



Making San Francisco Bays Better

Permittee's Copy

PERMIT NO. 8-01

(Issued on November 20, 2001, As Amended Through October 7, 2009)

AMENDMENT NO. TWENTY-FIVE

(Exclusive of Amendment No. Twenty-Three)

California Department of Transportation
P. O. Box 23660
Oakland, California 94623-0660

ATTENTION: Jim Richards

Ladies and Gentlemen:

On November 1, 2001, the San Francisco Bay Conservation and Development Commission, by a vote of 20 affirmative, 0 negative, and 0 abstentions, approved the resolution pursuant to which the original permit had been issued. Moreover, on August 2, 2002, September 20, 2002, February 25, 2003, September 17, 2003, March 3, 2004, January 5, 2004, May 6, 2004, July 13, 2004, December 15, 2004, April 19, 2005, July 13, 2005, November 16, 2005, June 13, 2006, October 9, 2007, October 23, 2007, June 11, 2008, September 16, 2008, October 31, 2008, and January 14, 2009, and October 7, 2009, the Executive Director of the San Francisco Bay Conservation and Development Commission approved Amendment Nos. One, Two, Three, Four, Five, Six, Seven, Eight, Nine, Ten, Eleven, Twelve, Thirteen, Fourteen, Fifteen, Seventeen, Eighteen, Twenty, Twenty-One, Twenty-Two, ~~and Twenty-Four~~, and Twenty-Five, respectively, pursuant to which this amended permit has been issued. Amendment No. Nineteen has been withdrawn. Additionally, on June 15, 2006, the San Francisco Bay Conservation and Development Commission, by a vote of 17 affirmative, 0 negative and 1 abstention, approved Material Amendment No. Sixteen.

I. Authorization

- A. Subject to the conditions stated below, the permittee, the California Department of Transportation, District 4 (Caltrans), is granted permission to replace the East Span of the San Francisco-Oakland Bay Bridge with a new self-anchored, single-tower, steel suspension bridge and concrete skyway in the City of Oakland, Alameda County, and in the City and County of San Francisco. Authorized work includes:

In the Bay:

1. **Dredging.** Dredge a total of approximately 616,721 cubic yards of material over approximately 99 acres of the Bay to construct portions of a new 2.18-mile-long replacement bridge for the East Span of the San Francisco-Oakland Bay Bridge (SFOBB) and to remove the existing East Span including:
 - a. **Construction Barge Access Channel (Episode No. 1).** Dredge approximately 216,230 cubic yards of material for a barge access channel to construct the new bridge in shallow water areas and dispose of the material at the federally-approved deep ocean disposal site (DODS) outside the Commission's jurisdiction;

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- b. **Construction Dredging (Episode No. 2).** Dredge approximately 187,087 cubic yards of material to construct footing piles and pile caps for the new bridge and dispose of the dredged material at the federally-approved SF-11 Alcatraz disposal site within the Commission's jurisdiction, except the upper twelve feet of Piers E1-E6 (Sediment Sampling and Analysis Plan (SAP) testing locations: N1 and N2) and Piers E15-E18 (SAP testing locations: SFOBB N5) which, because of elevated contaminant levels, would be disposed at an approved upland disposal site outside the Commission's jurisdiction;
 - c. **Demolition Barge Access Channel (Episode No. 3).** Dredge approximately 190,680 cubic yards of material for a barge access channel to remove the existing East Span and dispose of the material at an approved upland disposal site for wetland reuse, such as Hamilton or Montezuma, within the Commission's jurisdiction, or at an approved deep-ocean disposal site outside the Commission's jurisdiction;
 - d. **Demolition Dredging (Episode No. 4).** Dredge approximately 22,724 cubic yards of material to remove the existing bridge piles, tower foundations and associated fender piles and dispose of the material at the federally-approved SF-11 disposal site within the Commission's jurisdiction; and
 - e. **Experimental Eelgrass Transplant Program Dredging.** Beneficially use approximately 1,200 cubic yards of sand dredged pursuant to another BCDC permit and place the material at the Emeryville Flats to construct test plot plateaus at appropriate elevations for eelgrass (Amendment Nos. One, Two, Four, and Five).
2. **Temporary Bay Fill.** Place, use and, at project completion, remove a total of approximately ~~55,453~~ 55,669.2 cubic yards of temporary Bay fill covering approximately ~~14.53~~ 14.81 acres of Bay surface area to construct portions of a new 2.18-mile-long replacement bridge for the East Span of the SFOBB including:
- a. **Yerba Buena Island (YBI) Transition/Suspension Span.** Place, use, maintain and, at project completion, remove: (1) approximately 81 cubic yards of temporary, pile supported fill covering approximately 0.40 acres for a barge access dock at Clipper Cove to facilitate delivery of construction materials, equipment and personnel to the project site; (2) approximately 60 cubic yards of temporary, pile-supported fill covering approximately 0.13 acres for portions of a construction access trestle to serve as a construction platform and small boat dock and to facilitate moving of construction materials, equipment, and personnel at the east end of YBI; (3) approximately 1.60 acres of temporary, high-level suspended fill to construct portions of "falsework" to support bridge segments until adjoining structures are completed; (4) approximately 2,776 cubic yards of temporary submerged fill for "falsework" piers; (5) approximately 4,512 cubic yards of temporary, submerged fill covering approximately 13,734 square feet of Bay bottom to install a coffercell system and the associated temporary silt curtains required pursuant to Special Condition II-A (Amendment No. Twenty); and (6) approximately 1.23 cubic yards of temporary pilings to support a temporary pile-supported trestle, covering approximately 4,069 square feet (0.09 acre) of the Bay for up to 7 years to

