of installation of foundation support piles.	**PS**	**MM HZ-1a, MM HZ-1b** and **MM HZ-5a** would apply to this impact.	**LTS/M**
Impact HZ-5a Construction at Candlestick Point would not create vertical conduits for hazardous materials that could contaminate groundwater as a result of installation of foundation support piles.	**PS**	**MM HZ-5a** Foundation Support Piles Installation Plan. (Applies to Candlestick Point and HPS Phase II.) Prior to obtaining a permit from the City that authorizes installation of deep foundation piles, the Project Applicant shall prepare and submit a plan acceptable to the City stating that pilot boreholes for each pile would be drilled through the artificial fill materials so the piles can be installed without damage or misalignment and to prevent potentially contaminated fill materials from being pushed into the underlying sediments or groundwater. This measure shall be implemented for Candlestick Point through implementation of mitigation measure MM HZ-1a. This measure shall be implemented for HPS Phase II through additions to Article 31 or through an equivalent process established by the City or Agency as explained in MM HZ-1b.	**LTS/M**
Impact HZ-5b Construction at HPS Phase II would not create vertical conduits for hazardous materials that could contaminate groundwater as a result of installation of foundation support piles.	**PS**	**MM HZ-1b** and **MM HZ-5a** would apply to this impact.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact HZ-6 Construction activities associated with the Project would not expose construction workers, the public, or the environment to unacceptable levels of hazardous materials as a result of the handling, stockpiling, and transport of soil that may contain contaminants.	**PS**	**MM HZ-1a**, **MM HY-1a.2, MM HZ-1b,** and **MM HY-1a.1** would apply to this impact.	**LTS/M**
Impact HZ-6a Construction at Candlestick Point would not expose construction workers, the public, or the environment to unacceptable levels of hazardous materials as a result of handling, stockpiling, and transport of soil that may contain contaminants.	**PS**	**MM HZ-1a, MM HY-1a.2**, and **MM HY-1a.1** would apply to this impact.	**LTS/M**
Impact HZ-6b Construction at HPS Phase II would not expose construction workers, the public, or the environment to unacceptable levels of hazardous materials as a result of handling, stockpiling, and transport of soil that may contain contaminants.	**PS**	**MM HZ-1b, MM HZ-1a.2,** and **MM HY-1a.1** would apply to this impact.	**LTS/M**
Impact HZ-7 Construction activities associated with the Project would not expose construction workers, the public, or the environment to unacceptable levels of hazardous materials that could be present in stormwater runoff.	**PS**	**MM HZ-1a, MM HY-1a.2, MM HZ-1b, MM HZ-2a.1,** and **MM HY-1a.1** would apply to this impact.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact HZ-7a Construction at HPS Phase II would not expose construction workers, the public, or the environment to unacceptable levels of hazardous materials that could be present in stormwater runoff.	**PS**	**MM HZ-1a, MM HY-1a.2, MM HZ-2a.1**, and **MM HY-1a.1** would apply to this impact.	**LTS/M**
Impact HZ-7b Construction at HPS Phase II would not expose construction workers, the public, or the environment to unacceptable levels of hazardous materials that could be present in stormwater runoff.	**PS**	**MM HZ-1b, MM HY-1a.2, MM HZ-2a.1**, and **MM HY-1a.1** would apply to this impact.	**LTS/M**
Impact HZ-8 Project occupants or visitors in or near portions of HPS Phase II where remediation has not been fully completed would not be exposed to unacceptable levels of hazardous materials.	**PS**	**MM HZ-1b** and **MM HZ-12** would apply to this impact.	**LTS/M**
Impact HZ-9 Construction at HPS Phase II would not expose construction workers, the public, or the environment to unacceptable levels of hazardous materials as a result of Yosemite Slough bridge construction.	**PS**	**MM HZ-9** Navy-approved workplans for construction and remediation activities on Navy-owned property. (Applies only to the portions of HPS Phase II on Navy-owned property). Construction activities and remediation activities conducted on behalf of the Agency or the Project Applicant, on Navy-owned property shall be conducted in compliance with all required notices, restrictions, or other requirements set forth in the applicable lease, easement, or license or other form of right of entry and in accordance with a Navy-approved workplan. This mitigation measure also requires that such activities be conducted in accordance with applicable health and safety plans, dust control plans, stormwater pollution prevention plans, community involvement plans, or any other documents or plans required under applicable law. The City/Agency will access Navy property through a lease, license, or easement. The City/Agency shall not undertake any activity or approve any Project Applicant activity on Navy-owned property until the Navy and other agencies with approval authority have approved a workplan for the activity. The requirement to comply with the approved work plans shall be incorporated into and made a condition of any City/Agency approvals related to activities on Navy property. This measure shall be implemented for HPS Phase II through a process established by the City or Agency as explained in MM HZ-1b.	**LTS/M**

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Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact HZ-10 Construction activities associated with the Project in shoreline areas would not expose construction workers, the public, or the environment to unacceptable levels of hazardous materials as a result of the disturbance of sediment or soil that may contain chemical or radiological contaminants.	**PS**	**MM BI-4a.1, MM BI-4a.2, MM BI-5b.4, MM BI-12b.1, MM HY-1a.1, MM HY-1a.2, MM HZ-1a, MM HZ-2a.1**, and **MM HZ-10b** would apply to this impact	**LTS/M**
Impact HZ-10a Construction in the shoreline areas at Candlestick Point would not expose construction workers, the public, or the environment to unacceptable levels of hazardous materials as a result of the disturbance of sediment or soil that may contain chemical contaminants.	**PS**	**MM BI-4.a.1**, **MM BI-4.a.2**, **MM HY-1a.1**, **MM HY-1a.2**, **MM HZ-1a**, and **MM HZ-2a.1** would apply to this impact.	**LTS/M**
Impact HZ-10b Construction in the shoreline areas at HPS Phase II would not expose construction workers, the public, or the environment to unacceptable levels of hazardous materials as a result of the disturbance of sediment or soil that is radiologically affected or that may contain chemical contaminants.	**PS**	**MM HZ-10b** Regulatory Agency–Approved Workplans and Permits for Shoreline Improvements. Prior to undertaking any shoreline improvement activities that would affect sediment at HPS Phase II, the Agency or its contractor or Project Applicant shall prepare appropriate design documents and submit to USEPA, DTSC, RWQCB, and, if necessary, the Navy and CDPH for approval. A Dredged Material Management Office (DMMO) permit shall be obtained. The design documents shall incorporate the necessary shoreline improvements required for each specific area (e.g., including, but not limited to, rock buttressing, pile replacement, backfilling, riprap, or installation of natural-looking shoreline protection using fill and ACB mats) such that remediation (removal of sediment and any necessary dredging) and structural improvements are performed under the same regulatory approvals and permits. Prior to undertaking any shoreline improvement activities that could affect contaminated sediments left in place and covered or capped with a Navy-installed remedial measure, or that would involve pile replacement in such areas, the Agency or its contractor or Project Applicant shall prepare appropriate design documents that: (1) describes how the cover or cap would be inspected to determine whether proposed shoreline improvements would adversely affect the cover or cap; and (2) describes how construction activities would be performed to mitigate environmental risk and to restore the cover or cap. The design documents shall be submitted to USEPA, DTSC, RWQCB, and, if necessary, the Navy and CDPH for approval. A DMMO permit shall be obtained, as applicable. Prior to undertaking any shoreline improvements that could encounter contaminated sediments, the Agency or its contractor or Project Applicant shall comply with all requirements incorporated into the design documents, work	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
		plans, health and safety plans, dust control plans, and any other document or plan required under the Administrative Order of Consent. This includes all restrictions imposed pursuant to a CERCLA ROD, Petroleum Corrective Action Plan, FOSET, including restrictions imposed in deeds, covenants, and requirements set forth in Land Use Control Remedial Design Documents, Risk Management Plans and health and safety plans. Prior to obtaining a grading, excavation, site, building, or other permit from the City that authorizes remedial activities, SFDPH shall confirm that the work proposed complies with the applicable plans required by the Administrative Order of Consent. This measure shall be implemented through additions to Article 31 or through an equivalent process established by the City or Agency as explained in MM HZ-1b. **MM HZ-1b, MM HZ-12, MM HY-1a.1, MM HY-1a.2, MM B1-4a.1, MM BI-4a.2**, **MM BI-5b.4**, and **MM BI-12b.1** would also apply to this impact.	
Impact HZ-11 Construction activities associated with the Project on Navy-owned property, including improvements to existing utilities and installation of new underground utilities, would not expose occupants, construction workers, the public, or the environment to unacceptable levels of hazardous materials as a result of the disturbance of soil, sediment, or groundwater that may contain contaminants from historic uses, including radiological contaminants.	**PS**	**MM HZ-1b** and **MM HZ-9** would apply to this impact.	**LTS/M**
● **Impact HZ-12** Remediation activities conducted on behalf of the City or Project Applicant at the HPS Phase II parcels transferred prior to completion of remediation in an "early transfer" would not expose remediation and construction workers, the public, or the environment to unacceptable levels of hazardous materials as a result of the disturbance of soil, sediment, and/or groundwater that may contain contaminants from historic uses.	**PS**	**MM HZ-12** Compliance with Administrative Order on Consent at Early Transferred Parcels. (Applies only at HPS Phase II.) Prior to undertaking any remediation activities at HPS Phase II on property that the Navy has transferred to the Agency as part of an early-transfer, the Agency or its contractor or Project Applicant shall comply with all requirements incorporated into remedial design documents, work plans, health and safety plans, dust control plans, community involvement plans, and any other document or plan required under the Administrative Order of Consent. This includes all notices, restrictions, and requirements imposed pursuant to a CERCLA ROD, Petroleum Corrective Action Plan, FOSET, including restrictions imposed in deeds, covenants, and requirements set forth in Land Use Control Remedial Design Documents, Risk Management Plans, community involvement plans, and health and safety plans. Prior to obtaining a grading, excavation, site, building, or other permit from the City that authorizes remedial activities, SFDPH shall confirm that the work proposed complies with the applicable plans required by the Administrative Order on Consent. This measure shall be implemented through a requirement in the potential additions to Article 31 imposing requirements to parcels other than Parcel A or through an equivalent process established by the City or Agency.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact HZ-13 Construction of off-site roadway improvements would not expose construction workers, the public, or the environment to unacceptable levels of hazardous materials as a result of the disturbance of soil or groundwater that may contain contaminants.	**LTS**	No mitigation is required.	**LTS**
Impact HZ-14 Construction activities associated with the Project would not expose ecological receptors to unacceptable levels of hazardous materials as a result of the disturbance of soil, sediment, and/or groundwater with contaminants from historic uses.	**PS**	**MM HZ-1a, MM HZ-1b, MM HZ-2a.1, MM HZ-9, MM HZ-10b, MM HZ-12**, **MM HY-1a.1, MM HY-1a.2, MM HY-1a.3, MM BI-4a.1, MM BI-4a.2**, and **MM BI-12b.1** would apply to this impact.	**LTS/M**
Impact HZ-14a Construction at Candlestick Point would not expose ecological receptors to unacceptable levels of hazardous materials as a result of the disturbance of soil, sediment, and/or groundwater that may contain contaminants from historic uses.	**PS**	**MM HZ-1a**, **MM HZ-2a.1**, **MM HZ-15**, **MM HY-1a.1, MM HY-1a.2**, **MM HY-1a.3, MM BI-4a.1**, and **MM BI-4a.2** would apply to this impact.	**LTS/M**
Impact HZ-14b Construction at HPS Phase II would not expose ecological receptors to unacceptable levels of hazardous materials as a result of the disturbance of soil, sediment, and/or groundwater that may contain contaminants from historic uses.	**PS**	**MM HZ-1b, MM HZ-1a, MM HZ-9, MM HZ-10b, MM HZ-12, MM HZ-15, MM HY-1a.1, MM HY-1a.2, MM HY-1a.3, MM BI-4a.1, MM BI-4a.2**, and **MM BI-12b.1** would apply to this impact.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact HZ-15 Construction and grading activities associated with the Project would not disturb soil or rock that could be a source of naturally occurring asbestos in a manner that would present a human health hazard.	**PS**	**MM HZ-15** Asbestos Dust Mitigation Plans and Dust Control Plans. Prior to obtaining a grading, excavation, site, building or other permit from the City that includes soil disturbance activities, the Project Applicant shall obtain approval of an Asbestos Dust Mitigation Plan (ADMP) from BAAQMD for areas over 1 acre that potentially contain naturally occurring asbestos and approval of a Dust Control Plan (DCP) from SFDPH for all areas at HPS Phase II and for areas over 0.5 acre at Candlestick Point. Compliance with the ADMP and DCP shall be required as a condition of the permit. The ADMP shall be submitted to and approved by the BAAQMD prior to the beginning of construction, and the Project Applicant must ensure the implementation of all specified dust control measures throughout the construction Project. The ADMP shall require compliance with the following specific control measures to the extent deemed necessary by the BAAQMD to meet its standard: ■ For construction activities disturbing less than one acre of rock containing naturally occurring asbestos, the following specific dust control measures must be implemented in accordance with the asbestos ATCM before construction begins and each measure must be maintained throughout the duration of the construction Project: > Limit construction vehicle speed at the work site to 15 miles per hour > Sufficiently wet all ground surfaces prior to disturbance to prevent visible dust emissions from crossing the property line > Keep all graded and excavated areas around soil improvement operations, visibly dry unpaved roads, parking and staging areas wetted at least three times per shift daily with reclaimed water during construction to prevent visible dust emissions from crossing the property line. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour > Adequately wet all storage piles, treat with chemical dust suppressants, or cover piles when material is not being added to or removed from the pile > Wash down all equipment before moving from the property onto a paved public road > Clean all visible track out from the paved public road by street sweeping or a HEPA filter equipped vacuum device within 24 hours ■ For construction activities disturbing greater than one acre of rock containing naturally occurring asbestos, construction contractors are required to prepare an ADMP specifying measures that will be taken to ensure that no visible dust crosses the property boundary during construction. The plan must specify the following measures, to the extent deemed necessary by the BAAQMD to meet its standard: > Prevent and control visible track out from the property onto adjacent paved roads. Sweep with reclaimed water at the end of each day if visible soil material is carried out from property > Ensure adequate wetting or covering of active storage piles	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
		> Hydroseed or apply non-toxic soil stabilizers to disturbed surface areas and storage piles greater than ten cubic yards or 500 square feet of excavated materials, backfill material, import material, gravel, sand, road base, and soil that will remain inactive for seven days or more. > Control traffic on on-site unpaved roads, parking lots, and staging areas—including a maximum vehicle speed of 15 miles per hour or less > Control earth moving activities > Provide as much water as necessary to control dust (without creating run-off) in any area of land clearing, earth movement, excavation, drillings, and other dust-generating activity > Control dust emissions from off-site transport of naturally occurring asbestos containing materials > Stabilize disturbed areas following construction If required by the BAAQMD, air monitoring shall be implemented to monitor for off-site migration of asbestos dust during construction activities, and appropriate protocols shall be established and implemented for notification of nearby schools, property owners, and residents when monitoring results indicate asbestos levels that have exceeded the standards set forth in the plan. The DCP shall be submitted to and approved by the SFDPH prior to the beginning of construction, and the site operator must ensure the implementation of all specified dust control measures throughout the construction Project. The DCP shall require compliance with the following specific mitigation measures to the extent deemed necessary by the SFDPH to achieve no visible dust at the property boundary: ■ Submission of a map to the Director of Health showing all sensitive receptors within 1,000 feet of the site. ■ Keep all graded and excavated areas, areas around soil improvement operations, visibly dry unpaved roads, parking and staging areas wetted at least three times per shift daily with reclaimed water during construction to prevent visible dust emissions from crossing the property line. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour ■ Analysis of wind direction and placement of upwind and downwind particulate dust monitors. ■ Record keeping for particulate monitoring results. ■ Requirements for shutdown conditions based on wind, dust migration, or if dust is contained within the property boundary but not controlled after a specified number of minutes. ■ Establishing a hotline for surrounding community members who may be potentially affected by Project-related dust. Contact person shall respond and take corrective action within 48 hours. Post publicly visible signs around the site with the hotline number as well as the phone number of the BAAQMD and make sure the numbers are given to adjacent residents, schools, and businesses. ■ Limiting the area subject to construction activities at any one time. ■ Installing dust curtains and windbreaks on windward and downwind sides of the property lines, as necessary. Windbreaks on windward side should have no more than 50% air porosity.	

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
		■ Limiting the amount of soil in trucks hauling soil around the job site to the size of the truck bed and securing with a tarpaulin or ensuring the soil contains adequate moisture to minimize or prevent dust generation during transportation. ■ Enforcing a 15 mph speed limit for vehicles entering and exiting construction areas. ■ Sweeping affected streets with water sweepers at the end of the day. ■ Hiring an independent third party to conduct inspections for visible dust and keeping records of those inspections. ■ Minimizing the amount of excavated material or waste materials stored at the site. ■ Prevent visible track out from the property onto adjacent paved roads. Sweep with reclaimed water at the end of each day if visible soil material is carried out from property For all areas, this measure shall be implemented through Article 22B (areas over one half acre) or for HPS Phase II through a requirement in the potential additions to Article 31 imposing requirements to parcels other than Parcel A or through an equivalent process established by the City or Agency.	
Impact HZ-16 Construction activities associated with the Project would not result in a health hazard to construction workers, the public, or the environment as a result of the demolition or renovation of existing structures that could include asbestos-containing materials, lead-based paint, PCBs, or fluorescent lights containing mercury.	**LTS**	No mitigation is required.	**LTS**
Impact HZ-16a Construction at Candlestick Point would not result in a health hazard to construction workers, the public, or the environment as a result of the demolition or renovation of existing structures that could include asbestos-containing materials, lead-based paint, PCBs, or fluorescent lights containing mercury.	**LTS**	No mitigation is required.	**LTS**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact HZ-16b Construction at HPS Phase II would not result in a health hazard to construction workers, the public, or the environment as a result of the demolition or renovation of existing structures that could include asbestos-containing materials, lead-based paint, PCBs, or fluorescent lights containing mercury.	**LTS**	No mitigation is required.	**LTS**
Impact HZ-17 Construction activities associated with the Project would not expose construction workers to unacceptable levels of hazardous materials in soil, sediment, or groundwater in a manner which would present a human health risk.	**PS**	**MM HZ-2a.2** would apply to this impact.	**LTS/M**
Impact HZ-17a Construction at Candlestick Point would not expose construction workers to unacceptable levels of hazardous materials in soil or groundwater in a manner which would present a human health risk.	**PS**	**MM HZ-2a.2** would apply to this impact.	**LTS/M**
Impact HZ-17b Construction at HPS Phase II would not expose construction workers to unacceptable levels of hazardous materials in soil, sediment, or groundwater in a manner which would present a human health risk.	**PS**	**MM HZ-2a.2** would apply to this impact.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact HZ-18 Construction activities associated with the Project would not result in a human health risk involving the disturbance of naturally occurring asbestos, demolition of buildings that could contain hazardous substances in building materials, or possible disturbance of contaminated soils or groundwater within one-quarter mile of an existing school.	**PS**	**MM HZ-1a, MM HZ-1b, MM HZ-2a.1, MM HZ-2a.2,** and **MM HZ-15** would apply to this impact.	**LTS/M**
Impact HZ-18a Construction at Candlestick Point would not result in a human health risk involving the disturbance of naturally occurring asbestos, demolition of buildings that could contain hazardous substances in building materials, or possible disturbance of contaminated soils or groundwater within one-quarter mile of an existing school.	**PS**	**MM HZ 1a, HZ-2a.1, MM HZ-2a.2,** and **MM HZ-15** would apply to this impact.	**LTS/M**
Impact HZ-18b Construction at HPS Phase II would not result in a human health risk involving the disturbance of naturally occurring asbestos, demolition of buildings that could contain hazardous substances in building materials, or possible disturbance of contaminated soils or groundwater within one-quarter mile of an existing school.	**PS**	**MM HZ-1b, MM HZ-2a.1, MM HZ-2a.2**, and **MM HZ-15** would apply to this impact.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact HZ-19 Simultaneous construction activities at the Project site would not pose a human health risk from the release of contaminants from historic uses or fill.	**PS**	**MM HZ-1a, MM HZ-1b, MM HZ-9,** and **MM HZ-15** would apply to this impact.	**LTS/M**
Impact HZ-20 Construction activities associated with the Project would not result in adverse impacts to construction workers, visitors, or the environment from the routine use, storage, transportation, and disposal of hazardous materials.	**LTS**	No mitigation is required.	**LTS**
Impact HZ-21 Implementation of the Project would not result in adverse impacts to residents, visitors, or the environment from periodic maintenance requiring excavation of site soils to maintain or replace utilities, repair foundations, or make other subsurface repairs.	**PS**	**MM HZ-1a, MM HZ-1b, MM HZ-2a.1, MM HZ-2a.2, MM HZ-9,** and **MM HZ-12** would apply to this impact.	**LTS/M**
Impact HZ-21a Implementation of the Project at Candlestick Point would not result in adverse impacts to residents, visitors, or the environment from periodic maintenance requiring excavation of site soils to maintain or replace utilities, repair foundations, or make other subsurface repairs.	**PS**	**MM HZ-1a**, **MM HZ-2a.1**, and **MM HZ-2a.2** would apply to this impact.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact HZ-21b Implementation of the Project at HPS Phase II would not result in adverse impacts to residents, visitors, or the environment from periodic maintenance requiring excavation of site soils to maintain or replace utilities, repair foundations, or make other subsurface repairs.	**PS**	**MM HZ-1b, MM HZ-2a.1, MM HZ-2a.2, MM HZ-9,** and **MM HZ-12** would apply to this impact.	**LTS/M**
Impact HZ-22 Implementation of the Project would not result in a significant impact involving the routine use, storage, transportation, and disposal of hazardous materials.	**LTS**	No mitigation is required.	**LTS**
Impact HZ-23 Implementation of the Project would not pose a human health risk and/or result in an adverse effect on the environment from reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	**LTS**	No mitigation is required.	**LTS**
Impact HZ-24 Areas designated for research and development uses within HPS Phase II would not pose a human health risk as a result of hazardous air emissions within one-quarter mile of a school.	**PS**	**MM AQ-6.1** and **MM AQ-6.2** would apply to this impact.	**LTS/M**
Impact HZ-25 The Project site is not within the San Francisco Airport Land Use Policy Plan and the Project would not result in a safety hazard for people residing or working in the Project site.	**NI**	No mitigation is required.	**NI**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact HZ-26 Implementation of the Project would not occur within the vicinity of a private airstrip and would not result in a safety hazard for people residing or working in the Project site.	**NI**	No mitigation is required.	**NI**
Impact HZ-27 Implementation of the Project would not expose people or structures to a significant risk of loss, injury, or death involving fires or conflict with emergency response or evacuation plans.	**LTS**	No mitigation is required.	**LTS**
		SECTION III.L (GEOLOGY AND SOILS)	
Impact GE-1 Construction activities associated with the Project would not result in the loss of topsoil caused by soil erosion.	**PS**	**MM HY-1a.1** would apply to this impact.	**LTS/M**
Impact GE-1a Construction at Candlestick Point, including the Yosemite Slough bridge, would not result in the loss of topsoil caused by soil erosion.	**PS**	**MM HY-1a.1** would apply to this impact.	**LTS/M**
Impact GE-1b Construction at HPS Phase II would not result in the loss of topsoil caused by soil erosion.	**PS**	**MM HY-1a.1** would apply to this impact.	**LTS/M**
Impact GE-2 Construction activities associated with the Project would not result in damage to structures caused by settlement from lowering of groundwater levels.	**PS**	**MM GE-2a** would apply to this impact.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact GE-2a Construction at Candlestick Point and the Yosemite Slough bridge would not result in damage to structures from settlement caused by lowering of groundwater levels.	**PS**	**MM GE-2a** Mitigation to Minimize Dewatering Impacts during Construction. Prior to the issuance of any permit for a construction activity that would involve dewatering that could affect structures on adjacent or nearby properties, the Applicant shall, in compliance with Section 1803.1 of the *San Francisco Building Code* (SFBC), include in the permit application methods and techniques to ensure that dewatering would not lower the water table such that unacceptable settlement (as determined by a California Certified Engineering Geologist [CEG] or California Registered Geotechnical Engineer [GE]) at adjacent or nearby properties would occur. Such methods and technologies shall be based on the specific conditions at the construction site and could include, but are not necessarily limited to, the following: ■ Excavating below the groundwater table in confined areas with steel sheet piling driven below the base elevation of the proposed excavation, installation of bracing to support the excavation walls as required and, if necessary, underpinning the foundations of adjacent structures. Subsequently, the excavation would be carried out and seepage that enters the dammed area would be pumped out. ■ Perform dewatering using methods such as wellpoint systems, drainage ditches, and sump pumps. The excavation or dewatering methods shall be monitored to detect ground settlement and to monitor individual dewatering activities in the vicinity of an excavation. Monitoring results shall be submitted to the San Francisco Department of Building Inspection (DBI). In the event of unacceptable ground movement, as determined by DBI inspections and/or the review of monitoring results, all excavation work shall cease and corrective measures (including, for example, different dewatering methods and/or ground stabilization methods) shall be determined by the Project CEG or GE and reviewed and approved by DBI. No construction permit involving dewatering would be issued until the Project CEG or GE and DBI have approved dewatering and/or ground stabilization methods. The Project CEG or GE shall implement the corrective measures and continue monitoring activities.	**LTS/M**
Impact GE-2b Construction at HPS Phase II would not result in damage to structures caused by settlement from lowering of groundwater levels.	**PS**	**MM GE-2a** would apply to this impact.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact GE-3 Rock removal activities at the Alice Griffith Public Housing site and the Jamestown area would not result in damage to structures from vibration and/or settlement caused by the fracturing of bedrock for excavation.	**PS**	**MM GE-3** Mitigation to Minimize Rock Fragmentation Impacts during Construction. Prior to the issuance of any permit for a construction activity that would involve controlled rock fragmentation that could cause settlement or lateral movement of structures on adjacent or nearby properties, the Applicant shall, in compliance with Section 1803.1 of the *San Francisco Building Code* (SFBC), include in the permit application methods and techniques to ensure that controlled rock fragmentation would not cause unacceptable vibration and/or settlement or lateral movement of structures at adjacent or nearby properties. Such methods and technologies shall be based on the specific conditions at the construction site such as, but not limited to, the following: ■ Pre-excavation surveying of potentially affected structures. ■ Underpinning of foundations of potentially affected structures, as necessary. The excavation plan shall include a monitoring program to detect ground settlement or lateral movement of structures in the vicinity of an excavation. Monitoring results shall be submitted to DBI. In the event of unacceptable ground movement, as determined by DBI inspections, all excavation work shall cease and corrective measures shall be implemented. The controlled rock fragmentation program and ground stabilization measures shall be reevaluated and approved by the DBI.	**LTS/M**
Impact GE-4 Implementation of the Project would not expose people and structures to substantial adverse effects caused by seismically induced groundshaking.	**PS**	**MM GE-4a.1, MM GE-4a.2,** and **MM GE-4a.3** would apply to this impact.	**LTS/M**
Impact GE-4a Implementation of the Project at Candlestick Point, including the Yosemite Slough bridge and Alice Griffith Housing, would not expose people or structures to substantial adverse effects caused by seismically induced groundshaking.	**PS**	**MM GE-4a.1** Site-Specific Geotechnical Investigation with Seismic Analyses. Prior to the issuance of any building permits for the Project site: ■ The Applicant shall submit to the San Francisco Department of Building Inspection (DBI) for review and approval a site-specific, design-level geotechnical investigation prepared by a California Certified Engineering Geologist (CEG) or California Registered Geotechnical Engineer (GE), as well as project plans prepared in compliance with the requirements of the San Francisco Building Code (SFBC), the Seismic Hazards Mapping Act, and requirements contained in CGS Special Publication 117A "Guidelines for Evaluating and Mitigating Seismic Hazards in California." In addition, all engineering practices and analyses of peak ground accelerations and structural design shall be consistent with SFBC standards to ensure that structures can withstand expected ground accelerations. The CEG or GE shall determine and DBI shall approve design requirements for foundations and all other improvements associated with the permit application. ■ DBI shall employ a third-party CEG and California Registered Professional Engineer (Civil) (PE) to form a Geotechnical Peer Review Committee (GPRC), consisting of DBI and these third-party reviewers. The GPRC shall review the site-specific geotechnical investigations and the site-specific structural, foundation, infrastructure, and other relevant plans to ensure that these plans incorporate all necessary geotechnical mitigation measures. No permits shall be issued by DBI until the GPRC has approved the geotechnical	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
		investigation and the Project plans, including the factual determinations and the proposed engineering designs and construction methods. ■ All Project structural designs shall incorporate and conform to the requirements in the site-specific geotechnical investigations. ■ The Project CEG or GE shall be responsible for ensuring compliance with these requirements. **MM GE-4a.2** Seismic Design Compliance Documentation. Prior to the issuance of building permits for the replacement of the Alice Griffith Public Housing site, the Applicant shall submit any and all seismic design compliance documentation to the HUD, as required by that agency. The Project Developer shall confirm, by copy of all documents submitted, including transmittal, compliance with this requirement to DBI. The Project California Certified Engineering Geologist (CEG) or California Registered Geotechnical Engineer (GE) shall be responsible for verifying Project compliance with this requirement. **MM GE-4a.3** Site-specific Seismic Analyses to Ensure Safety of Bridge Design. Prior to the issuance of any building permits for the Project site, the California Certified Engineering Geologist (CEG) or California Registered Geotechnical Engineer (GE) for the Project shall confirm that the design-level geotechnical investigation for the Yosemite Slough bridge is based on Caltrans specifications (*Bridge Design Specifications*, Section 20 of *Bridge Memos to Designers*, *Seismic Design Criteria* as previously described) and meets the San Francisco Department of Public Works Bureau of Engineering (BOE) requirements. The Project CEG or GE and California Registered Structural Engineer (SE) shall approve bridge design. No building permits shall be issued until the CEG or GE and SE verify that the Project's bridge design complies with all Caltrans specifications and BOE requirements.	
Impact GE-4b Implementation of the Project at HPS Phase II would not expose people and structures to substantial adverse effects caused by seismically induced groundshaking.	**PS**	**MM GE-4a.1** would apply to this impact.	**LTS/M**
Impact GE-5 Implementation of the Project would not expose people or structures to substantial adverse effects caused by seismically induced ground failure such as liquefaction, lateral spreading, and settlement.	**PS**	**MM GE-4a.1, MM GE-4a.2, MM GE-4a.3**, and **MM GE-5a** would apply to this impact.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact GE-5a Implementation of the Project at Candlestick Point, including the Alice Griffith Housing and Yosemite Slough bridge, would not expose people or structures to substantial adverse effects caused by seismically induced ground failure such as liquefaction, lateral spreading, and settlement.	**PS**	**MM GE-5a** Site-Specific Geotechnical Investigation with Analyses of Liquefaction, Lateral Spreading and/or Settlement. Prior to issuance of building permits for the Project site: ■ The Applicant shall submit to the San Francisco Department of Building Inspection (DBI) for review and approval a site-specific, design-level geotechnical investigation prepared by a California Certified Engineering Geologist (CEG) or California Registered Geotechnical Engineer (GE), as well as project plans prepared in compliance with the requirements of the San Francisco Building Code (SFBC), the Seismic Hazards Mapping Act, and requirements contained in CGS Special Publication 117A "Guidelines for Evaluating and Mitigating Seismic Hazards in California." In addition, all engineering practices, and analyses of structural design shall be consistent with SFBC standards to ensure seismic stability, including reduction of potential liquefaction hazards. ■ DBI shall employ a third-party CEG and California Registered Professional Engineer (Civil) (PE) to form a Geotechnical Peer Review Committee (GPRC), consisting of DBI and these third-party reviewers. The GPRC shall review the site-specific geotechnical investigations and the site-specific structural, foundation, infrastructure, and other relevant plans to ensure that these plans incorporate all necessary geotechnical mitigation measures. No permits shall be issued by DBI until the GPRC has approved the geotechnical investigation and the Project plans, including the factual determinations and the proposed engineering designs and construction methods. ■ All Project structural designs shall incorporate and conform to the requirements in the site-specific geotechnical investigations. ■ The site-specific Project plans shall incorporate the mitigation measures contained in the approved site-specific geotechnical reports to reduce liquefaction hazards. The engineering design techniques to reduce liquefaction hazards shall include proven methods generally accepted by California Certified Engineering Geologists, subject to DBI and GPRC review and approval, including, but not necessarily limited to: > Structural Measures o Construction of deep foundations, which transfer loads to competent strata beneath the zone susceptible to liquefaction, for critical utilities and shallow foundations o Structural mat foundations to distribute concentrated load to prevent damage to structures > Ground Improvement Measures o Additional over-excavation and replacement of unstable soil with engineering-compacted fill o Dynamic compaction, such as Deep Dynamic Compaction (DDC) or Rapid Impact Compaction (RIC), to densify loose soils below the groundwater table o Vibro-compaction, sometimes referred to as vibro-floatation, to densify loose soils below the groundwater table o Stone columns to provide pore pressure dissipation pathways for soil, compact loose soil between columns, and provide additional bearing support beneath foundations	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
		○ Soil-cement columns to densify loose soils and provide additional bearing support beneath foundations ■ The Project CEG or GE shall be responsible for ensuring compliance with these requirements. **MM GE-4a.1**, **MM GE-4a.2**, and **MM GE-4a.3** would also apply to this impact.	
Impact GE-5b Implementation of the Project at HPS Phase II would not expose people or structures to substantial adverse effects caused by seismically induced ground failure such as liquefaction, lateral spreading, and settlement.	**PS**	**MM GE-4a.1** and **MM GE-5a** would apply to this impact.	**LTS/M**
Impact GE-6 Implementation of the Project would not expose people or structures to substantial adverse effects caused by seismically induced landslides.	**PS**	**MM GE-4a.2** and **MM GE-6a** would apply to this impact.	**LTS/M**
Impact GE-6a Implementation of the Project at Candlestick Point, including the Alice Griffith Housing, would not expose people or structures to substantial adverse effects caused by seismically induced landslides.	**PS**	**MM GE-6a** Site-Specific Geotechnical Investigation with Landslide Risk Analyses. Prior to issuance of building permits for the Project site: ■ The Applicant shall submit to the San Francisco Department of Building Inspection (DBI) for review and approval a site-specific, design-level geotechnical investigation prepared by a California Certified Engineering Geologist (CEG) or California Registered Geotechnical Engineer (GE), as well as project plans prepared in compliance with the requirements of the San Francisco Building Code (SFBC), the Seismic Hazards Mapping Act, and requirements contained in CGS Special Publication 117A "Guidelines for Evaluating and Mitigating Seismic Hazards in California." In addition, all engineering practices, and analyses of structural design shall be consistent with SFBC standards to ensure seismic stability, including reduction of potential landslide hazards. ■ DBI shall employ a third-party CEG and California Registered Professional Engineer (Civil) (PE) to form a Geotechnical Peer Review Committee (GPRC), consisting of DBI and these third-party reviewers. The GPRC shall review the site-specific geotechnical investigations and the site-specific structural, foundation, infrastructure, and other relevant plans to ensure that these plans incorporate all necessary geotechnical mitigation measures. No permits shall be issued by DBI until the GPRC has approved the geotechnical investigation and the Project plans, including the factual determinations and the proposed engineering designs and construction methods.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures

Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
		■ All Project structural designs shall incorporate and conform to the requirements in the site-specific geotechnical investigations. ■ The site-specific Project plans shall incorporate the mitigation measures contained in the approved site-specific geotechnical reports to reduce landslide hazards. The engineering design techniques to reduce landslide hazards shall include proven methods generally accepted by California Certified Engineering Geologists, subject to DBI and GPRC review and approval. The design-level geologic and geotechnical studies shall identify the presence of landslides and potentially unstable slopes and shall identify means to avoid the hazard or support the design of engineering procedures to stabilize the slopes, as required by Chapter 18 (Soils and Foundations) of the SFBC, as well as the procedures outlined in CGS Special Publication 117A. SFBC Sections 1803 through 1812 contain the formulae, tables, and graphs by which the Project engineer shall develop the Project's slope-stability specifications, including the appropriate foundation designs for structures on slopes and which would be used by DBI to verify the applicability of the specifications. If the presence of unstable slopes is identified, appropriate support and protection procedures shall be designed and implemented to maintain the stability of slopes adjacent to newly graded or re-graded access roads, work areas, and structures during and after construction, and to minimize potential for damage to structures and facilities at the Project site. These stabilization procedures, including, but not necessarily limited to, the following: > Retaining walls, rock buttresses, screw anchors, or concrete piers > Slope drainage or removal of unstable materials > Rockfall catch fences, rockfall mesh netting, or deflection walls > Setbacks at the toe of slopes > Avoidance of highly unstable areas ■ The Project CEG or GE shall be responsible for ensuring compliance with these requirements. **MM GE-4a.2** and **MM GE-6a** would also apply to this impact.	
Impact GE-6b Implementation of the Project at HPS Phase II would not expose people or structures to substantial adverse effects caused by seismically induced landslides.	**NI**	No mitigation is required.	**NI**
Impact GE-7 Implementation of the Project would not expose people or structures to substantial adverse effects caused by shoreline instability.	**PS**	**MM HY-12a.1** would apply to this impact.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact GE-7a Implementation of the Project at Candlestick Point would not expose people or structures to substantial adverse effects caused by shoreline instability.	**PS**	**MM HY-12a.1** would apply to this impact.	**LTS/M**
Impact GE-7b Implementation of the Project at HPS Phase II would not expose people or structures to substantial adverse effects caused by shoreline instability.	**PS**	**MM HY-12a.1** would apply to this impact.	**LTS/M**
Impact GE-8 Implementation of the Project would not expose people or structures to substantial adverse effects caused by landslides.	**PS**	**MM GE-6a** would apply to this impact.	**LTS/M**
Impact GE-8a Implementation of the Project at Candlestick Point would not expose people or structures to substantial adverse effects caused by landslides.	**PS**	**MM GE-6a** would apply to this impact.	**LTS/M**
Impact GE-8b Implementation of the Project at HPS Phase II would not expose people or structures to substantial adverse effects caused by landslides.	**PS**	**MM GE-6a** would apply to this impact.	**LTS/M**
Impact GE-9 Implementation of the Project would not expose people or structures to substantial adverse effects caused by damage from settlement.	**PS**	**MM GE-4a.2, MM GE-4a.3**, and **MM GE-5a** would apply to this impact.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact GE-9a Implementation of the Project at Candlestick Point, including Alice Griffith Housing and the Yosemite Slough bridge, would not expose people or structures to substantial adverse effects caused by damage from settlement.	**PS**	**MM GE-4a.2**, **MM GE-4a.3,** and **MM GE-5a** would apply to this impact.	**LTS/M**
Impact GE-9b Implementation of the Project at HPS Phase II would not expose people or structures to substantial adverse effects caused by damage from settlement.	**PS**	**MM GE-5a** would apply to this impact.	**LTS/M**
Impact GE-10 Implementation of the Project would not expose people or structures to substantial adverse effects caused by expansive soils.	**PS**	**MM GE-4a.1**, **MM GE-4a.2, GE-4a.3,** and **MM GE-10a** would apply to this impact.	**LTS/M**
Impact GE-10a Implementation of the Project at Candlestick Point, including Alice Griffith Housing and the Yosemite Slough bridge, would not expose people or structures to substantial adverse effects caused by expansive soils.	**PS**	**MM GE-10a** Site-Specific Geotechnical Investigation with Expansive Soils Analyses. Prior to issuance of building permits for the Project site: ■ The Applicant shall submit to the San Francisco Department of Building Inspection (DBI) for review and approval a site-specific, design-level geotechnical investigation prepared by a California Certified Engineering Geologist (CEG) or California Registered Geotechnical Engineer (GE), as well as project plans prepared in compliance with the requirements of the San Francisco Building Code (SFBC). In addition, all engineering practices, and analyses of structural design shall be consistent with SFBC standards to ensure soils stability, including reduction of potential soil expansion hazards. ■ DBI shall employ a third-party CEG and California Registered Professional Engineer (Civil) (PE) to form a Geotechnical Peer Review Committee (GPRC), consisting of DBI and these third-party reviewers. The GPRC shall review the site-specific geotechnical investigations and the site-specific structural, foundation, infrastructure, and other relevant plans to ensure that these plans incorporate all necessary geotechnical mitigation measures. No permits shall be issued by DBI until the GPRC has approved the geotechnical investigation and the Project plans, including the factual determinations and the proposed engineering designs and construction methods. ■ All Project structural designs shall incorporate and conform to the requirements in the site-specific geotechnical investigations.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures

Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
		■ The site-specific Project plans shall incorporate the mitigation measures contained in the approved site-specific geotechnical reports to reduce expansive soils hazards. The engineering design techniques to reduce expansive soils hazards shall include proven methods generally accepted by California Certified Engineering Geologists, subject to DBI and GPRC review and approval. The design-level geologic and geotechnical studies shall identify the presence of expansive soils and potentially unstable soils and shall identify means to avoid the hazard or support the design of engineering procedures to stabilize the soils, as required by Chapter 18 (Soils and Foundations) of the SFBC. SFBC Sections 1803 through 1812 contain the formulae, tables, and graphs by which the Project engineer shall develop the Project's soil-stability specifications, including the appropriate foundation designs for structures on expansive soils and which would be used by DBI to verify the applicability of the specifications. If the presence of expansive soils is identified, appropriate support and protection procedures shall be designed and implemented to maintain the stability of soils adjacent to newly graded or re-graded access roads, work areas, and structures during and after construction, and to minimize potential for damage to structures and facilities at the Project site. ■ The Project CEG or GE shall be responsible for ensuring compliance with these requirements. **MM GE-4a.2,** and **MM GE-4a.3** would also apply to this impact.	
Impact GE-10b Implementation of the Project at HPS Phase II would not expose people or structures to substantial adverse effects caused by expansive soils.	**PS**	**MM GE-10a** would apply to this impact.	**LTS/M**
Impact GE-11 Implementation of the Project would not expose people or structures to substantial adverse effects caused by corrosive soils.	**PS**	**MM GE-4a.2**, **MM GE-4a.3**, and **MM GE-11a** would apply to this impact.	**LTS/M**
Impact GE-11a Implementation of the Project at Candlestick Point, including Alice Griffith Housing and the Yosemite Slough bridge, would not expose people or structures to substantial adverse effects caused by corrosive soils.	**PS**	**MM GE-11a** Site-Specific Geotechnical Investigation with Corrosive Soils Analyses. Prior to issuance of building permits for the Project site: ■ The Applicant shall submit to the San Francisco Department of Building Inspection (DBI) for review and approval a site-specific, design-level geotechnical investigation prepared by a California Certified Engineering Geologist (CEG) or California Registered Geotechnical Engineer (GE), as well as project plans prepared in compliance with the requirements of the San Francisco Building Code (SFBC). In addition, all engineering practices, and analyses of structural design shall be consistent with SFBC standards to ensure soils stability, including reduction of potential hazards from corrosive soils. ■ DBI shall employ a third-party CEG and California Registered Professional Engineer (Civil) (PE) to form a Geotechnical Peer Review Committee (GPRC), consisting of DBI and these third-party reviewers. The GPRC shall review the site-specific geotechnical investigations and the site-specific structural, foundation,	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures

Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
		infrastructure, and other relevant plans to ensure that these plans incorporate all necessary geotechnical mitigation measures. No permits shall be issued by DBI until the GPRC has approved the geotechnical investigation and the Project plans, including the factual determinations and the proposed engineering designs and construction methods. ■ All Project structural designs shall incorporate and conform to the requirements in the site-specific geotechnical investigations. ■ The site-specific Project plans shall incorporate the mitigation measures contained in the approved site-specific geotechnical reports to reduce potential hazards from corrosive soils. The engineering design techniques to reduce corrosive soils hazards shall include proven methods generally accepted by California Certified Engineering Geologists, subject to DBI and GPRC review and approval. The design-level geologic and geotechnical studies shall identify the presence of corrosive soils and shall identify means to avoid the hazard, as required by Chapter 18 (Soils and Foundations) of the SFBC. SFBC Sections 1803 through 1812 contain the formulae, tables, and graphs by which the Project engineer shall develop the Project's structural design specifications, including the appropriate foundation designs for structures on corrosive soils and which would be used by DBI to verify the applicability of the specifications. If the presence of corrosive soils is identified, appropriate protection procedures shall be designed and implemented to minimize potential for damage from corrosive soils to structures and facilities at the Project site. ■ The Project CEG or GE shall be responsible for ensuring compliance with these requirements. **MM GE-4a.2** and **MM GE-4a.3** would also apply to this impact.	
Impact GE-11b Implementation of the Project at HPS Phase II would not expose people or structures to substantial adverse effects caused by corrosive soils.	**PS**	**MM GE-11a** would apply to this impact.	**LTS/M**
Impact GE-12 Implementation of the Project would not expose people or structures to substantial adverse effects caused by surface fault rupture.	**NI**	No mitigation is required.	**NI**
Impact GE-13 Implementation of the Project would not result in the use of soils incapable of adequately supporting septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.	**NI**	No mitigation is required.	**NI**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact GE-14 Implementation of the Project would not result in a substantial change of topography or destruction of unique geologic features.	**NI**	No mitigation is required.	**NI**
		SECTION III.M (HYDROLOGY AND WATER QUALITY)	
Impact HY-1 Construction activities associated with the Project would not cause an exceedance of water quality standards or contribute to or cause a violation of waste discharge requirements.	**PS**	**MM HY-1a.1, MM HY-1a.2, MM HY-1a.3, MM BI-4a.1, MM HZ-12, MM HZ-15, MM HZ-10b, MM BI-4a.2, MM BI-5b.4, MM BI-12b.1, MM BI-12b.2, MM HZ-1a, MM HZ-2a.1,** and **MM HZ-9** would apply to this impact.	**LTS/M**
Impact HY–1a Construction at Candlestick Point would not cause an exceedance of water quality standards or contribute to or cause a violation of waste discharge requirements.	**PS**	**MM HY-1a.1** Storm Water Pollution Prevention Plan: Combined Storm Sewer System. In compliance with the Article 4.1 of the Public Works Code and the City's Construction Site Water Pollution Prevention Program, the Project Applicant shall submit a site-specific Storm Water Pollution Prevention Plan (SWPPP) to the SFPUC for approval, prior to initiating construction activities in areas draining to the combined sewer system. The SFPUC requires implementation of appropriate Best Management Practices (BMPs) from the California Stormwater Quality Association Stormwater BMP Handbook- Construction or the Caltrans Construction Site BMPs Manual. In accordance with SFPUC's requirements, the SWPPP shall include: ■ An Erosion and Sediment Control Plan that includes a site map illustrating the BMPs that will be used to minimize on-site erosion and the sediment discharge into the combined sewer system, and a narrative description of those BMPs. Appropriate BMPs for Erosion and Sediment Control Plan may include: > Scheduling—Develop a schedule that includes sequencing of construction activities with the implementation of appropriate BMPs. Perform construction activities and control practices in accordance with the planned schedule. Schedule work to minimize soil-disturbing activities during the rainy season. Schedule major grading operations for the dry season when practical. Monitor the weather forecast for rainfall and adjust the schedule as appropriate. > Erosion Control BMPs—Preserve existing vegetation where feasible, apply mulch or hydroseed areas with native, non-invasive species, until permanent stabilization is established, and use soil binders, geotextiles and mats, earth dikes and drainage swales, velocity dissipation devices, slope drains, or polyacrylamide to protect soil from erosion. > Wind Erosion BMPs—Apply water or other dust palliatives to prevent dust nuisance; prevent overwatering which can cause erosion. Alternatively, cover small stockpiles or areas that remain inactive for seven or more days.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*

> Sediment Control BMPs—Install silt fences, sediment basins, sediment traps, check dams, fiber rolls, sand or gravel bag barriers, straw bale barriers, approved chemical treatment, and storm drain inlet protection to minimize the discharge of sediment. Employ street sweeping to remove sediment from streets.

> Tracking Controls—Stabilize the construction site entrance to prevent tracking of sediment onto public roads by construction vehicles. Stabilize on-site vehicle transportation routes immediately after grading to prevent erosion and control dust. Install a tire wash area to remove sediment from tires and under carriages.

- Non-Stormwater Management BMPs that may include water conservation practices; dewatering practices that minimize sediment discharges; and BMPs for: paving and grinding activities; identifying illicit connections and illegal dumping; irrigation and other planned or unplanned discharges of potable water; vehicle and equipment cleaning, fueling, and maintenance; concrete curing and finishing; temporary batch plants; implementing shoreline improvements and working over water. Discharges from dewatering activities shall comply with the SFPUC's Batch Wastewater Discharge Requirements that regulate influent concentrations for various constituents.
- Waste Management BMPs shall be implemented for material delivery, use, and storage; stockpile management; spill prevention and control; solid and liquid waste management; hazardous waste management; contaminated soil management; concrete waste management; and septic/sanitary waste management.
- SWPPP Training Requirements—Construction personnel will receive training on the SWPPP and BMP implementation.
- Site Inspections and BMP Maintenance—An inspector identified in the SWPPP will inspect the site on a regular basis, before and after a storm event, and once each 24-hour period during extended storms to identify BMP effectiveness and implement corrective actions if required. The SWPPP shall include checklists that document when the inspections occurred, the results of the inspection, required corrective measures, and when corrective measures were implemented. Required BMP maintenance related to a storm event shall be completed within 48 hours of the storm event.

MM HY-1a.2 Stormwater Pollution Prevention Plan: Separate Storm Sewer System. Consistent with the requirements of the SWRCB General Permit for Storm Water Discharges Associated with Construction and Land Disturbing Activities (Construction General Permit), the Project Applicant shall undertake the proposed Project in accordance with a project-specific Storm Water Pollution Prevention Plan (SWPPP) prepared by Qualified SWPPP Developer, who shall consult with California State Parks on those elements of the SWPPP that cover the Candlestick Park State Recreation Area, including selection of best management practices and other SWPPP improvements. The SFRWQCB, the primary agency responsible for protecting water quality within the project area, is responsible for reviewing and ensuring compliance with the SWPPP. This review is based on the Construction General Permit issued by the SWRCB.

The SWPPP shall include, as applicable, all Best Management Practices (BMPs) required in Attachment C of the Construction General Permit for Risk Level 1 dischargers, Attachment D for Risk Level 2 dischargers, or

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures

Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
		Attachment E for Risk Level 3 dischargers. In addition, recommended BMPs, subject to review and approval by the SFRWQCB, include the measures listed below. However, the measures themselves may be altered, supplemented, or deleted during the SFRWQCB's review process, since the SFRWQCB has final authority over the terms of the SWPPP. ■ Scheduling: > To reduce the potential for erosion and sediment discharge, schedule construction to minimize ground disturbance during the rainy season. Schedule major grading operations during the dry season when practical, and allow enough time before rainfall begins to stabilize the soil with vegetation or to install sediment-trapping devices. > Sequence construction activities to minimize the amount of time that soils remain disturbed. > Stabilize all disturbed soils as soon as possible following the completion of ground disturbing work. > Install erosion and sediment control BMPs prior to the start of any ground-disturbing activities. ■ Erosion and Sedimentation: > Preserve existing vegetation in areas where no construction activity is planned or where construction activity will occur at a later date. > Stabilize and re-vegetate disturbed areas as soon as possible after construction with planting, seeding, and/or mulch (e.g., straw or hay, erosion control blankets, hydromulch, or other similar material) except in actively cultivated areas. Planting and seeding shall use native, non-invasive species. > Install silt fences, coir rolls, and other suitable measures around the perimeter of the areas affected by construction and staging areas and around riparian buffers, storm drains, temporary stockpiles, spoil areas, stream channels, swales, down-slope of all exposed soil areas, and in other locations determined necessary to prevent off-site sedimentation. > Install temporary slope breakers during the rainy season on slopes greater than 5 percent where the base of the slope is less than 50 feet from a water body, wetland, or road crossing at spacing intervals required by the SFRWQCB. > Use filter fabric or other appropriate measures to prevent sediment from entering storm drain inlets. > Detain and treat stormwater using sedimentation basins, sediment traps, baker tanks, or other measures to ensure that discharges to receiving waters meet applicable water quality objectives. > Install check dams, where applicable, to reduce flow velocities. Check dams reduce erosion and allow sediment to settle out of runoff. > Install outlet protection/energy dissipation, where applicable, to prevent scour of the soil caused by concentrated high velocity flows. > Implement control measures such as spraying water or other dust palliatives to alleviate nuisance caused by dust.	

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures

Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
		■ Groundwater/Dewatering: > Prepare a dewatering plan prior to excavation specifying methods of water collection, transport, treatment, and discharge of all water produced by construction site dewatering. > Impound water produced by dewatering in sediment retention basins or other holding facilities to settle the solids and provide other treatment as necessary prior to discharge to receiving waters. Locate sedimentation basins and other retention and treatment facilities away from waterways to prevent sediment-laden water from reaching streams. > Control discharges of water produced by dewatering to prevent erosion. > If contaminated groundwater is encountered, contact the SFRWQCB for appropriate disposal options. Depending on the constituents of concern, such discharges may be disallowed altogether, or require regulation under a separate general or individual permit that would impose appropriate treatment requirements prior to discharge to the stormwater drainage system. ■ Tracking Controls: > Grade and stabilize construction site entrances and exits to prevent runoff from the site and to prevent erosion. > Install a tire washing facility at the site access to allow for tire washing when vehicles exit the site. > Remove any soil or sediment tracked off paved roads during construction by street sweeping. ■ Non-stormwater Controls: > Place drip pans under construction vehicles and all parked equipment. > Check construction equipment for leaks regularly. > Wash construction equipment in a designated enclosed area regularly. > Contain vehicle and equipment wash water for percolation or evaporative drying away from storm drain inlets. > Refuel vehicles and equipment away from receiving waters and storm drain inlets, contain the area to prevent run-on and run-off, and promptly cleanup spills. > Cover all storm drain inlets when paving or applying seals or similar materials to prevent the discharge of these materials. ■ Waste Management and Hazardous Materials Pollution Control: > Remove trash and construction debris from the project area daily. > Locate sanitary facilities a minimum of 300 feet from receiving waters. Maintain sanitary facilities regularly. > Store all hazardous materials in an area protected from rainfall and stormwater run-on and prevent the off-site discharge of hazardous materials.	

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
		> Minimize the potential for contamination of receiving waters by maintaining spill containment and cleanup equipment on site, and by properly labeling and disposing of hazardous wastes. > Locate waste collection areas close to construction entrances and away from roadways, storm drains, and receiving waters. > Inspect dumpsters and other waste and debris containers regularly for leaks and remove and properly dispose of any hazardous materials and liquid wastes placed in these containers. > Train construction personnel in proper material delivery, handling, storage, cleanup, and disposal procedures. > Implement construction materials management BMPs for: > Road paving, surfacing and asphalt removal activities. > Handling and disposal of concrete and cement. ■ BMP Inspection, Maintenance, and Repair: > Inspect all BMPs on a regular basis to confirm proper installation and function. Inspect BMPs daily during storms. > Immediately repair or replace BMPs that have failed. Provide sufficient devices and materials (e.g., silt fence, coir rolls, erosion blankets, etc.) throughout project construction to enable immediate corrective action for failed BMPs. ■ Monitoring and Reporting: > Provide the required documentation for SWPPP inspections, maintenance, and repair requirements. Personnel that will perform monitoring and inspection activities shall be identified in the SWPPP. > Maintain written records of inspections, spills, BMP-related maintenance activities, corrective actions, and visual observations of off-site discharges of sediment or other pollutants, as required by the SFRWQCB. > Monitor the water quality of discharges from the site to assess the effectiveness of control measures. ■ Implement Shoreline Improvements and work over water BMPs to minimize the potential transport of sediment, debris, and construction materials to the Lower Bay during construction of shoreline improvements. ■ Post-construction BMPs: > Re-vegetate all temporarily disturbed areas as required after construction activities are completed. Re-vegetation shall use native, non-invasive species. > Remove any remaining construction debris and trash from the project site and area upon project completion. > Phase the removal of temporary BMPs as necessary to ensure stabilization of the site.	

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*

> Maintain post-construction site conditions to avoid formation of unintended drainage channels, erosion, or areas of sedimentation.

> Correct post-construction site conditions as necessary to comply with the SWPPP and any other pertinent SFRWQCB requirements.

- Train construction site personnel on components of the SWPPP and BMP implementation. Train personnel that will perform inspection and monitoring activities.

MM HY-1a.3 Groundwater Dewatering Plan. Prior to commencement of construction activities and to minimize potential impacts to receiving water quality during the construction period, the Project Applicant shall through the proper implementation of this dewatering plan, show compliance with SFRWQCB/NPDES requirements, whichever are applicable.

The Dewatering Plan shall specify how the water would be collected, contained, treated, monitored, and/or discharged to the vicinity drainage system or Lower Bay. Subject to the review and approval of the SFRWQCB, the Dewatering Plan shall include, at a minimum:

- Identification of methods for collecting and handling water on site for treatment prior to discharge, including locations and capacity of settling basins, infiltration basins (where not restricted by site conditions), treatment ponds, and/or holding tanks
- Identification of methods for treating water on site prior to discharge, such as filtration, coagulation, sedimentation settlement areas, oil skimmers, pH adjustment, and other BMPs
- Procedures and methods for maintaining and monitoring dewatering operations to ensure that no breach in the process occurs that could result in an exceedance of applicable water quality objectives
- Identification of discharge locations and inclusion of details on how the discharge would be conducted to minimize erosion and scour
- Identification of maximum discharge rates to prevent exceedance of storm drain system capacities
- Additional requirements of the applicable General Permit or NPDES Permit/WDR (including effluent and discharge limitations and reporting and monitoring requirements, as applicable) shall be incorporated into the Dewatering Plan

Any exceedance of established narrative or numeric water quality objectives shall be reported to the SFRWQCB and corrective action taken as required by the SFRWQCB and the Dewatering Plan. Corrective action may include increased residence time in treatment features (e.g., longer holding time in settling basins) and/or incorporation of additional treatment measures (e.g., addition of sand filtration prior to discharge).

MM HZ-1a, **MM HZ-2a.1**, **MM HZ-5a, MM HZ-15**, **MM BI-4a.1,** and **MM BI-4a-2** would also apply to this impact.

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact HY-1b Construction at HPS Phase II would not cause an exceedance of water quality standards or contribute to or cause a violation of waste discharge requirements.	**PS**	**MM HY-1a.1, MM HY-1a.2**, **MM HY-1a.3**, **MM HZ-1a**, **MM HZ-2a.1**, **MM HZ-5a**, **MM HZ-10b**,**MM HZ-12, MM HZ-15, MM BI-4a.1**, **MM BI-4a.2**, **MM BI-5b.4**, **MM BI-12b.1**, and **MM BI 12b.2** would apply to this impact.	**LTS/M**
Impact HY-1c Construction of the Yosemite Slough bridge would not cause an exceedance of water quality standards or contribute to or cause a violation of waste discharge requirements.	**PS**	**MM HY-1a1, MM HY-1a.2, MM HZ-1a, MM HZ-2a.1, MM HZ-9, MM BI-4a.1, MM BI-4a.2; MM BI-12b.1**, and **MM BI-12b.2** would apply to this impact.	**LTS/M**
Impact HY-2 Construction activities associated with the Project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.	**LTS**	No mitigation is required.	**LTS**
Impact HY-3 Construction activities associated with the Project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site.	**LTS**	No mitigation is required.	**LTS**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact HY-4 Construction activities associated with the Project would not substantially alter the existing drainage pattern of the site, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site.	**PS**	**MM HY-1a.1, MM HY-1a.2,** and **MM HY-1a.3** would apply to this impact.	**LTS/M**
Impact HY-5 Construction activities associated with the Project would not create or contribute runoff water that would exceed the capacity of existing or planned storm sewer systems or provide substantial additional sources of polluted runoff.	**PS**	**MM HY-1a.2** would apply to this impact.	**LTS/M**
Impact HY-6 Implementation of the Project would not contribute to violations of water quality standards or waste discharge requirements.	**PS**	**MM HY-6a.1, MM HY-6a.2, MM HY-6b.1, MM HY-6b.2, MM HY-6b.3, MM BI-18b.1, MM BI-18b.2, MM BI-19b.1,** and **MM BI-19b.2** would apply to this impact.	**LTS/M**
Impact HY-6a Implementation of the Project at Candlestick Point would not contribute to violations of water quality standards or waste discharge requirements.	**PS**	**MM HY-6a.1** Regulatory Stormwater Requirements. The Project Applicant shall comply with requirements of the Municipal Stormwater General Permit and associated City SWMP, appropriate performance standards established in the Green Building Ordinance, and performance standards established by the SFPUC in the San Francisco Stormwater Design Guidelines. The Draft San Francisco Stormwater Design Guidelines have been developed to satisfy the Municipal Stormwater General Permit requirements for new development and redevelopment projects in areas served by separate storm sewers, and are expected to be adopted by December 2009. The Project Applicant shall comply with requirements of the Draft San Francisco Stormwater Design Guidelines. Upon adoption of the Final Stormwater Design Guidelines, the Project shall comply with the Final San Francisco Stormwater Design Guidelines unless discretionary permits have been approved. Per the Draft San Francisco Stormwater Design Guidelines, the Project Applicant shall submit a SCP to the SFPUC, as part of the development application submitted for approval. The SCP shall demonstrate how the following measures would be incorporated into the Project: ■ Low impact development site design principles (e.g., preserving natural drainage channels, treating stormwater runoff at its source rather than in downstream centralized controls)	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures

Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*

- Source control BMPs in the form of design standards and structural features for the following areas, as applicable:
  - Commercial areas
  - Restaurants
  - Retail gasoline outlets
  - Automotive repair shops
  - Parking lots
- Source control BMPs for landscaped areas shall be documented in the form of a Landscape Management Plan that relies on Integrated Pest Management and also includes pesticide and fertilizer application guidelines.
- Treatment control measures (e.g., bioretention, porous pavement, vegetated swales) targeting the Project-specific COCs: sediment, pathogens, metals, nutrients (nitrogen and phosphorus compounds), oxygen-demanding substances, organic compounds (e.g., PCBs, pesticides), oil and grease, and trash and debris. The SCP shall demonstrate that the Project has the land area available to support the proposed BMP facilities sized per the required water quality design storm. Volume-based BMPs shall be sized to treat runoff resulting from 0.75 inches of rainfall (LEED® SS6.2), and flow-based BMPs shall be sized to treat runoff resulting from a rainfall intensity of 0.2 inches per hour. Treatment trains shall be used where feasible.

Additional requirements:

- LEED® SS6.2: BMPs used to treat runoff shall be designed to remove 80 percent of the average annual post-development total suspended solids loads. BMPs are considered to meet these criteria if they are designed in accordance with SFPUC requirements.
- The SCP shall include an Operations and Maintenance Plan that demonstrates how the treatment control BMPs would be maintained in the long term, what entities would be responsible for BMP maintenance within the public and private rights-of-way, funding mechanisms, and what mechanisms would be used to formalize maintenance and access agreements.
- The Project Applicant shall also prepare a Stormwater Drainage Master Plan (SDMP) for approval by the SFPUC. The SDMP shall include plans for the storm drain infrastructure and plans for stormwater management controls (e.g., vegetated swales, dry wells). The storm drain infrastructure shall illustrate conveyance of the 5-year storm event in a separate storm drain piped system, and conveyance of the 100-year storm event in the street and drainage channel rights-of-way.

MM HY-6a.2 Recycled Water Irrigation Requirements. Prior to application of recycled water at the Project site for landscape irrigation, the Project Applicant shall demonstrate compliance with all terms and conditions of the SFPUC's Operations and Maintenance Plan and the Recycled Water General Permit conditions for the use of recycled water. As required by the Recycled Water General Permit, the Project Applicant shall submit an Operations and Maintenance Plan and an Irrigation Management Plan to the SWRCB. The Project Applicant shall also submit the Operations and Maintenance Plan and the Irrigation Management Plan to the SFPUC. Prior to

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures

Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
		on-site application of recycled water, the Project Applicant shall obtain written confirmation from the SFPUC that the Project Operations and Maintenance Plan and the Irrigation Management Plan is in compliance with the SFPUC's Operations and Maintenance Plan, and other SFPUC requirements for the use of recycled water. All recycled water provided to Project Applicant, pursuant to the Recycled Water General Permit, shall be treated in and managed in conformance with all applicable provisions of the Recycled Water Policy and shall meet Title 22 Requirements for disinfected tertiary recycled water as described in CCR Title 22, sections 60301.230 and 60301.320. In accordance with the Recycled Water General Permit, the Project Applicant's Operations and Maintenance Plan shall describe methods and procedures for complying with recycled water regulations, and the maintenance of equipment and emergency backup systems to maintain compliance with the General Permit conditions and California Department of Public Health (CDPH) requirements. The Project Applicant shall ensure that all users of recycled water comply with the Operations and Maintenance Plan by developing educational materials (e.g., pamphlet or brochure) that convey key operational elements (e.g., prevention of cross-connections) of the plan. In accordance with the Recycled Water General Permit, the Project Applicant's Irrigation Management Plan shall include measures to ensure the use of recycled water occurs at an agronomic rate while employing practices to minimize application of salinity constituents. The Irrigation Management Plan shall account for soil characteristics, recycled water characteristics, plant species irrigation requirements, climatic conditions, supplemental nutrient additions to support plant growth, and management of impoundments used to store or collect recycled water. The Irrigation Management Plan shall describe any conditions of approval required by the City, CDPH, or SWRCB. The Project Applicant shall implement the following landscape irrigation BMPs in accordance with Recycled Water General Permit Requirements: ■ The Operations and Maintenance Plan shall include leak detection methods and correction within 72 hours of identifying a leak or prior to the release of 1,000 gallons. ■ Recycled water shall not be applied during precipitation events. ■ Impoundment areas shall be managed such that no discharge occurs from storms smaller than the 25-year, 24-hour event. The Project Applicant shall also implement BMPs for general operational controls, protection of workers and the public (e.g., education about not drinking recycled water), and efficient irrigation (e.g., dedicated landscape water meters for monitoring water usage and leak detection). The Project Applicant shall conduct monthly monitoring to quantify the volume of recycled water applied, the locations and total area of application, and the mass of nitrogen and salinity constituents applied. **MM HZ-1a** and **MM HZ-2a.1** would also apply to this impact.	

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact HY-6b Implementation of the Project at HPS Phase II would not contribute to violations of water quality standards or waste discharge requirements.	**PS**	**MM HY-6b.1** Limitations on Stormwater Infiltration. Infiltration BMPs on HPS Phase II shall be prohibited. Alternative BMPs for stormwater quality control, reuse, and treatment shall be used. For instance, biofiltration BMPs can be implemented with an impervious liner and subdrain system to treat stormwater runoff while preventing infiltration. Overland flow (greater than the five-year and up to the 100-year storm) shall be conveyed in lined channels or other conveyances that will not result in infiltration. **MM HY-6b.2** Industrial General Permit. The Facility Operator shall apply for an Industrial General Permit prior to operational activities for facilities requiring coverage under the Industrial General Permit, which is determined based on the facility's SIC. The Facility Operator shall comply with all provisions in the Industrial General Permit, including implementation of a SWPPP, to effectively control pollutants to the BAT/BCT during the normal course of operations. Primary components and pollution prevention measures that the SWPPP shall address are described below. The Facility Operator shall refer to the California Stormwater Quality Association Stormwater Best Management Practice Handbook – Industrial and Commercial or equivalent for details on BMP implementation. The SFRWQCB is responsible for overseeing Industrial General Permit activities, including SWPPP compliance. The following BMPs shall be incorporated into the SWPPP. Non-Structural BMPs ■ Good Housekeeping: Good housekeeping generally consists of practical procedures to maintain a clean and orderly facility. ■ Preventive Maintenance: Regular inspection and maintenance of structural stormwater controls (catch basins, oil/water separators, etc.) as well as other facility equipment and systems. ■ Spill Response: Spill clean-up procedures and necessary clean-up equipment based upon the quantities and locations of significant materials that may spill or leak. ■ Material Handling and Storage: Procedures to minimize the potential for spills and leaks and to minimize exposure of significant materials to stormwater and authorized non-stormwater discharges. ■ Employee Training: Training of personnel who are responsible for (1) implementing activities identified in the SWPPP, (2) conducting inspections, sampling, and visual observations, and (3) managing stormwater. The SWPPP shall identify periodic dates for such training. Records shall be maintained of all training sessions held. ■ Waste Handling/Recycling: Procedures or processes to handle, store, or dispose of waste materials or recyclable materials. ■ Recordkeeping and Internal Reporting: Procedures to ensure that all records of inspections, spills, maintenance activities, corrective actions, visual observations, etc., are developed, retained, and provided, as necessary, to the appropriate facility personnel. ■ Erosion Control and Site Stabilization: This may include the planting and maintenance of vegetation, diversion of run-on and runoff, placement of sandbags, silt screens, or other sediment control devices, etc.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures

Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
		■ Inspections: This includes, in addition to the preventative maintenance inspections identified above, an inspection schedule of all potential pollutant sources. Tracking and follow-up procedures shall be described to ensure adequate corrective actions are taken and SWPPP revisions are made as needed. ■ Quality Assurance: Procedures to ensure that all elements of the SWPPP and Monitoring Program are adequately conducted. <u>Structural BMPs to be Considered</u> ■ Overhead Coverage: Structures that provide horizontal coverage of materials, chemicals, and pollutant sources from contact with stormwater and authorized non-stormwater discharges. ■ Retention Ponds: Basins, ponds, surface impoundments, etc. that do not allow stormwater to discharge from the facility. ■ Control Devices: Berms or other devices that channel or route run-on and runoff away from pollutant sources. ■ Secondary Containment Structures: This generally includes containment structures around storage tanks and other areas for the purpose of collecting any leaks or spills. ■ Treatment: This includes inlet controls, infiltration devices, oil/water separators, detention ponds, vegetative swales, etc. that reduce the pollutants in stormwater discharges and authorized non-stormwater discharges. However, because of extensive site constraints, use of infiltration BMPs shall be limited. **MM HY-6b.3** <u>Clean Marinas California Program.</u> The marina operator shall obtain certification under the Clean Marinas California Program. The Clean Marinas California Program has developed marina BMPs and an inspection and certification process for marinas that meet the program standard for BMP implementation. The marina operator shall implement BMPs that address the following sources of pollution: petroleum containment, topside boat maintenance and cleaning, underwater boat hull cleaning, marina operations, marina debris, boat sewage discharge, solid waste, liquid waste, fish waste, hazardous materials, and stormwater runoff. **MM HY-6a.1, MM HY-6a.2 MM HZ-1b, MM HZ-2a.1, MM HZ-5a, MM HZ-9, MM HZ-10b, MM HZ-12, MM HZ-15, MM BI-18b.1, MM BI-18b.2, MM BI-19b.1,** and **MM BI-19b.2** would also apply to this impact.	
Impact HY-6c Implementation of the Yosemite Slough bridge would not contribute to violations of water quality standards or waste discharge requirements.	**LTS**	No mitigation is required.	**LTS**
Impact HY-7 Implementation of the Project would not otherwise degrade water quality.	**PS**	**MM HY-6a.1, MM HY-6a.2**, and **MM HY-6b.1** would apply to this impact.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact HY-8 Implementation of the Project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.	**NI**	No mitigation is required.	**NI**
Impact HY-9 Implementation of the Project would not alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, and would not result in substantial erosion or siltation on site or off site.	**PS**	**MM HY-6a.1** would apply to this impact.	**LTS/M**
Impact HY-10 Implementation of the Project would not alter the existing drainage pattern of the site, through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff, and would not result in flooding on site or off site.	**PS**	**MM HY-6a.1** would apply to this impact.	**LTS/M**
Impact HY-11 Implementation of the Project would not create or contribute runoff water that would exceed the capacity of existing or planned storm sewer systems or provide substantial additional sources of polluted runoff.	**PS**	**MM HY-6a.1** would apply to this impact.	**LTS/M**
Impact HY–12 Implementation of the Project would not place housing in a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.	**PS**	**MM HY-12a.1** and **MM HY-12a.2** would apply to this impact.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures

Impact(s)	Level of Significance Prior to Mitigation	Mitigation Measure(s) and/or Project Requirements	Level of Significance After Mitigation
Impact HY-12a Implementation of the Project at Candlestick Point would not place housing in a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.	**PS**	**MM HY-12a.1** Finished Grade Elevations Above Base Flood Elevation. The Project site shall be graded such that finished floor elevations are 3.5 feet above the Base Flood Elevation (BFE), and streets and pads are 3 feet above BFE to allow for future sea level rise, thereby elevating all housing and structures above the existing and potential future flood hazard area. If the FIRM for San Francisco is not finalized prior to implementation of the Project, the Project Applicant shall work with the City Surveyor to revise the City's Interim Floodplain Map. If the FIRM for San Francisco is finalized prior to implementation of the Project, the Project Applicant shall request that the Office of the City Administrator (Floodplain Manager) request a Letter of Map Revision based on Fill (LOMR-F) from FEMA that places the Project outside SFHA and requires that the FIRM is updated by FEMA to reflect revised regulatory floodplain designations. **MM HY-12a.2** Shoreline Improvements for Future Sea-Level Rise. Shoreline and public access improvements shall be designed to allow future increases in elevation along the shoreline edge to keep up with higher sea level rise values, should they occur. Design elements shall include providing adequate setbacks to allow for future elevation increases of at least 3 feet from the existing elevation along the shoreline. Before the first Small Lot Final Map is approved, the Project Applicant must petition the appropriate governing body to form (or annex into if appropriate) and administer a special assessment district or other funding mechanism to finance and construct future improvements necessary to ensure that the shoreline, public facilities, and public access improvements will be protected should sea level rise exceed 16 inches at the perimeter of the Project. Prior to the sale of the first residential unit within the Project, the legislative body shall have acted upon the petition to include the property within the district boundary. The newly formed district shall also administer a Monitoring and Adaptive Management Plan to monitor sea level and implement and maintain the protective improvements.	**LTS/M**
Impact HY-12b Implementation of the Project at HPS Phase II would not place housing in a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.	**PS**	**MM HY-12a.1** and **MM HY-12a.2** would apply to this impact.	**LTS/M**
Impact HY-13 Implementation of the Project would not place structures within a 100-year flood hazard area or impede or redirect flood flows.	**PS**	**MM HY-12a.2** would apply to this impact.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact HY-13a Implementation of the Project at Candlestick Point would not place structures within a 100-year flood hazard area that could impede or redirect flood flows.	**LTS**	No mitigation is required.	**LTS**
Impact HY-13b Implementation of the Project at HPS Phase II would not place structures within a 100-year flood hazard area or impede or redirect flood flows.	**PS**	**MM HY-13b** Floodplain Development Permit. To reduce the impacts of placing structures in a 100-year flood hazard area that could impede or redirect flows, the Project Applicant shall implement that following measures: ■ The Project Applicant shall obtain a Floodplain Development Permit from the Office of the City Administrator in accordance with the City's floodplain management ordinance that includes a hydraulic evaluation to determine whether structures or structural elements would impede or redirect flood flows and mandates minimum design and construction standards. Design and construction methods shall comply with NFIP requirements for placing structures in Zone V. ■ The Floodplain Development Permit shall include a "V-Zone Certification" in accordance with the NFIP. As part of the certification, a professional engineer or architect shall consider the NFIP "Free-of-Obstruction" requirement, to ensure that floodwaters or waves would not be deflected into a building or adjacent structure.	**LTS/M**
Impact HY-13c The Yosemite Slough bridge would not place structures within a 100-year flood hazard area or impede or redirect flood flows.	**LTS**	No mitigation is required.	**LTS**
Impact HY-14 Implementation of the Project would not expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.	**PS**	**MM HY-14** Shoreline Improvements to Reduce Flood Risk. To reduce the flood impacts of failure of existing shoreline structures, the Project Applicant shall implement shoreline improvements for flood control protection, as identified in the Candlestick Point/Hunters Point Development Project Proposed Shoreline Improvements report. Where feasible, elements of living shorelines shall be incorporated into the shoreline protection improvement measures. **MM HY-11a.2** would also apply to this impact.	**LTS/M**
Impact HY-15 Implementation of the Project would not expose people or structures to inundation by seiche, tsunami, or mudflow.	**LTS**	No mitigation is required.	**LTS**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures

Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
SECTION III.N (BIOLOGICAL RESOURCES)			
(Note: As mentioned in the introductory text, Project impacts for Impact BI-3a through Impact BI-21b are provided by Impact BI-22 through Impact BI-26)			
Impact BI-1 Implementation of the Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	**NI**	No mitigation is required.	**NI**
Impact BI-2 Implementation of the Project would not have a substantial adverse effect, either directly or through habitat modifications, on any common species or habitats through substantial interference 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.	**LTS**	No mitigation is required. Implementation of **MM BI-7b** would be beneficial to grassland-associated raptors and terrestrial biological resources.	**LTS**
Impact BI-3a Construction at Candlestick Point would not have a substantial adverse effect, either directly or through habitat modifications, on any plant species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS.	**NI**	No mitigation is required.	**NI**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact BI-3b Construction at HPS Phase II and construction of the Yosemite Slough bridge would not have a substantial adverse effect, either directly or through habitat modifications, on any plant species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS.	**NI**	No mitigation is required.	**NI**
Impact BI-4a Construction at Candlestick Point would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the *Clean Water Act* through direct removal, filling, hydrological interruption, or other means.	**PS**	**MM BI-4a.1** Wetlands and Jurisdictional/Regulated Waters Mitigation for Temporary and/or Permanent Impacts. Wetlands and jurisdictional waters shall be avoided to the maximum extent practicable for all Project components. For example, any measures taken to improve the existing shoreline of Candlestick Point or HPS Phase II for purposes of flood control, erosion control, or repair or stabilization of existing structures shall minimize the amount of fill to be placed in jurisdictional areas. Where avoidance of existing wetlands and drainages is not feasible, and before any construction activities are initiated in jurisdictional areas, the Applicant shall obtain the following permits, as applicable to the activities in question: ■ CWA Section 404 permit from the USACE. ■ Section 10 *Rivers and Harbors Act* Permit from the USACE. ■ CWA Section 401 water quality certification from the RWQCB, and/or Report of Waste Discharge for Waters of the State. ■ CWA Section 402/National Pollution Discharge Elimination System permit from SWRCB [requiring preparation of a Stormwater Pollution Prevention Plan (SWPPP)]. ■ CDFG Section 1602 streambed alteration agreement from CDFG. ■ A permit from the BCDC. ■ Dredging permits from the USACE and BCDC as required, obtained through the Dredged Material Management Office (DMMO) process. Copies of these permits shall be provided to the contractor, along with the construction specifications. The Project Applicant shall be responsible for complying with all of the conditions set forth in these permits, including any financial responsibilities. Compensation for impacts to wetlands and jurisdictional waters shall be required to mitigate any permanent impacts to these habitats to less-than significant-levels. Such mitigation shall also be developed (separately from the CEQA process) as a part of the permitting process with the USACE, or for non-USACE-jurisdictional wetlands,	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures

Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
		during permitting through the SFRWQCB, BCDC, and/or CDFG. The exact mitigation ratio shall be established during the permitting process, and depends on a number of factors, including the type and value of the wetlands permanently affected by the Project; however, mitigation shall be provided at a ratio of no less than 1:1 (at least 1 acre of mitigation for every 1 acre of waters of the US/State permanently filled). Mitigation could be achieved through a combination of on-site restoration or creation of wetlands or aquatic habitats (including removal of on-site fill or structures such as piers, resulting in a gain of wetland or aquatic habitats); off-site restoration/creation; and/or mitigation credits purchased at mitigation banks within the San Francisco Bay Region. However, any mitigation for impacts to jurisdictional waters providing habitat for special-status fish such as the green sturgeon, Central California Coast steelhead, Chinook salmon, and longfin smelt must result in the restoration or creation (at a minimum 1:1 ratio) of suitable habitat for these species, and any mitigation for impacts to jurisdictional wetlands or other waters that are considered EFH by the NMFS must result in the restoration or creation (at a minimum 1:1 ratio) of EFH. Suitably planned mitigation sites may satisfy mitigation requirements for jurisdictional areas, special-status fish, and EFH simultaneously (i.e., in the same mitigation areas) if the mitigation satisfies all these needs. For funding of off-site improvements or purchase of mitigation bank credits, the Project Applicant shall provide written evidence to the City/Agency that either (a) compensation has been established through the purchase of a sufficient number of mitigation credits to satisfy the mitigation acreage requirements of the Project activity, or (b) funds sufficient for the restoration of the mitigation acreage requirements of the Project activity have been paid to the BCDC, CCC, or other entity or agency that offers mitigation credits in the San Francisco Bay Area. For areas to be restored, to mitigate for temporary or permanent impacts, the Project Applicant shall prepare and implement a Wetland and Jurisdictional Waters Mitigation Monitoring Plan (Mitigation Monitoring Plan). The Plan shall be submitted to the regulatory agencies along with permit application materials for approval, along with a copy to the City/Agency. The Project Applicant shall retain a restoration ecologist or wetland biologist to develop the Wetland and Jurisdictional Waters Mitigation and Monitoring Plan, and it shall contain the following components (or as otherwise modified by regulatory agency permitting conditions): 1. Summary of habitat impacts and proposed mitigation ratios, along with a description of any other mitigation strategies used to achieve the overall mitigation ratios, such as funding of off-site improvements and/or purchase of mitigation bank credits 2. Goal of the restoration to achieve no net loss of habitat functions and values 3. Location of mitigation site(s) and description of existing site conditions 4. Mitigation design: ■ Existing and proposed site hydrology ■ Grading plan if appropriate, including bank stabilization or other site stabilization features ■ Soil amendments and other site preparation elements as appropriate	

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*

- Planting plan
- Irrigation and maintenance plan
- Remedial measures/adaptive management, etc.

5. Monitoring plan (including final and performance criteria, monitoring methods, data analysis, reporting requirements, monitoring schedule, etc.)
6. Contingency plan for mitigation elements that do not meet performance or final success criteria.

Restoration and/or creation of wetlands or aquatic habitats could occur on site or off site and at one or more locations, as approved by the regulatory agencies. Impacts occurring due to activities on Candlestick Point may be mitigated by restoration or creation activities on HPS Phase II and vice versa. For example, loss of open water habitat that might result from construction of shoreline treatments could potentially be mitigated by the removal of fill or structures from aquatic habitat on HPS Phase II.

The Project Applicant, or its agent, shall implement the Wetland and Jurisdictional Waters Mitigation Monitoring Plan. At least five years of monitoring (or more if required as a condition of the permits) shall be conducted to document whether the success criteria (that are determined as part of the mitigation plan) are achieved, and to identify any remedial actions that must be taken if the identified success criteria are not met. Annual monitoring reports (described below) shall be submitted to CDFG, the USACE, the BCDC, the City/Agency, and the SFRWQCB. Each report shall summarize data collected during the monitoring period, describe how the habitats are progressing in terms of the success criteria, and discuss any remedial actions performed. Additional reporting requirements imposed by permit conditions shall be incorporated into the Wetland and Jurisdictional Waters Mitigation Monitoring Plan and implemented.

Success criteria for specified years of monitoring for vegetated mitigation wetlands are as follows (though these may be subject to change pending development of specific Mitigation and Monitoring Plans and consultation during the permit process):

- Year 1 after restored areas reach elevations suitable for colonization by wetland plants: 10 percent combined area and basal cover (rhizomatous turf) of all vegetation in the preserve wetland; at least two hydrophytic plants co-dominant with whatever other vegetative cover exists.
- Year 3 after restored areas reach colonization elevation: 50 percent combined area and basal cover (rhizomatous turf) of all vegetation; prevalence of hydrophytic species in terms of both cover and dominant species composition of the vegetation; native vascular species shall comprise 95 percent of the vegetation in the preserve wetland.
- Year 5 after restored areas reach colonization elevation: 70 percent combined area and basal cover (rhizomatous turf) of all vegetation; more than 50 percent dominance in terms of both cover and species composition of facultative (FAC), facultative wetland (FACW), and obligate (OBL) species; native vascular species shall comprise 95 percent of the vegetation in the preserve wetlands.

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures

Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*

Other success criteria shall be developed for open water/mud flat habitats (which would not be expected to support vegetation) or for wetland complexes specifically designed to contain extensive areas of channels, pannes, or flats that would not be vegetated. In addition, the final Project design shall avoid substantial adverse effects to the pre-Project hydrology, water quality, or water quantity in any wetland that is to be retained on site. This shall be accomplished by avoiding or repairing any disturbance to the hydrologic conditions supporting these wetlands, as verified through an on-site Wetland Protection Plan that shall be prepared by a restoration ecologist or wetland biologist that is retained by the Project Applicant, and submitted to regulatory agencies for approval, along with a copy to the City/Agency. If such indirect effects cannot be avoided, compensatory mitigation shall be provided for the indirectly affected wetlands at a minimum 1:1 ratio, as described above. Mitigation for indirectly impacted wetlands shall be described in the Wetland and Jurisdictional Waters Mitigation and Monitoring Plan.

Project features resulting in impacts to open water areas as a result of the marina, bridge, and breakwater construction shall be designed to be the minimum size required to meet their designated need. The opening in the breakwater shall be large enough and positioned such that it would allow for a complete daily exchange of water within the marina that would otherwise result from normal tidal flow, as determined by a coastal engineer and an aquatic biologist. This opening shall be designed to minimize disruption to the local hydrology generated by the breakwater and allow for normal tidal flow to ensure the daily exchange of nutrients.

MM BI-4a.2 Wetlands and Jurisdictional/Regulated Waters Impact Minimization for Construction-Related Impacts. The Project Applicant shall ensure that the contractor minimizes indirect construction-related impacts on wetlands and jurisdictional/regulated waters throughout the Study Area by implementing the following Best Management Practices (BMPs):

- Prior to any construction activities on the site, a protective fence shall be installed a minimum of one foot (or greater, if feasible) from the edge of all wetland habitat to be avoided in the immediate vicinity of the proposed construction areas. Prior to initiation of construction activities, a qualified biologist shall inspect the protective fencing to ensure that all wetland features have been appropriately protected. No encroachment into fenced areas shall be permitted during construction and the fence shall remain in place until all construction activities within 50 feet of the protected feature have been completed.
- Construction inspectors shall routinely inspect protected areas to ensure that protective measures remain in place and effective until all construction activities near the protected resource have been completed. The fencing shall be removed immediately following construction activities.
- To maintain hydrologic connections, the Project design shall include culverts for all seasonal and perennial drainages that are waters of the United States and/or Waters of the State.
- Sediment mitigation measures shall be in place prior to the onset of Project construction and shall be monitored and maintained until construction activities have been completed. Temporary stockpiling of excavated or imported material shall occur only in approved construction staging areas. Excess excavated soil shall be disposed of at a regional landfill or at another approved and/or properly permitted location. Stockpiles that are to remain on the site throughout the wet season shall be protected to prevent erosion.

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
		■ Where determined necessary by regulatory agencies, geotextile cushions and other appropriate materials (i.e., timber pads, prefabricated equipment pads, geotextile fabric) shall be used in saturated conditions to minimize damage to the substrate and vegetation. ■ Exposed slopes and banks shall be stabilized immediately following completion of construction activities to reduce the effects of erosion on the drainage system. ■ In highly erodible areas, such as Yosemite Slough, banks shall be stabilized using a non-vegetative material that shall bind the soil initially and break down within a few years. If, during review of the grading permit for this area, the City/Agency determines that more aggressive erosion control treatments are needed, the contractor shall be directed to use geotextile mats, excelsior blankets, or other soil stabilization products. ■ The contractors shall develop a Storm Water Pollution Prevention Plan (SWPPP) prior to construction. As discussed in the Regulatory Framework of the Hydrology and Water Quality section of this EIR, the SWPPP will comply with applicable local, state, and federal requirements. Erosion control BMPs may include, but are not limited to, the application of straw mulch; seeding with fast growing grasses; construction of berms, silt fences, hay bale dikes, stormwater detention basins, and other energy dissipaters. BMPs shall be selected and implemented to ensure that contaminants are prevented from entering the San Francisco Bay during construction and operation of the facilities shall protect water quality and the marine species in accordance with all regulatory standards and requirements. ■ Testing and disposal of any dredged sediment shall be conducted as required by the USACE and the Long-Term Management Strategy (LTMS)[2] ■ All temporarily impacted wetlands and other jurisdictional waters, whether in tidal or non-tidal areas, shall be restored to pre-construction contours following construction. Such impact areas include areas that are dewatered (e.g., using coffer dams) and/or used for construction access. Temporarily impacted wetlands that were vegetated prior to construction shall be revegetated in accordance with a Wetlands and Jurisdictional Water Mitigation and Monitoring Plan as described above. ■ For impacts to tidal habitats: > Conduct all work in dewatered work areas > Install sediment curtains around the worksite to minimize sediment transport > Work only during periods of slack, tide (minimal current) and low wind to minimize transport of sediment laden water	

[2] US Army Corps of Engineers, US Environmental Protection Agency, San Francisco Bay Conservation and Implementation Commission, and San Francisco Bay Regional Water Quality Control Board. Long-term Management Strategy for the Placement of Dredge Material in the San Francisco Bay, Management Plan 2001.

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures

Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact BI-4b Construction at HPS Phase II would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the *Clean Water Act* (including, but not limited to, marsh, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	**PS**	**MM BI-4a.1** and **MM BI-4a.2** would apply to this impact.	**LTS/M**
Impact BI-4c Construction of the Yosemite Slough bridge would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the *Clean Water Act* (including, but not limited to, marsh, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	**PS**	**MM BI-4c** Mitigation for Shading Impacts to Jurisdictional/Regulated Waters. Mud flats and aquatic habitats impacted by permanent shading from the Yosemite Slough bridge shall be mitigated by the creation or restoration, either on site, off site, and/or via purchase of mitigation bank credits, at a 0.5:1 (mitigation:impacted) ratio. Aside from the mitigation ratio, such mitigation shall be provided as described for mitigation measure MM BI-4a.1. **MM BI-4a.1** and **MM BI-4a.2** would also apply to this impact.	**LTS/M**
Impact BI-5a Construction at Candlestick Point would not have a substantial adverse effect on eelgrass beds, a sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFG or USFWS.	**NI**	No mitigation is required.	**NI**
Impact BI-5b Construction at HPS Phase II and construction of the Yosemite Slough bridge would not have a substantial adverse effect on eelgrass beds, a sensitive natural community identified in local or regional	**PS**	**MM BI-5b.1** Avoidance of Impacts to Eelgrass. As the design of shoreline treatments progresses, and a specific Shoreline Treatment Plan is determined, the Plan shall minimize any in-water construction required for installation of any treatment measures near either of the two eelgrass locations noted above. **MM BI-5b.2** Eelgrass Survey. Prior to the initiation of construction of the Yosemite Slough bridge or construction of shoreline treatments, an update to the existing eelgrass mapping shall be conducted to determine the precise locations of the eelgrass beds. This survey shall occur when a final Shoreline Treatment Plan has been prepared. The survey shall be conducted by a biologist(s) familiar with eelgrass identification and ecology and approved by NMFS to conduct such a survey. The area to be surveyed shall encompass the mapped eelgrass beds, plus a	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures

Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
plans, policies, and regulations or by the CDFG or USFWS.		buffer of 750 feet. Survey methods shall employ either SCUBA or sufficient grab samples to ensure that the bottom was adequately inventoried. The survey shall occur between August and October and collect data on eelgrass distribution, density, and depth of occurrence for the survey areas. The edges of the eelgrass beds shall be mapped. At the conclusion of the survey a report shall be prepared documenting the survey methods, results, and eelgrass distribution within the survey area. This report shall be submitted to NMFS for approval. The survey data shall feed back into the shoreline treatment design process so that Project engineers can redesign the treatments to avoid or minimize any direct impacts to eelgrass beds. If the shoreline treatments can be adjusted so that no direct impacts to eelgrass beds would occur, no further mitigation under this measure would be required for shoreline treatment construction. Management of water quality concerns is addressed through mitigation measure MM BI-5b.4 and shall be required to minimize sediment accumulation on the eelgrass. If direct impacts to eelgrass beds cannot be avoided, either by Hunters Point shoreline treatments or Yosemite Slough bridge construction, mitigation measure MM BI-5b.3 shall be implemented. **MM BI-5b.3** Compensatory Eelgrass Mitigation. If direct impacts to eelgrass beds cannot be avoided, compensatory mitigation shall be provided in conformance with the Southern California Eelgrass Mitigation Policy. Mitigation shall entail the replacement of impacted eelgrass at a 3:1 (mitigation:impact) ratio on an acreage basis, based on the eelgrass mapping described in mitigation measure MM BI-5b.2 and detailed designs of the feature(s) that would impact eelgrass beds. Such mitigation could occur either off site or on site.[3] Off-site mitigation could be achieved through distribution of a sufficient amount of funding to allow restoration or enhancement of eelgrass beds at another location in the Bay. If this option is selected, all funds shall be distributed to the appropriate state or federal agency or restoration-focused non-governmental agency (i.e., CDFG restoration fund, California Coastal Conservancy, Save the Bay, etc). The Project Applicant shall provide written evidence to the City/Agency that either a) compensation has been established through the purchase of a sufficient number of mitigation credits to satisfy the mitigation acreage requirements of the Project activity, or b) funds sufficient for the restoration of the mitigation acreage requirements of the Project activity have been paid. These funds shall be applied only to eelgrass restoration within the Bay. If on-site mitigation is selected as the appropriate option, the Project Applicant shall retain a qualified biologist familiar with eelgrass ecology (as approved by the City/Agency) to prepare and implement a detailed Eelgrass Mitigation Plan. Unless otherwise directed by NMFS, the Eelgrass Mitigation Plan shall follow the basic outline and contain all the components required of the Southern California Eelgrass Mitigation Policy (as revised in 2005),[4] including: identification of the mitigation need, site, transplant methodology, mitigation extent (typically 3:1	

[3] NMFS, Southwest Regional Office, Southern California Eelgrass Mitigation Policy, as revised August 30, 2005. Website: http://swr.nmfs.noaa.gov/hcd/policies/EELPOLrev11_final.pdf. Accessed July 20, 2009.
[4] NMFS, Southwest Regional Office, Southern California Eelgrass Mitigation Policy, as revised August 30, 2005. Website: http://swr.nmfs.noaa.gov/hcd/policies/EELPOLrev11_final.pdf. Accessed July 20, 2009.

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
		on an acreage basis[5]), monitoring protocols (including frequency, staffing, reviewing agencies, duration, etc), and success criteria. A draft Eelgrass Mitigation Plan shall be submitted to NMFS, for its review and approval prior to implementation, with a copy to the City/Agency. Once the plan has been approved, it shall be implemented in the following appropriate season for transplantation. Restored eelgrass beds shall be monitored for success over a 5-year period. **MM BI-5b.4** Eelgrass Water Quality BMPs. To prevent sediment that could be suspended during construction from settling out onto eelgrass, for any shoreline treatments within 750 feet of identified eelgrass beds, the Project Applicant shall require the selected contractor to implement appropriate BMPs that could include any or all of the following options, or others deemed appropriate by NMFS: 1. Conduct all work in dewatered work areas 2. Conduct all in-water work during periods of eelgrass dormancy (November 1-March 31) 3. Install sediment curtains around the worksite to minimize sediment transport 4. Work only during periods of slack tide (minimal current) and low wind to minimize transport of sediment laden water	
Impact BI-6a Construction at Candlestick Point would not have a substantial adverse effect, either directly or through habitat modifications, on any bird species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS.	**PS**	**MM BI-6a.1** Impact Avoidance and Pre-Construction Surveys for Nesting Special-Status and Legally Protected Avian Species. The following measures shall be implemented by the Project Developer to avoid impacts to nesting birds. 1. Not more than 15 days prior to construction activities that occur between February 1 and August 31, surveys for nesting birds shall be conducted by a qualified biologist (one familiar with the breeding biology and nesting habits of birds that may breed in the Project vicinity) that is selected by the Project Developer, and approved by the City/Agency. Surveys shall cover the entire area to be affected by construction and the area within a 250-foot buffer of construction or ground-disturbing activities. The results of the surveys, including survey dates, times, methods, species observed, and a map of any discovered nests, shall be submitted to the City/Agency. If no active avian nests (i.e. nests with eggs or young) are identified on or within 250 feet of the limits of the disturbance area, no further mitigation is necessary. Phased construction work shall require additional surveys if vegetation or building removal has not occurred within 15 days of the initial survey or is planned for an area that was not previously surveyed. Alternatively, to avoid impacts, the Project Developer shall begin construction after the previous breeding season for local raptors and other special-status species has ended (after August 31) and before the next breeding season begins (before February 1). 2. If active nests (with eggs or young) of special-status or protected avian species are found within 250 feet of the proposed disturbance area, a minimum 250-foot no-disturbance buffer zone surrounding active raptor	**LTS/M**

[5] US Army Corps of Engineers, US Environmental Protection Agency, San Francisco Bay Conservation and Implementation Commission, and San Francisco Bay Regional Water Quality Control Board. Long-term Management Strategy for the Placement of Dredge Material in the San Francisco Bay, Management Plan 2001; Appendix F – ESA and EFH Consultation.

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
		nests and a minimum 100-foot buffer zone surrounding nests of other special-status or protected avian species shall be established until the young have fledged. Project activities shall not occur within the buffer as long as the nest is active. The size of the buffer area may be reduced if a qualified biologist familiar with the species' nesting biology (as approved by the City/Agency) and CDFG determine it would not be likely to have adverse effects on the particular species. Alternatively, certain activities may occur within the aforementioned buffers, with CDFG concurrence, if a qualified biologist monitors the activity of nesting birds for signs of agitation while those activities are being performed. If the birds show signs of agitation suggesting that they could abandon the nest, activities would cease within the buffer area. No action other than avoidance shall be taken without CDFG consultation. 3. Completion of the nesting cycle (to determine when construction near the nest can commence) shall be determined by a qualified biologist experienced in identification and biology of the specific special-status or protected species. **MM BI-6a.2** Burrowing Owl Protocol Surveys and Mitigation. Because burrowing owls may take refuge in burrows any time of year, species-specific measures are necessary to avoid take of this species. The following measures shall be undertaken by the Project Developer to protect burrowing owls. Prior to construction activities, focused pre-construction surveys shall be conducted for burrowing owls where suitable habitat is present within the construction areas. Surveys shall be conducted by a qualified biologist (i.e., one who is familiar with burrowing owl ecology and experienced in performing surveys for them, approved by the City/Agency) no more than 30 days prior to commencement of construction activities. These surveys shall be conducted in accordance with the CDFG burrowing owl survey protocol contained within California Burrowing Owl Consortium's April 1995 Burrowing Owl Survey Protocol and Mitigation Guidelines, or any more current equivalent should new guidelines be released before construction. 1. If no occupied burrows are found in the survey area, a letter report documenting survey methods and findings shall be submitted to the City/Agency and CDFG, and no further mitigation is necessary. 2. If unoccupied burrows are found during the non-breeding season, prior to construction activities, the Project Developer shall collapse the unoccupied burrows, or otherwise obstruct their entrances to prevent owls from entering and nesting in the burrows. This measure would prevent inadvertent impacts during construction activities. 3. If occupied burrows are found, a letter report documenting survey methods and findings (including a map showing the locations of the occupied burrows) shall be submitted to the City/Agency and CDFG. Impacts to the burrows shall be avoided by providing a construction-free buffer of 250 feet during the nesting season (February 1 through August 31). A buffer of 165 feet from the active burrows should be provided during the non-breeding season (September 1 through January 31) if feasible, though a reduced buffer is acceptable during the non-breeding season as long as construction avoids direct impacts to the burrow(s) used by the owls. The size of the buffer area may be reduced if the CDFG determines it would not be likely to have adverse effects on the owls. No Project activity shall commence within the buffer area until a qualified	

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures

Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
		biologist (as approved by the City/Agency) confirms that the burrow is no longer occupied. If the burrow is occupied by a nesting pair, as recommended by the California Burrowing Owl Consortium's April 1995 Burrowing Owl Survey Protocol and Mitigation Guidelines, a minimum of 6.5 acres of foraging habitat contiguous (immediately adjacent) to the burrow shall be maintained until the nesting season is over. If the foraging habitat contiguous to the occupied burrow is currently less than 6.5 acres, the entire foraging habitat shall be maintained until the nesting season is over. 4. If impacts to occupied burrows are unavoidable, passive relocation techniques approved by CDFG shall be used to evict owls from burrows within the construction area prior to construction activities. However, no occupied burrows shall be disturbed during the nesting season unless a qualified biologist (as approved by the City/Agency) verifies through non-invasive methods that juveniles from the occupied burrows are foraging independently and are capable of independent survival, or verifies the owls have not yet laid eggs. If any breeding owls must be relocated (i.e., after the nesting season has ended), mitigation of impacts to lost foraging and nesting habitat for relocated pairs shall follow guidelines provided in the California Burrowing Owl Consortium's April 1995 Burrowing Owl Survey Protocol and Mitigation Guidelines, which depending upon conditions detailed in the guidance (such as mitigation habitat quality), range from 7.5 to 19.5 acres per pair. This mitigation may take the form of the purchase of credits in a burrowing owl mitigation bank or the preservation and management of the required habitat acreage on site (e.g., in the Grasslands Ecology Park) or off site. If mitigation is provided via on-site or off-site habitat preservation and management, a Burrowing Owl Habitat Management Plan shall be prepared by a qualified biologist and submitted to the CDFG for review and approval, along with a copy to the City/Agency. This plan shall detail the location of the mitigation site, the means of preservation of the site (i.e., via a conservation easement), any enhancement and management measures necessary to ensure that habitat for burrowing owls is maintained in the long term, a monitoring program, and the size of an endowment established for the long-term maintenance of the site.	
Impact BI-6b Construction at HPS Phase II would not have a substantial adverse effect, either directly or through habitat modifications, on any bird species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS.	**PS**	**MM BI-6b** American Peregrine Falcon Nest Protection Measures. To protect the nest of peregrine falcons during construction, the following measures shall be implemented by the Project Developer prior to construction or other disturbance within 500 feet of the Re-gunning crane nest. 1. Not more than 30 days prior to construction activities that occur between February 1 and August 15, surveys for nesting peregrine falcons shall be conducted on the Re-gunning crane, and within a 500-foot buffer surrounding the potential nesting location. Surveys shall be performed by a qualified biologist (i.e., one familiar with falcon biology and nesting) that is selected by the Project Developer, and approved by the City/Agency. The results of the surveys shall be submitted to the City/Agency and the CDFG. If no active peregrine falcon nests, eggs, or breeding activity, are identified on or within 500 feet of the limits of the disturbance area, no further mitigation is necessary. Alternatively, to avoid impacts, the Project Developer can begin construction after the previous breeding season has ended (after August 31) and before the next breeding season begins (before February 1). 2. If active peregrine nests or breeding activity are observed within the survey area, a minimum 250-foot no disturbance buffer zone surrounding the nesting location shall be established until the young have fledged.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
		Within this buffer, no Project construction activities shall occur while the nest is active. The size of the buffer area may be reduced if a qualified biologist and CDFG determine it would not be likely to have adverse effects on the falcons. No action other than avoidance shall be taken without CDFG consultation. 3. No new Project construction activity shall commence within the buffer area until young have fledged and the nest is no longer active, or until nesting has been terminated for reasons unrelated to Project activities. Completion of the nesting cycle shall be determined by a qualified biologist who is experienced in peregrine falcon breeding biology (as determined and approved by the City/Agency). **MM BI-6a.1** and **MM BI-6a.2** would also apply to this impact.	
Impact BI-7a Construction at Candlestick Point would not have a substantial adverse effect on the quantity and quality of suitable foraging habitat for raptors.	**LTS**	No mitigation is required. Implementation of **MM BI-7b** would be beneficial to grassland-associated raptors.	**LTS**
Impact BI-7b Implementation of the Project at HPS Phase II would not have a substantial adverse effect on the quantity and quality of suitable foraging habitat for raptors.	**PS**	**MM BI-7b** Enhancement of Raptor Foraging Habitat. The Draft Parks, Open Space, and Habitat Concept Plan shall implement, at a minimum, the following measures in open space areas outside the CPSRA, and if allowed, within the CPSRA area: ■ **Restoration and Management of Grasslands:** To maintain grassland-associated wildlife species on the site, grasslands extensive enough to support such species shall be maintained and enhanced through the restoration of native grasses. Such grassland habitat shall not be well manicured or regularly mown. No trees shall be planted within such areas, and shrub cover would be limited to a few small, scattered patches of low-statured coastal scrub plants. At a minimum, replacement of non-native grassland impacted at HPS Phase II with native-dominated grassland shall occur at a ratio of 1:1 (1 acre of native-dominated grassland restored: 1 acre of non-native grassland impacted). ■ **Increase in Tree/Shrub Cover:** Trees and shrubs (particularly natives) shall be planted and maintained outside the designated grassland restoration area to provide foraging habitat for raptors and other migratory birds, and cover for mammals, reptiles, and smaller birds that may serve as raptor prey. While native vegetation shall be favored, site-appropriate non-native trees and shrubs that provide food or structural resources that are particularly valuable to native wildlife shall also be considered. Approximately 10,000 net new trees shall be planted at the Project site and in the community, in addition to trees that will be replaced as required by the Urban Forestry Ordinance or MM BI-14a. The elements identified above shall be reviewed and approved by a qualified biologist (one familiar with the ecology of the Project site), and the Draft Parks, Open Space, and Habitat Concept Plan shall be implemented during construction of the Project. This plan shall be approved by the City/Agency prior to construction, and its preparation and implementation shall be the financial responsibility of the Project Applicant.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact BI-8a Construction at Candlestick Point would not have a substantial adverse effect, either directly or through habitat modifications, on the western red bat, a species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS.	**LTS**	No mitigation is required. **MM BI-7b** and **MM BI-14a** would result in a beneficial effect on habitat for the western red bat.	**LTS**
Impact BI-8b Construction at HPS Phase II would not have a substantial adverse effect, either directly or through habitat modifications, on the western red bat, a species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS.	**LTS**	No mitigation is required. Implementation of **MM BI-7b** and **MM BI-14a** would be beneficial to the habitat for the western red bat.	**LTS**
Impact BI-9a Pile driving associated with construction at Candlestick Point would not have a substantial adverse effect either directly or through habitat modifications, on marine mammals or fish identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS.	**NI**	No mitigation is required.	**NI**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures

Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact BI-9b Pile driving associated with construction of the marina and the Yosemite Slough bridge would not have a substantial adverse effect at HPS Phase II, either directly or through habitat modifications, on marine mammals or fish identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS.	**PS**	**MM BI-9b** Pile Driving Design and Minimization Measures. To minimize impacts on fish and marine mammals, the Project Applicant shall be implemented the following measure to reduce the amount of pressure waves generated by pile driving. The first set of measures shall be implemented during Project design. The second set of measures shall be implemented during construction. Design Measures: 1. Engineer structures to use fewer or smaller piles, where feasible, and preferably, solid piles. 2. Design structures that can be installed in a short period of time (i.e., during periods of slack tide when fish movements are lower). 3. Do not use unsheathed creosote-soaked wood pilings. The City/Agency, with consultation from a qualified biologist who is familiar with marine biology, as approved by the City/Agency, shall review the final Project design to ensure that these design requirements have been incorporated into the Project. Construction Measures: 1. Drive piles with a vibratory device instead of an impact hammer if feasible. 2. Restrict pile driving of steel piles to the June 1 to November 30 work window, or as otherwise recommended by NMFS (driving of concrete piles would not be subject to this condition). 3. Avoid installation of any piles during the Pacific herring spawning season of December through February. Consult with the CDFG regarding actual spawning times if pile installation occurs between October and April. 4. If steel piles must be driven with an impact hammer, an air curtain shall be installed to disrupt sound wave propagation, or the area around the piles being driven shall be dewatered using a cofferdam. The goal of either measure is to disrupt the sound wave as it moves from water into air. 5. If an air curtain is used, a qualified biologist shall monitor pile driving to ensure that the air curtain is functioning properly and Project-generated sound waves do not exceed the threshold of 180-decibels generating 1 micropascal (as established by NMFS guidelines). This shall require monitoring of in-water sound waves during pile driving. 6. Unless the area around the piles is dewatered during pile driving, a qualified biologist shall be present during pile driving of steel piles to monitor the work area for marine mammals. Driving of steel piles shall cease if a marine mammal approaches within 250 feet of the work area or until the animal leaves the work area of its own accord.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures

Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact BI-10a Construction of the Candlestick Point would require the removal of hard substrates (riprap) used by native oysters, but would not have a substantial adverse effect, either directly or through habitat modifications, on this species.	**LTS**	No mitigation is required.	**LTS**
Impact BI-10b Construction at HPS Phase II would require removal of hard substrates (docks, riprap, seawalls, pilings, etc) used by native oysters, but would not have a substantial adverse effect, either directly or through habitat modifications, on this species.	**LTS**	No mitigation is required.	**LTS**
Impact BI-10c Construction of the Yosemite Slough bridge may require removal of hard substrates (docks, riprap, seawalls, pilings, etc) used by native oysters, but would not have a substantial adverse effect, either directly or through habitat modifications, on this species.	**LTS**	No mitigation is required.	**LTS**
Impact BI-11a Construction at Candlestick Point would not have a substantial adverse effect on designated critical habitat for green sturgeon and Central California Coast steelhead, and would not result in impacts to individuals of these species as well as Chinook salmon and longfin smelt through disturbance and loss of aquatic and mudflat	**PS**	**MM BI 4a.1** and **MM BI 4a.2** would apply to this impact.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
habitat as a result of construction of shoreline revetments.			
Impact BI-11b Construction at HPS Phase II would not have a substantial adverse effect on designated critical habitat for green sturgeon and Central California Coast steelhead, and would not result in impacts to individuals of these species as well as Chinook salmon and longfin smelt through temporary and permanent disturbance of aquatic and mudflat habitat during construction of shoreline revetments.	**PS**	**MM BI 4a.1** and **MM BI 4a.2** would apply to this impact.	**LTS/M**
Impact BI-11c Construction of the Yosemite Slough bridge would not have a substantial adverse effect on designated critical habitat for green sturgeon and Central California Coast steelhead and would not result in impacts to individuals of these species, Chinook salmon, or longfin smelt through disturbance or loss of aquatic and mudflat habitat as a result of construction of shoreline revetments.	**PS**	**MM BI 4a.1** and **MM BI 4a.2** would apply to this impact.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact BI-12a Construction at Candlestick Point would not have a substantial adverse effect on designated essential fish habitat through (EFH) or result in a substantial change in total available essential fish habitat through placement of riprap and other fill or through temporary water-quality impacts during construction. EFH is a sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFG or USFWS.	**PS**	**MM BI-12a.1** Seasonal Restrictions on In-Water Work. In-water work when juvenile salmonids are moving through the estuary on the way to the ocean or when groundfish and prey species could be directly impacted shall be avoided. Because steelhead are potentially present, the allowed dredge window for this area of the San Francisco Bay is June 1 through November 30. All in-water construction shall occur during this window. If completion of in-water work within this period is not feasible due to scheduling issues, new timing guidelines that shall be established and submitted to NMFS and CDFG for review and approval. **MM BI-12a.2** Worker Training. Personnel involved in in-water construction and deconstruction activities shall be trained by a qualified biologist (experienced in construction monitoring, as approved by the City/Agency) in the importance of the marine environment to special-status fish, birds, and marine mammals and the environmental protection measures put in place to prevent impacts to these species, their habitats, and Essential Fish Habitat. The training shall include, at a minimum, the following: ■ A review of the special-status fish, birds, and marine mammals and sensitive habitats that could be found in work areas ■ Measures to avoid and minimize adverse effects to special-status fish, birds, marine mammals, their habitats, and Essential Fish Habitat ■ A review of all conditions and requirements of environmental permits, reports, and plans (i.e., USACE permits) **MM BI-4a.1** and **MM BI-4a.2** would also apply to this impact.	**LTS/M**
Impact BI-12b Construction at HPS Phase II would not have a substantial adverse effect on designated essential fish habitat through (EFH) through placement of riprap and other fill, or through temporary water-quality impacts during construction. EFH is a sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFG or USFWS.	**PS**	**MM BI-12b.1** Essential Fish Habitat Avoidance and Minimization Measures. The following mitigation measures have been adapted from Amendment 11 of the West Coast Groundfish Plan[6] and Appendix A of the Pacific Coast Salmon Plan.[7] Incorporation of the following, or equivalent mitigation as otherwise required by the USACE or NMFS, would reduce the impacts to Essential Fish Habitat (EFH) to a level considered less than significant. Unless modified by the federal permitting agencies (NMFS or USACE), these measures shall be implemented during construction by the Project Applicant. Any reporting required shall be specified in the USACE permits and reports shall be submitted to the USACE and NMFS. ■ If dredging is required, permits will be obtained through the Dredged Material Management Office (DMMO) process, and the following mitigation from the Long-Term Management Strategy (LTMS) shall be implemented: > Dredging shall avoid areas with submerged aquatic vegetation (eelgrass beds or other EFH areas of particular concern) especially where the action could affect groundfish, prey of outmigrating juvenile salmon or groundfish, larval marine species, or habitat for native oysters	**LTS/M**

[6] PFMC 1998. Essential Fish Habitat – West Coast Groundfish, Amendment 11.
[7] PFMC 1999. Appendix A: Identification and description of Essential Fish Habitat, Adverse Impacts, and Recommended Conservation Measures for Salmon. *In* Pacific Coast Salmon Plan (1997) as amended through Amendment 14. Website: http://www.pcouncil.org/salmon/salfmp/a14.html.

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*

> Sediments shall be tested for contaminants as per EPA and USACE requirements. Contaminated sediments shall be disposed of in accordance with EPA and USACE guidelines

> Slopes of the dredged area shall be gradual enough so that sloughing is unlikely to occur. Verification of these conditions shall be achieved through follow-up bathymetric surveys

> To minimize turbidity and potential resuspension of contaminated sediments, dredging shall use suction equipment, or similar equipment, when feasible. Where an equipment type may generate significant turbidity (i.e., clamshell), dredging shall be conducted using adequate engineering and best management practices to control turbidity. These include, but are not limited to, sediment curtains and tidal work windows.

- All construction equipment used in conjunction with in-water work (pipelines, barges, cranes, etc.) shall avoid wetlands, marshes, and areas of subaquatic vegetation (including eelgrass beds)
- Upland disposal options shall be considered for all spoils generated by on-site construction, especially if high levels of contaminants are present
- Maximize the use of clean dredged material for beneficial use opportunities, such as salt marsh restoration
- Use Best Management Practices (BMPs) for controlling pollution from marina operations, boatyards, and fueling facilities that meet, as applicable, the BMPs listed in the National Management Measures to Control Nonpoint Source Pollution from Marinas and Recreational Boating[8]

MM BI-12b.2 Deconstruction/Construction Debris Recovery. A Seafloor Debris Minimization and Removal Plan shall be prepared by the Project Applicant and approved by the City/Agency, prior to initiation of in-water deconstruction (dismantling) or construction activities. The Plan shall be implemented during in-water deconstruction or construction activities, and such activities shall be monitored by a qualified biologist who is experienced in construction monitoring (as approved by the City/Agency). The Seafloor Debris Minimization and Removal Plan shall include, at a minimum:

- Debris field boundaries associated with deconstruction activities
- Identification of measures taken to minimize the potential for debris to fall into aquatic habitats (i.e., the use of netting below in-water construction or deconstruction areas)
- Deconstruction equipment, tools, pipes, pilings, and other materials or debris that are inadvertently dropped into the Bay, along with their descriptions and locations
- Circumstances requiring immediate cessation of deconstruction activities and immediate initiation of search and recovery efforts, including procedures for implementing those recovery efforts
- How lost debris that is to be removed post-deconstruction is to be identified, who will be conducting search and recovery operations, and the survey methods to be employed to locate lost equipment and materials
- Criteria that will be used to:

[8] National Management Measures to Control Nonpoint Source Pollution from Marinas and Recreational Boating. EPA 841-B-01-005, November 2001.

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
		> Determine whether recovery efforts are appropriate for the object being recovered and do not result in potential environmental impairment greater than if the debris was allowed to remain in place > When sufficient effort has been expended to recover a lost object(s) with no success and continued efforts to recover the seafloor debris have diminishing potential for success and/or result in environmental impairment greater than leaving the debris in place ■ Person(s) responsible for implementing the Plan and making the determination on the type of recovery required ■ How debris is to be disposed of or recycled ■ Metrics for determining when recovery efforts will be considered complete Following completion of all post deconstruction recovery efforts for seafloor debris, a report shall be prepared by the Project Applicant and submitted to the City/Agency detailing, at a minimum, (1) recovery activities during deconstruction and post-deconstruction, (2) listings of all lost and recovered debris, (3) final disposition of recovered debris, and (4) discussion of what debris could not be recovered and why. **MMBI-4a.1, MM BI-4a.2, MM BI-5b.1, MM BI-5b.2, MM BI-5b.3, MM BI-5b.4, MM BI-12a.1**, and **MM BI-12a.2** would also apply to this impact.	
Impact BI-12c Construction of the Yosemite Slough bridge would not have a substantial adverse effect on designated essential fish habitat through (EFH) through placement of riprap and other fill, or through temporary water-quality impacts during construction. EFH is a sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFG or USFWS.	**PS**	**MM BI-4a.1, MM BI-4a.2, MM BI-12a.1, MM BI-12a.2, MM BI-12b.1**, and **MM BI-12b.2** would apply to this impact.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact BI-13a Construction at Candlestick Point would not interfere substantially with the movement of native resident or migratory wildlife species or with established native resident or migratory wildlife corridor, or impede the use of native wildlife nursery sites.	**LTS**	No mitigation is required.	**LTS**
Impact BI-13b Construction at HPS Phase II and construction of the Yosemite Slough bridge would not interfere substantially with the movement of native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, but it could impede the use of native wildlife nursery sites.	**PS**	**MM BI-5b.1** through **MM BI-5b.4** would apply to this impact.	**LTS/M**
Impact BI-14a Construction at Candlestick Point would not conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	**PS**	**MM BI-14a** Preservation and Replacement of Significant Trees, and Preservation and Planting of Street Trees. Construction activities outside of the Department of Public Works (DPW) jurisdiction could result in the disturbance or removal of a large number of trees. To minimize this impact, the following measures shall be implemented by the Project Applicant in these areas: 1. Avoidance of the removal of trees that meet the size specifications of significant trees in the Public Works Code Article 16 shall occur to the maximum extent feasible, and any such trees that are removed shall be replaced at a minimum of 1:1 (1 impacted:1 replaced). The species used for replacement shall be consistent with DPW recommendations. 2. Street trees shall be planted in all new development areas. The species, size, and locations shall be consistent with the requirements specified in Planning Code Section 143, including, but not limited to, the following: a) The street trees installed shall be a minimum of one 24-inch box tree for each 20 feet of frontage of the property along each street or alley, with any remaining fraction of 10 feet or more of frontage requiring an additional tree. Such trees shall be located either within a setback area on the lot or within the public right-of-way along such lot. b) The species of trees selected shall be suitable for the site, and, in the case of trees installed in the public right-of-way, the species and locations shall be subject to the approval by the DPW. Procedures	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures

Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
		and other requirements for the installation, maintenance, and protection of trees in the public right-of-way shall be as set forth in Public Works Code Article 16. 3. If a significant tree or street tree will not be removed, but construction activities will occur within the dripline of such trees, a Tree Protection Plan shall be prepared by an International Society of Arboriculture (ISA) certified arborist, in accordance with the Urban Forestry Ordinance. This plan shall be submitted to the Planning Department for review and approval prior to issuance of a demolition or building permit. The Tree Protection Plan shall include measures to protect all parts of a tree from disturbance during construction, and may include the following: a) A site plan with tree species, trunk location, trunk diameter at breast height, and the canopy dripline area within development b) The use of protective fencing to establish an area to be left undisturbed during construction c) Protection specifications, including construction specifications such as boring instead of trenching for utility lines, or tree specifications such as drainage, fertilization, or irrigation measures d) Pruning specifications, if needed, to preserve the health of the tree and allow construction to proceed Implementation of **MM BI-7b** would be beneficial to protected trees.	
Impact BI-14b Construction at HPS Phase II and Yosemite Slough bridge would not conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	**PS**	**MM BI-14a** would apply to this impact. Implementation of **MM BI-7b** would be beneficial to protected trees.	**LTS/M**
Impact BI-15a Construction within the shoreline or Bay at Candlestick Point would not result in the disturbance of contaminated soil or the re-suspension of contaminated sediments.	**NI**	No mitigation is required.	**NI**
Impact BI-15b Construction within the shoreline or Bay at HPS Phase II would not result in the disturbance of contaminated soil or the re-suspension of contaminated sediments.	**PS**	**MM HZ-10b**, **MM HY-1a.1**, and **MM HY-1a.2** would apply to this impact.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact BI-16a Implementation of the Project at Candlestick Point would not 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 CDFG or USFWS or interfere substantially with the movement of any native resident or migratory fish, or impede the use of native wildlife nursery sites.	**LTS**	No mitigation is required. Implementation of **MM BI-7b** would be beneficial to terrestrial biological resources.	**LTS**
Impact BI-16b Implementation of the Project at HPS Phase II, including operation of the proposed marina, would not have a substantial adverse effect, either directly or through habitat modifications, on aquatic species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS or 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.	**LTS**	No mitigation is required. Implementation of **MM BI-7b** would be beneficial to terrestrial biological resources.	**LTS**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact BI-17a Implementation of the Project at Candlestick Point would not have a substantial adverse effect, either directly or through habitat modifications, on nesting American peregrine falcons, identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS.	**NI**	No mitigation is required.	**NI**
Impact BI-17b Implementation of the Project at HPS Phase II would not have a substantial adverse effect, either directly or through habitat modifications, on nesting American peregrine falcons, identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS.	**NI**	No mitigation is required.	**NI**
Impact BI-18a Implementation of the Project at Candlestick Point would not have a substantial adverse effect, either directly or through habitat modifications, on aquatic species identified as a candidate, sensitive, or special-status in local or regional plans, policies, or regulations, or by the CDFG or USFWS, or have a substantial adverse effect on designated EFH, a sensitive natural community identified in local or regional plans, policies, and regulations or by the NMFS.	**NI**	No mitigation is required.	**NI**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact BI-18b Implementation of the marina in HPS Phase II would require routine maintenance dredging of the marina, which could remove habitat or generate substantial increases in turbidity within the marina, but would not have a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special-status in local or regional plans, policies, or regulations, or by the CDFG or USFWS, or have a substantial adverse effect on designated EFH, a sensitive natural community identified in local or regional plans, policies, and regulations or by the NMFS.	**PS**	**MM BI-18b.1** Maintenance Dredging and Turbidity Minimization Measures for the Operation of the Marina. Maintenance dredging for the marina could remove or generate sediment plumes that could impact special-status species, their habitats, and Essential Fish Habitat (EFH). To minimize this effect, the following measures shall be implemented by the Project Applicant: 1. Conduct a detailed survey for native oysters in all suitable substrates within the marina, which includes the area between the land and breakwaters, after construction of the new breakwaters. This survey shall be conducted by a qualified oyster biologist at low tides that expose the maximum amount of substrate possible. Surveys can be conducted at any time of year, but late summer and early fall are optimal because newly settled oysters are detectable. This survey shall occur before any construction within the proposed marina location takes place to establish a baseline condition. If few or no oysters are observed on hard substrates that would remain in place after dredging, no further mitigation is required. 2. If oysters are found at densities at or above 90 oysters per square meter[9] on suitable oyster-settlement substrates that would be removed or in areas where dredging sediment could settle out onto the oysters, a detailed sediment plume modeling study of the proposed marina operation shall be conducted to determine if the operations and maintenance of the marina would generate a substantial plume of sediment. This model shall include the local bathymetry and sediment information, tidal data, and detailed marina information (number and types of boats, etc). The model shall be prepared by a qualified harbor engineer (as approved by the City/Agency) with direct experience in this type of work within San Francisco Bay, prior to issuance of any permits for the construction of features directly associated with the marina. A report documenting modeling methods, input data, assumptions, results, and implications for increased rates of sedimentation shall be prepared and provided to NMFS during the USACE-directed Section 7 and EFH consultation for the marina. If the model demonstrates minimal sediment resuspension that would settle out before reaching sensitive habitats, no further mitigation is required. 3. If the sediment plume reaches sensitive shoreline habitats (substrates that support native oysters), compensatory mitigation shall be provided by the Project Applicant at a ratio recommended by NMFS for the type of habitat adversely affected. The Project Applicant shall retain a qualified oyster biologist (as approved by the City/Agency) to develop an Oyster Restoration Plan that shall be reviewed and approved by the City/Agency. This Plan shall include site selection, substrate installation, and monitoring procedures, and include the following components (unless otherwise modified by NMFS): ■ A suitable site for installation of replacement substrate would be one with adequate daily tidal flow, a location that would not be affected by maintenance dredging or other routine marina maintenance activities, and one that is lacking in appropriate settlement substrate. A location outside of the new breakwaters or in association with any eelgrass mitigation sites would be appropriate.	**LTS/M**

[9] MACTEC Engineering and Consulting, Inc. 2008. *Oyster Point Marina Olympia Oyster Surveys Pre- and Post-Dredging February 2008, Oyster Point Marina, South San Francisco, California.* Prepared for PBS&J; Obernolte. 2009. Personal communication between MACTEC and PBS&J.

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures

Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
		■ Although oysters would settle on a variety of materials, the most appropriate for restoration purposes is oyster shell. This is typically installed by placing the shell into mesh bags that can then be placed in piles on the seafloor of the mitigation site. Enough shell shall be installed under the guidance of a qualified oyster biologist to make up for the loss attributable to the Project. Mitigation shall occur after construction of all in-water elements of the Project within HPS Phase II. ■ The restoration site shall be monitored on a regular basis by a qualified oyster biologist for a minimum of two years, or until success criteria are achieved if they are not achieved within two years. Monitoring shall involve routine checks (bi-monthly during the winter and monthly during the spring and summer) to evaluate settlement, growth, and survival on the mitigation site. Success shall be determined to have been achieved when settlement and survival rates for oysters are not statistically significantly different between the mitigation site and either populations being impacted (if data are available) or nearby established populations (i.e., Oyster Point Marina). **MM BI-18b.2** Implement BMPs to Reduce Impacts of Dredging To Water Quality. BMPs established in Appendix I of the Long-Term Management Strategy (LTMS) for management of disposal of dredge material in San Francisco Bay are designed specifically to minimize spread of contaminants Long-Term Management Strategy (LTMS) outside of dredge areas. All of these elements of the LTMS shall be applied to any proposed dredging or construction activities associated with the Project unless otherwise modified by the USACE, BCDC, or SFRWQCB in permit conditions associated with the proposed dredging activities associated with this Project (same as MM BI-19b.2).	
Impact BI-19a Implementation of the Project at Candlestick Point would not result in impacts to aquatic organisms through the re-suspension of contaminated sediments.	**NI**	No mitigation is required.	**NI**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact BI-19b Implementation of the marina in HPS Phase II would not have a substantial adverse effect, either directly or through habitat modifications, on sensitive aquatic species, identified as candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS, or have a substantial adverse effect on designated EFH, a sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFG or USFWS, or have a substantial effect on predators that prey on contaminated species or feed on contaminated substrates as a result of routine maintenance dredging or could generate routine increases in turbidity within the marina that would result in the re-suspension of contaminated sediments.	**PS**	**MM BI-19b.1** Work Windows to Reduce Maintenance Dredging Impacts to Fish during Operation of the Marina. According to the Long-Term Management Strategy (LTMS), dredging Projects that occur during the designated work windows do not need to consult with NMFS under the federal *Endangered Species Act* (FESA).[10] The window in which dredging is allowed for the protection of steelhead in the central Bay is June 1 to November 30. The spawning season for the Pacific herring is March 1 to November 30.[11] Therefore, the window that shall be applied to minimize impacts to sensitive fish species (during which dredging activities cannot occur) is March 1 to November 30. **MM BI-19b.2** Implement BMPs to Reduce Impacts of Dredging To Water Quality. BMPs established in Appendix I of the Long-Term Management Strategy (LTMS) are designed specifically to minimize spread of contaminants outside of dredge areas. All of these elements of the LTMS shall be applied to any proposed dredging or construction activities associated with the Project unless otherwise modified by the USACE, BCDC, or the San Francisco Bay Regional Water Quality Control Board in permit conditions associated with the proposed dredging activities associated with this Project (same as MM BI-18b.2).	**LTS/M**

[10] US Army Corps of Engineers, US Environmental Protection Agency, San Francisco Bay Conservation and Implementation Commission, and San Francisco Bay Regional Water Quality Control Board. Long-term Management Strategy for the Placement of Dredge Material in the San Francisco Bay, Management Plan 2001.
[11] US Army Corps of Engineers, US Environmental Protection Agency, San Francisco Bay Conservation and Implementation Commission, and San Francisco Bay Regional Water Quality Control Board. Long-term Management Strategy for the Placement of Dredge Material in the San Francisco Bay, Management Plan 2001; Appendix F.

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures

Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact BI-20a Implementation of the Project at Candlestick Point would not interfere substantially with the movement of resident or migratory bird species by increasing collision hazards and the amount of artificial lighting.	**PS**	**MM BI-20a.1** Lighting Measures to Reduce Impacts to Birds. During design of any building greater than 100 feet tall, the Project Applicant and architect shall consult with a qualified biologist experienced with bird strikes and building/lighting design issues (as approved by the City/Agency) to identify lighting-related measures to minimize the effects of the building's lighting on birds. Such measures, which may include the following and/or other measures, will be incorporated into the building's design and operation. ■ Use strobe or flashing lights in place of continuously burning lights for obstruction lighting. Use flashing white lights rather than continuous light, red light, or rotating beams. ■ Install shields onto light sources not necessary for air traffic to direct light towards the ground. ■ Extinguish all exterior lighting (i.e., rooftop floods, perimeter spots) not required for public safety. ■ When interior or exterior lights must be left on at night, the developer and/or operator of the buildings shall examine and adopt alternatives to bright, all-night, floor-wide lighting, which may include: > Installing motion-sensitive lighting. > Using desk lamps and task lighting. > Reprogramming timers. > Use of lower-intensity lighting. ■ Windows or window treatments that reduce transmission of light out of the building will be implemented to the extent feasible. ■ Educational materials will be provided to building occupants encouraging them to minimize light transmission from windows, especially during peak spring and fall migratory periods, by turning off unnecessary lighting and/or closing drapes and blinds at night. ■ A report of the lighting alternatives considered and adopted shall be provided to the City/Agency for review and approval prior to construction. The City/Agency shall ensure that lighting-related measures to reduce the risk of bird collisions have been incorporated into the design of such buildings to the extent practicable. **MM BI-20a.2** Building Design Measures to Minimize Bird Strike Risk. During design of any building greater than 100 feet tall, the Project Applicant and architect will consult with a qualified biologist experienced with bird strikes and building/lighting design issues (as approved by the City/Agency) to identify measures related to the external appearance of the building to minimize the risk of bird strikes. Such measures, which may include the following and/or other measures, will be incorporated into the building's design. ■ Use non-reflective tinted glass. ■ Use window films to make windows visible to birds from the outside. ■ Use external surfaces/designs that "break up" reflective surfaces. ■ Place bird attractants, such as bird feeders and baths, at least 3 feet and preferably 30 feet or more from windows in order to reduce collision mortality.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
		A report of the design measures considered and adopted shall be provided to the City/Agency for review and approval prior to construction. The City/Agency shall ensure that building design-related measures to reduce the risk of bird collisions have been incorporated to the extent practicable.	
Impact BI-20b Implementation of the Project at HPS Phase II would not interfere substantially with the movement of resident or migratory bird species by increasing collision hazards and the amount of artificial lighting.	**PS**	**MM BI-20a.1** and **MM BI-20a.2** would apply to this impact.	**LTS/M**
Impact BI-21a Implementation of the Project at Candlestick Point would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	**PS**	**MM BI-14a** would apply to this impact.	**LTS/M**
Impact BI-21b Implementation of the Project at HPS Phase II would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	**PS**	**MM BI-14a** would apply to this impact.	**LTS/M**
Impact BI-22 Implementation of the Project would not have a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, by the CDFG, USFWS, or NMFS.	**PS**	**MM BI-4a.1, MM BI-4a.2, MM BI-5b.1** through **MM BI-5b.4, MM BI-6a.1, MM BI-6a.2, MM BI-6b, MM BI-7b, MM BI-9b, MM BI-18b.1**, and **MM BI-18b.2** would apply to this impact.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact BI-23 Implementation of the Project would not have a substantial adverse effect on sensitive natural communities identified in local or regional plans, policies, or regulations by the CDFG, USFWS, or NMFS.	**PS**	**MM BI-5b.1** through **MI-BI-5b.4**, **MM BI-12a.1, MM BI-12a.2, MM BI-12b.1, MM BI-12b.2, MM BI-18b.1**, **MM BI-18b.2**, **MM BI-19b.1**, and **MM BI-19b.2** would apply to this impact.	**LTS/M**
Impact BI-24 Implementation of the Project would not have a substantial adverse effect on federally protected wetlands and other waters as defined by Section 404 of the *Clean Water Act* (including, but not limited to, marsh, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	**PS**	**MM BI-4a.1** and **MM BI-4a.2** would apply to this impact.	**LTS/M**
Impact BI-25 Implementation of the Project would not interfere substantially with the movement of 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 site.	**PS**	**MM BI-5b.1** through **MM BI-5b.4, MM BI-20a.1,** and **MM BI-20a.2** would apply to this impact.	**LTS/M**
Impact BI-26 Implementation of the Project would not conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	**PS**	**MM BI-14a** would apply to this impact. Implementation of **MM BI-7b** would be beneficial to protected trees.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
		SECTION III.O (PUBLIC SERVICES)	
Impact PS-1 Construction activities associated with the Project would not result in a need for new or physically altered facilities in order to maintain acceptable service ratios, response times, or other performance objectives for police protection.	**PS**	**MM PS-1** Site Security Measures During Construction. During site preparation and in advance of construction of individual buildings, fencing, screening, and security lighting shall be provided by the Project Applicant. During non-construction hours the site must be secured and locked, and ample security lighting shall be provided. **MM TR-1** would also apply to this impact.	**LTS/M**
Impact PS-2 Implementation of the Project would not result in a need for new or physically altered facilities beyond those included as part of this Project in order to maintain acceptable service ratios, response times, or other performance objectives for police protection.	**Varies**	Refer to Section III.D (Transportation and Circulation), Section III.H (Air Quality), Section III.I (Noise), Section III.J (Cultural Resources) Section III.K (Hazards and Hazardous Materials), and Section III.M (Hydrology and Water Quality) for the specific significance conclusions and mitigation measures for construction-related effects.	**Varies**
Impact PS-3 Construction activities associated with the Project would not result in a need for new or physically altered facilities in order to maintain acceptable response times for fire protection and emergency medical services.	**PS**	**MM TR-1** would apply to this impact.	**LTS/M**
Impact PS-4 Implementation of the Project would not result in a need for new or physically altered facilities beyond those included as part of this Project in order to maintain acceptable response times for fire protection and emergency medical services.	**Varies**	Refer to Section III.D (Transportation and Circulation), Section III.H (Air Quality), Section III.I (Noise), Section III.J (Cultural Resources) Section III.K (Hazards and Hazardous Materials), and Section III.M (Hydrology and Water Quality) for the specific significance conclusions and mitigation measures for construction-related effects.	**Varies**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact PS-5 Construction activities associated with the Project would not affect the provision of school services by decreasing access to school services.	**NI**	No mitigation is required.	**NI**
Impact PS-6 New students associated with implementation of the Project would not require new or expanded school facilities, the construction of which could result in substantial adverse impacts.	**LTS**	No mitigation is required.	**LTS**
Impact PS-7 Construction activities associated with the Project would not affect provision of school services by decreasing access to library services.	**NI**	No mitigation is required.	**NI**
Impact PS-8 Implementation of the Project would not result in an increase in demand for library services that is not met by existing library facilities in the vicinity that have been expanded or updated.	**LTS**	No mitigation is required.	**LTS**
		SECTION III.P (RECREATION)	
Impact RE-1 Construction of the parks, recreational uses, and open space proposed by the Project would not result in substantial adverse physical environmental impacts beyond those analyzed and disclosed in this EIR.	**Varies**	Refer to Section III.D (Transportation and Circulation), Section III.H (Air Quality), Section III.I (Noise), Section III.J (Cultural Resources and Paleontological Resources) Section III.K (Hazards and Hazardous Materials), and Section III.M (Hydrology and Water Quality) for the specific significance conclusions and mitigation measures for construction-related effects.	**Varies**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact RE-2 Implementation of the Project would not increase the use of existing parks and recreational facilities that would cause the substantial physical deterioration of the facilities to occur or to be accelerated, nor would it result in the need for, new or physically altered park or recreational facilities.	**PS**	**MM RE-2** Phasing of parkland with respect to residential and/or employment generating uses. Development of the Project and associated parkland shall generally proceed in four phases, as illustrated by Figure II-16 (Proposed Site Preparation Schedule) of Chapter II (Project Description) of this EIR. To ensure that within each phase parks and population increase substantially concurrently, development shall be scheduled such that adequate parkland is constructed and operational when residential and employment-generating uses are occupied. The following standards shall be met: ■ No project development shall be granted a temporary certificate of occupancy if the City determines that the new population associated with that development would result in a parkland-to-population ratio within the Project site lower than 5.5 acres per 1,000 residents/population, as calculated by the Agency. ■ For the purposes of this mitigation measure, in order for a park to be considered in the parkland-to-population ratio, the Agency must determine that within 12 months of the issuance of the temporary certificate of occupancy, it will be fully constructed and operational, and, if applicable, operation and maintenance funding will be provided to the Agency.	**LTS/M**
● **Impact RE-3** Implementation of the Project would decrease the size of CPSRA but would not, overall, have an adverse effect on the recreational opportunities offered by that park, nor would it substantially adversely affect windsurfing opportunities at the Project site.	**LTS**	No mitigation is required.	**LTS**
		SECTION III.Q (UTILITIES)	
Impact UT-1 Implementation of the Project would not require water supplies in excess of existing entitlements or result in the need for new or expanded entitlements.	**LTS**	No mitigation is required.	**LTS**
● **Impact UT-2** Implementation of the Project would not require or result in the construction of new or expanded water treatment facilities. The Project would require the expansion of an auxiliary water conveyance system to provide adequate water supply for firefighting to the Project site.	**PS**	**MM UT-2** Auxiliary Water Supply System. Prior to issuance of occupancy permits, as part of the Infrastructure Plan to be approved, the Project Applicant shall construct an Auxiliary Water Supply System (AWSS) loop within Candlestick Point to connect to the City's planned extension of the off-site system off-site on Gilman Street from Ingalls Street to Candlestick Point. The Project Applicant shall construct an additional AWSS loop on HPS Phase II to connect to the existing system at Earl Street and Innes Avenue and at Palou and Griffith Avenues, with looped service along Spear Avenue/Crisp Road.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact UT-3 Implementation of the Project would not require expansion of existing off-site wastewater conveyance or treatment facilities.	**PS**	**MM UT-3a** would apply to this impact.	**LTS/M**
Impact UT-3a Implementation of the Project at Candlestick Point would not require expansion of existing off-site wastewater conveyance facilities.	**PS**	**MM UT-3a** Wet-Weather Wastewater Handling. Prior to approval of the Project's wastewater infrastructure construction documents for any new development, the Project Applicant shall demonstrate to the San Francisco Public Utilities Commission (SFPUC), in writing, that there will be no net increase in wastewater discharges during wet-weather conditions from within the Project Area boundary to the Bayside System compared to pre-Project discharges. This may be accomplished through a variety of means, including, but not limited to: ■ Temporary on-site retention or detention of flows to the system ■ Separation of all or a portion of the stormwater and wastewater system at Candlestick Point	**LTS/M**
Impact UT-3b Implementation of the Project at HPS Phase II would not require expansion of existing off-site wastewater conveyance facilities.	**PS**	**MM UT-3a** would apply to this impact.	**LTS/M**
Impact UT-4 Implementation of the Project would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.	**LTS**	No mitigation is required.	**LTS**
Impact UT-5 Construction activities associated with the Project, including demolition of existing facilities, would not generate construction-related solid waste that would exceed the capacity of landfills serving the City and County of San Francisco.	**PS**	**MM UT-5a** would apply to this impact.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures

Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact UT-5a Construction at Candlestick Point, including demolition of existing facilities, would not generate construction-related solid waste that would exceed the capacity of landfills serving the City and County of San Francisco.	**PS**	**MM UT-5a** Construction Waste Diversion Plan. The Project Applicant shall submit a Construction Waste Diversion Plan to the Director of the San Francisco Department of the Environment demonstrating a plan to divert at least 75 percent of or more of the total construction and demolition debris produced as the result of the Project (such as wood, metal, concrete, asphalt, and sheetrock) from landfill interment, which is required by the City's Green Building Ordinance. The Plan shall be submitted and approved by the Director of the San Francisco Department of the Environment before the issuance of building permits. This Plan shall include (1) identification of how much material resulting from demolition of existing facilities could be reused on site (e.g., existing asphalt and concrete could be removed, crushed, reconditioned, and reused as base material for new roadways and parking lots); (2) the extent to which materials could be sorted on site (e.g., through piecemeal demolition of selected facilities to extract recyclable materials), (3) the amount of material that would be transported to an off-site location for separation; and (4) the amount of materials that cannot be reused or recycled and would be interred at a landfill, such as the Altamont Landfill in Livermore.	**LTS/M**
Impact UT-5b Construction at HPS Phase II, including demolition of existing facilities, would not generate construction-related solid waste that would exceed the capacity of landfills serving the City and County of San Francisco.	**PS**	**MM UT-5a** would apply to this impact.	**LTS/M**
Impact UT-6 Construction activities associated with the Project would not require the disposal of hazardous wastes such as lead-based paint, asbestos, and contaminated soils that would exceed the capacity of transport, storage, and disposal facilities permitted to treat such waste.	**LTS**	No mitigation is required.	**LTS**
Impact UT-6a Construction at Candlestick Point would not require the disposal of hazardous wastes such as lead-based paint, asbestos, and contaminated soils that would exceed the capacity of transport, storage, and disposal facilities permitted to treat such waste.	**LTS**	No mitigation is required.	**LTS**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact UT-6b Construction at HPS Phase II would not require the disposal of hazardous wastes such as lead-based paint, asbestos, and contaminated soils that would exceed the capacity of transport, storage, and disposal facilities permitted to treat such waste.	**LTS**	No mitigation is required.	**LTS**
Impact UT-7 Implementation of the Project would not generate solid waste that would exceed the capacity of landfills serving the City and County of San Francisco.	**PS**	**MM UT-7a** and **MM UT-7a-1** would apply to this impact.	**LTS/M**
Impact UT-7a Implementation of the Project at Candlestick Point would not generate solid waste that would exceed the capacity of landfills serving the City and County of San Francisco.	**PS**	**MM UT-7a** Site Waste Management Plan. The Project Applicant shall prepare a Site Waste Management Plan (SWMP) in cooperation with the Agency to describe the methods by which the Project shall minimize waste generation not otherwise covered by existing City regulatory policies, with the goal of achieving a diversion rate of at least 72 percent, consistent with the City's existing diversion rate in 2008. The SWMP shall be submitted to the Department of Environment (DOE) for approval prior to the issuance of the first development permit for the Project.	**LTS/M**
Impact UT-7b Implementation of the Project at HPS Phase II would not generate solid waste that would exceed the capacity of landfills serving the City and County of San Francisco.	**PS**	**MM UT-7a** would apply to this impact.	**LTS/M**
Impact UT-8 Implementation of the Project would not generate hazardous waste that would exceed the permitted capacity of transport, storage, and disposal facilities authorized to treat such waste.	**LTS**	No mitigation is required.	**LTS**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact UT-8a Implementation of the Project at Candlestick Point would not generate hazardous waste that would exceed the permitted capacity of transport, storage, and disposal facilities authorized to treat such waste.	**LTS**	No mitigation is required.	**LTS**
Impact UT-8b Implementation of the Project at HPS Phase II would not generate hazardous waste that would exceed the permitted capacity of transport, storage, and disposal facilities authorized to treat such waste.	**LTS**	No mitigation is required.	**LTS**
Impact UT-9 Implementation of the Project would comply with federal, state, and local statutes and regulations related to solid waste.	**PS**	**MM UT-5a, MM UT-7a.1**, and **MM UT-7a.2** would apply to this impact.	**LTS/M**
Impact UT-10 Implementation of the Project would not require extension of dry utility infrastructure that would exceed the capacity of the services providing such utilities.	**LTS**	No mitigation is required.	**LTS**
		SECTION III.R (ENERGY)	
Impact ME-1 Construction activities associated with the Project would not result in the use of large amounts of energy, or use energy in a wasteful manner.	**LTS**	No mitigation is required.	**LTS**
Impact ME-2 Buildings constructed by the Project would not use large amounts of electricity in a wasteful manner.	**PS**	**MM GC-2, MM GC -3**, and **MM GC-4** would apply to this impact.	**LTS/M**

Table ES-2 Summary of Environmental Effects and Project Requirements/Mitigation Measures			
Impact(s)	*Level of Significance Prior to Mitigation*	*Mitigation Measure(s) and/or Project Requirements*	*Level of Significance After Mitigation*
Impact ME-3 Buildings constructed by the Project would not use large amounts of natural gas in a wasteful manner.	**PS**	**MM GC-2** and **MM GC-3** would apply to this impact.	**LTS/M**
Impact ME-4 Vehicle trips associated with the Project would not use large amounts of energy in a wasteful manner.	**PS**	**MM TR-1** through **MM TR-5** would apply to this impact.	**LTS/M**
		SECTION III.S (GREENHOUSE GAS EMISSIONS)	
Impact GC-1 The Project would not result in a substantial contribution to global climate change by increasing GHG emissions in a manner that conflicts with the state goal of reducing GHG emissions in California to 1990 levels by 2020 (e.g., a substantial contribution to global climate change) or conflicts with San Francisco's Climate Action Plan by impeding implementation of the local GHG reduction goals established by the San Francisco 2008 Greenhouse Gas Reduction Ordinance.	**PS**	**MM GC-1** Plant up to 10,000 net new trees at the Project site and in the community. **MM GC-2** Exceed the 2008 Standards for Title 24 Part 6 energy efficiency standards for homes and businesses would by at least 15 percent. **MM GC-3** Install ENERGY STAR appliances, where appliances are offered by homebuilders. **MM GC-4** Use light emitting diode (LED) based energy efficient street lighting.	**LTS/M**

NI = No Impact
LTS = Less than Significant
LTS/M = Less than Significant with Mitigation
PS = Potentially Significant
S = Significant
SU = Significant and Unavoidable
SU/M = Significant and Unavoidable with Mitigation

Table ES-2a Mitigation Measure Applicability Matrix

Mitigation Measure	Project	Variant 1	Variant 2	Variant 2A	Variant 3	Variant 4	Variant 5	Alternative 2	Alternative 3	Alternative 4	Subalternative 4A	Alternative 5
MM TR-1	●	●	●	●	●	●	●	●	●	●	●	●
MM TR-2	●	●	●	●	●	●	●	●	●	●	●	●
MM TR-4	●	●	●	●	●	●	●	●	n/a	●	●	●
MM TR-6	●	●	●	●	●	●	●	●	●	●	●	●
MM TR-7	●	●	●	●	●	●	●	●	●	n/a	n/a	●
MM TR-8	●	●	●	●	●	●	●	●	●	●	●	●
MM TR-16	●	●	●	●	●	●	●	●	n/a	●	●	●
MM TR-17	●	●	●	●	●	●	●	●	●	●	●	●
MM TR-21.1	●	●	●	●	●	●	●	●	n/a	●	●	●
MM TR-21.2	●	●	●	●	●	●	●	●	n/a	●	●	●
MM TR-22.1	●	●	●	●	●	●	●	●	●	●	●	●
MM TR-22.2	●	●	●	●	●	●	●	●	●	●	●	●
MM TR-23.1	●	●	●	●	●	●	●	●	●	●	●	●
MM TR-23.2	●	●	●	●	●	●	●	●	●	●	●	●
MM TR-24.1	●	●	●	●	●	●	●	●	n/a	n/a	n/a	●
MM TR-24.2	●	●	●	●	●	●	●	●	n/a	n/a	n/a	●
MM TR-25	●	●	●	●	●	●	●	●	●	●	●	●
MM TR-26.1	●	●	●	●	●	●	●	●	●	●	●	●
MM TR-26.2	●	●	●	●	●	●	●	●	●	●	●	●
MM TR-27.1	●	●	●	●	●	●	●	●	n/a	n/a	n/a	●
MM TR-27.2	●	●	●	●	●	●	●	●	n/a	n/a	n/a	●
MM TR-32	●	●	●	●	●	●	●	●	●	●	●	●
MM TR-38	n/a	n/a	n/a	n/a	●	●	●	●	n/a	n/a	●	n/a
MM TR-39	n/a	n/a	n/a	n/a	●	●	●	●	n/a	n/a	●	n/a
MM TR-46	n/a	n/a	n/a	n/a	●	●	●	●	n/a	n/a	●	n/a

Table ES-2a Mitigation Measure Applicability Matrix

Mitigation Measure	*Project*	*Variant 1*	*Variant 2*	*Variant 2A*	*Variant 3*	*Variant 4*	*Variant 5*	*Alternative 2*	*Alternative 3*	*Alternative 4*	*Subalternative 4A*	*Alternative 5*
MM TR-47	n/a	n/a	n/a	n/a	●	●	●	●	n/a	n/a	●	n/a
MM TR-51	●	●	●	●	●	●	●	●	●	●	●	●
MM AE-2	●	●	●	●	●	●	●	●	●	●	●	●
MM AE-7a.1	●	●	●	●	●	●	●	●	●	●	●	●
MM AE-7a.2	●	●	●	●	●	●	●	●	●	●	●	●
MM AE-7a.3	●	●	●	●	●	●	●	●	●	●	●	●
MM AE-7a.4	●	●	●	●	●	●	●	●	●	●	●	●
MM AE-7b.1	●	n/a	n/a	n/a	●	●	●	●	n/a	n/a	●	n/a
MM AE-7b.2	●	n/a	n/a	n/a	●	●	●	●	n/a	n/a	●	n/a
MM W-1a	●	●	●	●	●	●	●	●	●	●	●	●
MM AQ-2.1	●	●	●	●	●	●	●	●	●	●	●	●
MM AQ-2.2	●	●	●	●	●	●	●	●	●	●	●	●
MM AQ-6.1	●	●	●	●	●	●	●	●	●	●	●	●
MM AQ-6.2	●	●	●	●	●	●	●	●	●	●	●	●
MM NO-1a.1	●	●	●	●	●	●	●	●	●	●	●	●
MM NO-1a.2	●	●	●	●	●	●	●	●	●	●	●	●
MM NO-2a	●	●	●	●	●	●	●	●	●	●	●	●
MM NO-7.1	●	n/a	n/a	n/a	●	●	●	●	n/a	n/a	●	n/a
MM CP-1b.1	●	●	●	●	●	●	●	●	●	n/a	n/a	●
MM CP-1b.2	●	●	●	●	●	●	●	●	●	n/a	n/a	●
MM CP-2a	●	●	●	●	●	●	●	●	●	●	●	●
MM CP-3a	●	●	●	●	●	●	●	●	●	●	●	●
MM HZ-1a	●	●	●	●	●	●	●	●	●	●	●	●
MM HZ-1b	●	●	●	●	●	●	●	●	●	●	●	●
MM HZ-2a.1	●	●	●	●	●	●	●	●	●	●	●	●

Table ES-2a Mitigation Measure Applicability Matrix

Mitigation Measure	Project	Variant 1	Variant 2	Variant 2A	Variant 3	Variant 4	Variant 5	Alternative 2	Alternative 3	Alternative 4	Subalternative 4A	Alternative 5
MM HZ-2a.2	●	●	●	●	●	●	●	●	●	●	●	●
MM HZ-5a	●	●	●	●	●	●	●	●	●	●	●	●
MM HZ-9	●	●	●	●	●	●	●	n/a	●	n/a	●	n/a
MM HZ-10b	●	●	●	●	●	●	●	●	●	●	●	●
MM HZ-12	●	●	●	●	●	●	●	●	●	●	●	●
MM HZ-15	●	●	●	●	●	●	●	●	●	●	●	●
MM GE-2a	●	●	●	●	●	●	●	●	●	●	●	●
MM GE-3	●	●	●	●	●	●	●	●	●	●	●	●
MM GE-4a.1	●	●	●	●	●	●	●	●	●	●	●	●
MM GE-4a.2	●	●	●	●	●	●	●	●	●	●	●	●
MM GE-4a.3	●	●	●	●	●	●	●	●	●	●	●	●
MM GE-5a	●	●	●	●	●	●	●	●	●	●	●	●
MM GE-6a	●	●	●	●	●	●	●	●	●	●	●	●
MM GE-10a	●	●	●	●	●	●	●	●	●	●	●	●
MM GE-11a	●	●	●	●	●	●	●	●	●	●	●	●
MM HY-1a.1	●	●	●	●	●	●	●	●	●	●	●	●
MM HY-1a.2	●	●	●	●	●	●	●	●	●	●	●	●
MM HY-6a.1	●	●	●	●	●	●	●	●	●	●	●	●
MM HY-6a.2	●	●	●	●	●	●	●	●	●	●	●	●
MM HY-6b.1	●	●	●	●	●	●	●	●	●	●	●	●
MM HY-6b.2	●	●	●	●	●	●	●	●	●	●	●	●
MM HY-6b.3	●	●	●	●	●	●	●	●	●	n/a	●	●
MM HY-12a.1	●	●	●	●	●	●	●	●	●	●	●	●
MM HY-12a.2	●	●	●	●	●	●	●	●	●	●	●	●
MM HY-14	●	●	●	●	●	●	●	●	●	●	●	●

Table ES-2a Mitigation Measure Applicability Matrix

Mitigation Measure	*Project*	*Variant 1*	*Variant 2*	*Variant 2A*	*Variant 3*	*Variant 4*	*Variant 5*	*Alternative 2*	*Alternative 3*	*Alternative 4*	*Subalternative 4A*	*Alternative 5*
MM BI-4a.1	●	●	●	●	●	●	●	●	●	●	●	●
MM BI-4a.2	●	●	●	●	●	●	●	●	●	●	●	●
MM BI-4c	●	●	●	●	●	●	●	n/a	●	n/a	●	n/a
MM BI-5b.1	●	●	●	●	●	●	●	●	●	●	●	●
MM BI-5b.2	●	●	●	●	●	●	●	●	●	●	●	●
MM BI-5b.3	●	●	●	●	●	●	●	●	●	●	●	●
MM BI-5b.4	●	●	●	●	●	●	●	●	●	●	●	●
MM BI-6a.1	●	●	●	●	●	●	●	●	●	●	●	●
MM BI-6a.2	●	●	●	●	●	●	●	●	●	●	●	●
MM BI-6b	●	●	●	●	●	●	●	●	●	●	●	●
MM BI-7b	●	●	●	●	●	●	●	●	●	●	●	●
MM BI-9b	●	●	●	●	●	●	●	●	●	n/a	●	●
MM BI-12a.1	●	●	●	●	●	●	●	●	●	●	●	●
MM BI-12a.2	●	●	●	●	●	●	●	●	●	●	●	●
MM BI-12b.1	●	●	●	●	●	●	●	●	●	●	●	●
MM BI-12b.2	●	●	●	●	●	●	●	●	●	●	●	●
MM BI-14a	●	●	●	●	●	●	●	●	●	●	●	●
MM BI-18b.1	●	●	●	●	●	●	●	●	●	n/a	●	●
MM BI-18b.2	●	●	●	●	●	●	●	●	●	n/a	●	●
MM BI-19b.1	●	●	●	●	●	●	●	●	●	n/a	●	●
MM BI-19b.2	●	●	●	●	●	●	●	●	●	n/a	●	●
MM BI-20a.1	●	●	●	●	●	●	●	●	●	●	●	●
MM PS-1	●	●	●	●	●	●	●	●	●	●	●	●
MM RE-2	●	●	●	●	●	●	●	●	●	●	●	●
MM UT-2	●	●	●	●	●	●	●	●	●	●	●	●

Table ES-2a Mitigation Measure Applicability Matrix

Mitigation Measure	*Project*	*Variant 1*	*Variant 2*	*Variant 2A*	*Variant 3*	*Variant 4*	*Variant 5*	*Alternative 2*	*Alternative 3*	*Alternative 4*	*Subalternative 4A*	*Alternative 5*
MM UT-3a	●	●	●	●	●	●	●	●	●	●	●	●
MM UT-5a	●	●	●	●	●	●	●	●	●	●	●	●
MM UT-7a	●	●	●	●	●	●	●	●	●	●	●	●
MM GC-1	●	●	●	●	●	●	●	●	●	●	●	●
MM GC-2	●	●	●	●	●	●	●	●	●	●	●	●
MM GC-3	●	●	●	●	●	●	●	●	●	●	●	●
MM GC-4	●	●	●	●	●	●	●	●	●	●	●	●

SOURCE: PBS&J, 2010.

"●" indicates that the mitigation measure is applicable; "n/a" indicates that the mitigation measure is not applicable.