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provide a marine trestle at Coast Guard Cove on the southeast side of YBI for offloading the prefabricated east tie-intruss for the detour while the Self-Anchored Suspension Span is constructed (Amendment No. Six and Eleven); ~~and~~ (7) as part of the thermal cooling operation at Clipper Cove, temporarily (for up to seven years) install three floating rafts supported by floating drums that will cover approximately 192 square feet of Bay surface area and attach three, 12-inch-in-diameter pipes (occupying 77 cubic yards of Bay volume) to the rafts that will withdraw Bay water to be used in the concrete cooling and curing process for the east- and west-bound bridge piers (Amendment No. Seven); and (8) Install a temporary access trestle at the eastern end of Yerba Buena Island, connecting Yerba Buena Island to the main tower of the Self-Anchored Suspension Span (SAS), Tower 1 (T1) to provide pedestrian, vehicle, and equipment access that will include the following: (a) 22, 36-inch-in-diameter steel pipe piles that will result in the placement 84.78 square feet of Bay fill and will displace 216.2 cubic yards of Bay volume; (b) an access trestle resulting in 6,098.4 (0.14 acre) square feet of pile-supported fill; and (c) a metal footbridge that will connect the trestle to the T1 marine foundation resulting in 6,338.18 (0.14 acre) of temporary pile supported fill. (Amendment No. Twenty 25).

- b. **Skyway.** Place, use, maintain and, at project completion, remove: (1) approximately 199 cubic yards of temporary, pile-supported fill covering approximately 1.73 acres for a construction access trestle to serve as a construction platform and small boat dock and to facilitate moving construction materials, equipment and personnel; (2) 6.17 acres of temporary, high-level suspended fill for "falsework" to support bridge segments until adjoining structures are completed; (3) 592 cubic yards of temporary, submerged fill for "falsework" piers; and (4) 26,928 cubic yards of temporary, submerged fill for 28 cofferdams;
- c. **Oakland Touchdown Structures and Approaches.** Place, use, maintain and, at project completion, remove (1) approximately 508 cubic yards of pile-supported fill covering approximately 3.46 acres for portions of a construction access trestle to serve as a construction platform and small boat dock and to facilitate moving construction materials, equipment and personnel; (2) approximately 0.48 acres of temporary, low and high-level suspended fill for "falsework" to support bridge segments until adjoining structures are completed (this "falsework" would fall within the footprint of the construction access trestle and therefore would not contribute to the overall area of temporary fill); (3) approximately 695 cubic yards of temporary, submerged fill for portions of "falsework" piers; (4) approximately 1,500 cubic yards of temporary, submerged fill for seven cofferdams; (5) a 565-square-foot trestle loading ramp at the end of Berth 7 in the Port of Oakland's Outer Harbor supported by six, 24-inch-in-diameter piles occupying 24.8 cubic yards of Bay volume (Amendment No. Eight); and (6) store a 175-square-foot, hollow rock screed that will be used to level rock material within coffercells and will displace 4.6 cubic yards of Bay volume at Berth 7 (Amendment No. Eight).

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- d. **Geofill.** Place, use, maintain and, at project completion, remove:
(1) approximately 16,667 cubic yards of temporary, solid fill covering approximately 0.65 acres for portions of a 1,970-linear-foot-long tidal berm in areas north of the Oakland Touchdown. The temporary "geotube" structure, which is a large diameter, water permeable geotextile fabric, would enclose dredged and/or excavated material and protect the work area from tidal and wave action while installing wick drains and placing fill for the westbound roadway; and (2) approximately 833 cubic yards of solid fill covering approximately 0.10 acres for a temporary tidal berm northwest of the Oakland Touchdown to facilitate relocation of the Caltrans maintenance road (the area of the temporary tidal berm would fall within the footprint of the maintenance road and the shadow of the elevated eastbound roadway, both of which are accounted for as permanent Bay fill).
 - e. **Post-Construction Stormwater Treatment Measures.** As part of the overall stormwater treatment system that will collect and treat stormwater runoff from approximately 143.3 acres (five catchment groups) of existing Caltrans right-of-way from the Oakland Touchdown in the City of Oakland to Temescal Creek in the City of Emeryville along the northside of Highway 80 excavate approximately 7,997 square feet of tidal marsh vegetation and revegetate the area upon completing excavation activities; and (2) install and remove, upon the completion of installation of stormwater treatment measures, 1,866 linear feet of environmentally sensitive area/exclusionary fencing to protect clapper rail and the salt marsh harvest mouse from the intrusion of construction equipment and personnel into sensitive habitat (Amendment No. Fifteen). In addition, project activities will temporarily impact approximately 1,742 square feet (approximately 0.04 acre) along Radio Road (Amendment No. Eighteen).
3. **Permanent Bay Fill.** Place and use a total of approximately 104,453 cubic yards of permanent Bay fill covering approximately 46.05 acres of Bay surface area to construct portions of a new 2.18-mile-long replacement bridge for the East Span of the SFOBB (Amendment Nos. One, Two, Three, Four and Five):
 - a. **YBI Transition/Suspension Span.** Place, use and maintain: (1) approximately 16,786 cubic yards of permanent, submerged fill for footing piles and pile caps; (2) approximately 2,502 cubic yards of permanent, submerged fill for pier fenders; (3) approximately 8.01 acres of permanent, high-level suspended fill for portions of a self-anchored, asymmetrical suspension bridge and cast-in-place, pre-stressed concrete bridge approaches, electrical service platforms, lighting and safety barriers; (4) approximately 0.65 acres of permanent, high-level suspended fill for portions of a bicycle and pedestrian path, one belvedere (view platforms) and safety railings; and (5) repair, retrofit, replace and/or relocate existing drainage outfalls, drainage facilities and utilities and install new outfalls as approved by the Regional Water Quality Control Board (RWQCB);
 - b. **Skyway.** Place, use and maintain: (1) approximately 32,819 cubic yards of permanent, submerged fill for footing piles and pile caps; (2) approximately 4,210 cubic yards of permanent, submerged fill for pier fenders; (3) approximately 27.36 acres of permanent, high-level suspended fill for a pre-cast or cast-in place, post tensioned concrete skyway bridges, electrical service platforms,

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lighting and safety barriers; and (4) approximately 2.97 acres of permanent, high-level suspended fill for a bicycle and pedestrian path, five belvederes and safety railings;

- c. **Oakland Touchdown Structures and Approaches.** Place, use and maintain:
(1) approximately 1,354 cubic yards of permanent, submerged fill for footing piles and footing pile caps; (2) approximately 10 cubic yards and 2.79 acres of permanent, low and high-level suspended fill for portions of a cast-in-place, pre-stressed, concrete box-girder bridge, electrical service platforms, lighting and safety barriers; (3) approximately 0.15 acres of permanent, low and high-level suspended fill for portions of a bicycle and pedestrian path and safety railings; (4) repair, retrofit, replace and/or relocate existing drainage outfalls, drainage facilities and utilities and install new outfalls as approved by the RWQCB; and (5) pavement, retaining structures, and safety barriers on Bay fill for the westbound roadway and relocate the Caltrans maintenance road;
 - d. **Maintenance Road and Shoreline Protection.** Place, use and maintain a total of approximately 67,284 cubic yards of fill to be comprised of: (1) approximately 44,272 cubic yards of permanent, engineered, solid and earthen fill covering approximately 3.31 acres for the westbound roadway. The new touchdown perimeter would be created by excavating to an elevation of approximately minus 2.6 feet NGVD and backfilling with clean fill material to match the elevations of the Oakland Approach. Vertical wick drains would be placed to purge water during consolidation of the surcharge material and to provide a drainage path for pore water during a seismic event. All water that drains from the substrate through the wick drains and vertical drains would flow through gravel blankets into the Bay; (2) approximately 1,300 cubic yards of engineered solid and earthen fill covering approximately 0.29 acres to relocate the Caltrans maintenance road; (3) approximately 21,712 cubic yards of engineered rock slope protection to be used as shoreline protection; and (4) repair, retrofit, replace and/or relocate existing drainage outfalls, drainage facilities and utilities; and
 - e. **Post-Construction Stormwater Treatment Measures.** As part of the overall stormwater treatment system that will collect and treat stormwater runoff from approximately 143.3 acres (five catchment groups) of existing Caltrans right-of-way from the Oakland Touchdown in the City of Oakland to Temescal Creek in the City of Emeryville along the northside of Highway 80, place, use and maintain: (1) a 172-square-foot bypass structure; (2) an 11-square-foot-portion of a maintenance vehicle pullout (MVP)/pump station/electrical cabinet cluster; and (3) 75.37 cubic yards of rock riprap covering 1,366 square feet of area. All items shall be installed as required by the RWQCB (Amendment No. Fifteen).
4. **On-Site Restoration.** Restore on-site, north of the Oakland Touchdown area, approximately 3.07 acres of sand flats and eelgrass beds temporarily impacted by activities associated with constructing portions of a new 2.18 mile-long replacement bridge for the East Span of the SFOBB including: