San Francisco Bay Conservation and Development Commission
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September 4, 2015

Application Summary
(For Commission consideration on September 17, 2015)

Number: Material Amendment to BCDC Permit Application No. 2001.008.38
Date Filed: August 31, 2015
90th Day: November 28, 2015
Staff Assigned: Bob Batha (415/352-3612; bob.batha@bcdc.ca.gov)

Summary

Applicant: The California Department of Transportation (Caltrans)

Location: In the Bay and within the 100-foot shoreline band, at Pier 3 of the original east span of the San Francisco-Oakland Bay Bridge (SFOBB), approximately 2,420 feet east of Yerba Buena Island, in the City and County of San Francisco (Figure 1).

Figure 1: Project Site

Project: The proposed project would use controlled explosives to demolish one of the marine foundations (the largest of them) of the original east span of the Bay Bridge. It is anticipated that the resulting debris would fall into the open cellular chambers of the pier foundation below the Bay's mudline.

The permit application raises three main issues, specifically whether the project would be consistent with: (1) the Commission's law and policies on Bay fill, particularly the burying of demolition debris beneath the bay bottom; (2) the Bay Plan policies regarding natural resource protection, with the implosion potentially impacting fish, birds, and marine mammals; and (3) the Bay Plan policies on water quality, with the possible creation of a debris plume from the implosion.

Background

On November 20, 2001, the Commission issued BCDC Permit No. 2001.008 authorizing Caltrans to construct the new east span of the Bay Bridge. The new bridge was constructed immediately north of the original east span and completed and opened for vehicular traffic September 2, 2013. The original east span was completed in 1936 and was supported by 21 in-water bridge piers (Piers E2 through E22), as well as land-based bridge piers and bents both on Yerba Buena Island (YBI) and Oakland.

BCDC Permit No. 2001.008 required that within seven years or "…by March 1, 2020 of opening the eastbound roadway of the new East Span to vehicular traffic, the permittee shall completely remove the existing East Span of the SFOBB (San Francisco Oakland Bay Bridge) covering approximately 12.5 acres of high-level suspended fill for the bridge deck, trusses and girders and approximately 78,829 cubic yards of solid fill of the support piers and footings and pier fenders. All material from the existing East Span shall be removed and disposed of at an authorized location outside of the Commission's jurisdiction, except for the approximately 5,600 cubic yards of material generated from the mechanical above water-line demolition of the Pier E3 pile cap which shall be placed with the Pier E3 caisson approximately -175 feet below the mud line" [Special Condition II-F-1].

All regulatory agency permits authorizing construction of the new east span of the Bay Bridge required Caltrans to remove the original east span of the San Francisco Oakland Bay Bridge (SFOBB) using mechanical methods. The Final Environmental Impact Statement prepared for the project, dated May 2001, evaluated mechanical dismantling of the former bridge. Dismantling of the SFOBB original east span began in late 2013.

Since the original permit was issued in November 2001, the project has been revised many times. BCDC has issued thirty four amendments to the permit, authorizing, for example, changes to the amount of falsework, extending deadlines for commencing required mitigation, changing required mitigation, and the construction of temporary access trestles. As a result of

these changes to the project, Caltrans reinitiated consultation with the National Marine Fisheries Service (NMFS) eleven times since the issuance of the original biological opinion (BO) and the California Department of Fish and Wildlife has issued three amendments to its original Incidental Take Permit. In its application for Amendment 38 to the permit, Caltrans is proposing using a controlled implosion to remove one of the former span's piers, the largest one, Pier E3. Caltrans believes this method of demolition will "…reduce and avoid impacts to environmental resources in the Bay, reduce the SFOBB Project's total duration of in-water construction activities in the Bay and minimize risks to public safety."

If the controlled implosion technique proves effective and monitoring determines that the impacts are minimal or manageable, use of controlled implosions may be proposed in the demolition of the remaining in-water piers. These implosions would require that Caltrans return to the Commission for additional authorization.

Project Description

Project Details: Caltrans proposes the following project:

In the Bay and Within the 100-foot Shoreline Band:

1. **Demolition.** Remove Pier E3 by use of controlled charges to implode the pier into its open cellular chambers below the mudline, resulting in the placement of demolition debris below the Bay bottom.

In the Bay:

1. **Install.** Temporarily (for approximately one month) install and after the explosion, remove, a Blast Attenuation System (BAS or bubble curtain) to minimize impacts to biological resources in the Bay from the implosion;
2. **Remove.** Following the implosion, remove to an authorized upland location outside of the Commission's jurisdiction or place within the cellular chambers of the pier below the mudline any debris that falls outside the boundary of the cellular structure of the pier;
3. **Monitoring.** Monitoring equipment, vessels, and personnel, will measure the effects of the blast for up to one month following the implosion; and
4. **Temporarily Close Public Access**. Temporarily, for no more than three days, close the bicycle/pedestrian path on the new east span for safety.

Bay Fill:

1. **Demolition Debris.** The removal of Pier E3 would result in an approximate 15,000-square-foot (0.35-acre) net increase in open Bay surface area, and an approximate 16,995 cubic yards net increase in Bay volume. Approximately 16,104 cubic yards of concrete and steel debris is anticipated to fall into the 28 cellular chambers of Pier E3 which extend approximately 165 feet below the mudline. This material would be permanently entombed below the Bay bottom. Caltrans states that "all debris is expected to fall to the base of the

caisson, well below mudline. This disposal method is congruous with the SFOBB Project FEIS, which states that the Department may use the hollow interiors of the columns remaining below the mudline as receptacles for pieces of concrete….”

Fill	**Removed (Demolition)**			**New (Debris Buried Within Confines of Pier Below the Mudline)**		
	SF	AC	CY	SF	AC	CY
Pier 3	15,000	0.35	16,995	15,000	0.35	16,104

Most of the rubble from the controlled implosion will consist of concrete and rebar and is expected to fall within the caisson cells below the mudline. Some rubble may either mound on top of the caisson, or fall on the Bay floor next to the caisson. Caltrans, using a barge-mounted crane with a clamming bucket, will remove all rubble above the mudline and place it and sort it on the barges. Sorted concrete will be lowered over the caisson voids and released to sink into the open voids. Buckets used to place the rubble will be equipped with GPS to accurately guide the location of the bucket in the water. This operation will take place over several weeks following the blast.

2. **Blast Attenuation System (BAS)**. Prior to the controlled implosion, a blast attenuation system will be installed encircling Pier 3. The BAS is a system of pipes on frames that will be fed by air compressors on barges to create a curtain of air bubbles around the entire pier during the implosion (bubble curtain). The pipes will be placed 25 to 40 feet from the outside edge of Pier E3. Bubble curtains have been effective in reducing the sound pressure waves generated in pile driving (e.g. for the new east span of the SFOBB). Caltrans states that the bubble curtain “…is anticipated to provide approximately 80% attenuation, or better, based on past experience with similar systems during controlled blasting.” Once the controlled implosion has occurred, the contractor will remove the bubble curtain and associated compressors, barges, and related equipment within four weeks.

The issues raised by the project’s fill are discussed in more detail in the issues raised section below.

Mitigation: For the originally authorized SFOBB project, Caltrans committed to a $15.5 million mitigation program to offset project impacts. This mitigation was in addition to construction best management practices and on-site restoration and enhancement activities.

The proposed controlled implosion would likely cause additional impacts not originally evaluated or mitigated for in the Final EIS and subsequent project amendments. To evaluate and mitigate these impacts, Caltrans is proposing the following avoidance and minimization measures, among others:

1. **Siltation Measures**. Conduct a hydrographic survey of the Pier E3 area after the controlled implosion and 12 months later to evaluate effects of the implosion on Bay bathymetry;
2. **Blast Attenuation System (BAS).** Deploy a BAS "to reduce the velocity of pressure waves, increase sound attenuation from the underwater charges, and reduce the number of individuals and habitat subject to harmful sound. Minimal efficiency of the BAS for reducing blast wave pressures is estimated at 80%";
3. **Seasonal Avoidance.** Time the implosion for the period of the year when the least amount of fish, especially listed and endangered species, are likely to be present;
4. **Bird Monitoring.** Monitor the presence of least tern and brown pelican in a 500-foot zone from Pier E3 and delay the blast if these species are observed in the area;
5. **Bird Hazing.** Deter birds from entering the avian exclusion zone using human presence and possibly sound; and
6. **Turbidity Monitoring.** Monitor turbidity plumes following the implosion and during rubble removal.

The project's mitigation measures are discussed in more detail in the issues raised section below.

Public, Vehicular and Boat Access: To assure public safety, the bicycle/pedestrian trail on the new east span of the SFOBB would be closed near the gate at Burma Road for a few hours before the scheduled blast. The gate will be opened a few hours following the implosion. Rolling traffic stops would occur in both directions of the new east span in advance of detonation. There is potential for drivers to hear the blast and be distracted. To be safe, Caltrans is planning a rolling stop but may be closed up to three days for public safety. Traffic is not expected to be stopped for more than five minutes and will be resumed as soon as the blaster-in-charge gives the go ahead. The California Highway Patrol would establish and enforce safety zones to exclude commercial and recreational boat traffic from the blast zone both before and for a period following detonation, with support from the U.S. Coast Guard.

Schedule and Cost: Preparation for the implosion, scheduled for November 7, 2015, has already begun. The applicant has prepared the pier for the implosion by removing the pile cap, has tested a section of the bubble curtain pursuant to a Commission Regionwide permit, and has begun drilling holes in the Pier where controlled charges would be loaded. Monitoring following the implosion would occur for

varying periods of time—for example, three days for marine mammals, several hours for water quality and fish impacts, and one month for sediment sampling. The entire detonation sequence will last approximately six seconds. All activities associated with the implosion are expected to last about seven months.

The estimated cost for the implosion and associated monitoring is $11 million. If monitoring indicates that the project successfully removed the pier with acceptable impacts to Bay resources, Caltrans anticipates further amending Permit No. 2001.008 to allow controlled charges in the demolition of other in-water piers of the former east span.

Staff Analysis

A. **Issues Raised**: The permit application raises three main issues, specifically whether the project would be consistent with: (1) the Commission's law and policies on Bay fill, particularly the burying of demolition debris beneath the bay bottom; (2) the Bay Plan policies regarding natural resource protection, with the implosion potentially impacting fish, birds, and marine mammals; and (3) the Bay Plan policies on water quality, with the possible creation of a debris plume from the implosion.

1. **Bay Fill and Priority Use.** The Commission may allow fill when it meets the requirements identified in Section 66605 of the McAteer-Petris Act, which provide, in part, that: (a) fill "should be limited to water-oriented uses;" (b) fill in the Bay should be approved only when "no alternative upland location" is available; (c) fill should be "the minimum amount necessary to achieve the purpose of the fill"; (d) "the nature, location, and extent of any fill should be such that it will minimize harmful effects to the Bay area, such as, the reduction or impairment of the volume, surface area or circulation of water, water quality, fertility of marshes or fish or wildlife resources, or other conditions impacting the environment…"; (e) "fill [should] be constructed in accordance with sound safety standards which will afford reasonable protection to persons and property against the hazards of unstable geologic or soil conditions or of flood or storm waters"; and (f) "fill should be authorized when the applicant has such valid title to the properties in question that he or she may fill them in the manner and for the uses to be approved."

   The Bay Plan Map 4 designates the SFOBB as a scenic drive. Removing the former east span would improve views from the new east span, whose low railing and lack of overhead structures have been designed to promote views of the Bay.

   Questions about the project's consistency with the fill requirements of the McAteer-Petris Act revolve around the placement of rubble from the former Pier 3 into the interior of the former pier. Because the pier was constructed 30 years prior to the Commission's creation, Pier E3 currently is within the 100-foot shoreline band. However, in the seconds following the implosion, the area now occupied by the pier will become part of the Bay, and rubble-filled. The implosion has been designed so that the demolished rubble from former Pier 3 will fall into the cellular voids of the former pier. Charges will also be placed in the pier's wall 20 feet below the mudline so that as much as 20 feet of the pier below the Bay bottom will also fall within the pier's voids to a depth 175 feet below the Bay bottom. But it is likely that not all the rubble will fall into

the voids. Caltrans will use barge-mounted cranes to remove this concrete debris, sort it, and place it back into the pier's voids. Because the former pier will be in the Commission's Bay jurisdiction after the implosion, the Commission must be able to find that disposing of the fill within the former chambers of the pier is a water-oriented use.

Water-Oriented Use and Upland Alternative. Section 66605 of the McAteer-Petris Act identifies "bridges" as a water-oriented use. While Pier E3 provided critical support for the former bridge, with the opening of the new bridge, the former bridge became surplus. The Commission must determine whether disposing of demolition debris from the former bridge in the Bay is consistent with the Commission's fill policies.

In the original BCDC Permit to Caltrans for constructing the new east span of the Bay Bridge, the permit authorized the removal of "... the former SFOBB East Span to approximately minus 1.5 feet below the existing mud line and dispose or recycle the bridge debris at an approved location outside the Commission's jurisdiction…." [Authorization Section I.A.5]. The permit also required the removal of "…all pilings, support piers and footings to at least 1.5 feet below the existing mudline. Prior to removal of the existing East Span, the permittee shall prepare and submit a removal plan to be approved by or on behalf of the Commission to ensure that the removal plan does not adversely impact Bay-related resources, endangered species, navigation and public health and safety and that sufficient safeguards are included to protect human safety and capture all demolition debris and related substances."

The placement of demolition debris "that is determined to be inert, non-hazardous, and not-toxic may be deposited within the footings of the existing bridge up to but no higher than an elevation of minus 10-feet below the pre-construction mudline elevation with express written approval by or on behalf of the Commission…" was required in BCDC Permit No. 2001.008, Special Condition II-V. The result of the implosion and subsequent rubble management will mean that the removal of Pier 3 will comply with this condition – that is, that the pier will be removed to at least 10 feet below the mudline. While the Commission has urged that wherever possible, former structures in the Bay be fully removed when no longer in use, in practice, those portions of abandoned structures lying 1.5 feet to 3.0 feet below the mudline are abandoned in place. Full removal of such structures is not always possible because the structures may break during removal, because the environmental disturbance (e.g. resuspending contaminants, increased turbidity, impacts to benthic communities, etc.) resulting from fully removing structures from the Bay may be significant, and because of the high cost of full removal. As a result, the Commission has typically required that structures be cut 1.5 feet to 3.0 feet below the mudline and therefore, remnants of former bridge piers, port piers, pipelines, utilities, etc. are found below the mudline throughout the Bay.

The Commission must determine if the disposal of concrete rubble from the implosion within the cells of the former Pier E3 are consistent with the Commission's fill policies.

2. **Bay Biological Resources and Mitigation**. In addition to the provisions of Section 66605 of the McAteer-Petris Act regarding fill effects on resources, the Bay Plan contains the following relevant policies:

   Fish, Other Aquatic Organisms, and Wildlife Policy 2, states, in part: "...habitats that are needed to conserve, increase, or prevent the extinction of any native species, species threatened or endangered…should be protected…." Policy 4 states, in part: "[t]he Commission should: (a) consult with the California Department of Fish and Game and the U.S. Fish and Wildlife Service or the National Marine Fisheries Service whenever a proposed project may adversely affect an endangered or threatened… species….; [and] (c) give appropriate consideration to the recommendations of the [resource agencies] in order to avoid possible adverse effects of a proposed project on fish, other aquatic organisms and wildlife habitat."

   Tidal Marshes and Tidal Flats Policy 1 states, in part: "…[f]illing, diking, and dredging projects that would substantially harm tidal marshes…should be allowed only for purposes that provide substantial public benefits and only if there is no feasible alternative." Policy 2 states: "[a]ny proposed fill, diking, or dredging project should be thoroughly evaluated to determine the effect of the project on tidal marshes and tidal flats, and designed to minimize, and if feasible, avoid any harmful effects." Further, the Bay Plan Subtidal Areas Policy 1 states, in part, projects in subtidal areas "should be designed to minimize and, if feasible, avoid any harmful effects" on Bay resources.

   The Bay Plan's Subtidal Areas Policies 1 and 2 state: "[a]ny proposed filling or dredging project in a subtidal areas should be thoroughly evaluated to determine the local and Bay-wide effects of the project on: (a) the possible introduction or spread of invasive species; (b) tidal hydrology and sediment movement; (c) fish, other aquatic organisms and wildlife; (d) aquatic plants; and (e) the Bay's bathymetry. Projects in subtidal areas should be designed to minimize and, if feasible, avoid any harmful effects. Subtidal areas that are scarce in the Bay or have an abundance and diversity of fish, other aquatic organisms and wildlife (e.g. eelgrass beds, sandy deep water or underwater pinnacles) should be conserved. Filling, changes in use, and dredging projects in these areas should therefore be allowed only if: (a) there is no feasible alternative; and (b) the project provides substantial public benefits."

   The Bay Plan Mitigation Policy 1 states, in part, that projects should avoid adverse environmental impacts and, if unavoidable, impacts minimized to the greatest extent practicable and, moreover, require measures to compensate for such impacts. Policy 2 states, in part: "…compensatory mitigation projects should be sited and designed…as close to the impact site as practicable…." The Bay Plan Mitigation Policy 4 states, in part: "[t]he amount and type of compensatory mitigation should be determined…based on a clearly identified rationale that includes an analysis of: the probability of success of the mitigation project; the expected time delay between the impact and the functioning of the mitigation site; and the type and quality of the ecological functions of the proposed mitigation site as compared to the impacted site." Policy 6 states, in part, mitigation

should occur "prior to, or concurrently with those parts of the project causing adverse impacts." Policy 7 states, in part, that the program should include goals, performance standards to evaluate success, and plans for site monitoring, adaptation, maintenance, and management.

a. **Why Caltrans Has Selected Implosion Over Mechanical Dismantling**. Caltrans originally proposed to mechanically dismantle the former east span. While precise details of the demolition were not developed, such demolition would likely involve the construction of coffer dams around piers so work could be performed in the dry, to isolate the foundations from Bay waters, and to prevent discharge of demolition rubble into the Bay. The installation of pilings to support coffer dams, the dewatering of the area enclosed by the coffer dams to allow work, and the length of time needed to mechanically demolish the piers would have significant environmental impacts. For example, installation of a coffer dam around Pier E3 was estimated to take 1,415 construction days (approximately 46 months). Although pile driving would follow the hydroacoustic regulations required of all pile-driving for SFOBB, the long time-period needed to install the cofferdam would increase the likelihood of unintended exposure to high noise levels and sound pressure waves. Caltrans believes that the short duration of the implosion blast, although creating a high density soundwave, will have less impact overall compared to a lengthy mechanical demolition. The California Department of Fish and Wildlife and the National Marine Fisheries Service have come to a similar conclusion.

b. **Impacts to Fish and Wildlife.** It is difficult to determine the number and species of fish and wildlife that may be impacted by the implosion. Fish and wildlife can rapidly move though an area and it is not always possible to determine the abundance or types of animals that may be present in an area at any given time. According to Caltrans, animals immediately adjacent to the blast zone will be killed by the sound pressure waves and noise from the implosion. Animals farther away may experience permanent or temporary injury. Caltrans modeled expected sound pressure levels to be experienced in areas near the blast site, as attenuated with the bubble curtain (Exhibits M, O, and P). Caltrans estimates that the maximum total amount of temporarily affected marine habitat during the controlled implosion would be approximately 1,026 acres. Work over the last several years has attempted to determine those sound pressure levels where injury or behavioral disturbance to animals may occur and those studies inform the.

   Caltrans determined that the best way to minimize impacts to fish and wildlife is to time the implosion to a time when the least amount of animals would be present in the project vicinity (see Exhibit L). November 7 has been selected as that time. None of the salmon runs (several endangered), herring, or nesting birds are typically in the area at that time. To further limit exposure of animals to the potential harmful effects of the blast, Caltrans will install a bubble curtain that will reduce blast wave pressures by an estimated 80%. In addition, monitors will be employed to observe the area with binoculars, scanning equipment, and sonar technology to monitor fish assemblages, and to discourage the presence of animals within the blast area. The implosion will be delayed or postponed if marine mammals or bird species of

concern (e.g., peregrine falcon, brown pelican, or least tern) are observed in areas where they could be harmed. The presence of human observers will also act to discourage some animals from entering the blast zone. Hazing and auditory deterrents may be used to encourage marine mammals and bird species of concern to avoid areas where they may be injured. In addition, a plan to rescue and rehabilitate any marine mammals injured by the blast is being developed with the National Marine Fisheries Service (NMFS).

c. **Mitigation**. With the avoidance and minimization measures described above, no marine mammals are expected to be injured, impacts to birds should be minimal, and most endangered species should be unaffected. However, there is limited experience with controlled implosion technology in marine environments so the actual extent of impacts cannot be known or precisely predicted. And one species of concern is likely to be in the area during the blast, the threatened longfin smelt.

   In 2014, longfin abundance was at its second lowest on record. The California Department of Fish and Wildlife (CDFW), concerned that the longfin was at a critical point in its survival, required in its Incidental Take Permit a mitigation measure and a monitoring measure to protect and better understand the implosion's impact on this species. Specifically, the take permit requires Caltrans to purchase four acres of mitigation credits for longfin smelt prior to beginning activities related to the implosion of Pier E3.

d. **Monitoring.** Caltrans will perform extensive monitoring of all fish and wildlife species prior to the implosion, to determine the presence of species, to guide deterrence efforts, and determine the exact time of the implosion. Such monitoring will include using fish finding equipment to detect the presence of large schools of fish such as Pacific herring staging in the project areas, and hydrophones to confirm the absence of marine mammal species prior to the implosion. Monitoring will continue immediately after the implosion to determine any effects from the blast. Bird predation monitoring will be used as an indicator of fish mortality and observers will monitor increased bird feeding after the implosion and collect any fish floating on the surface. A requirement of CDFW's Incidental Take Permit is that Caltrans will perform a series of oblique and otter trawls as soon after the implosion as is safe and feasible to assess potential project related mortality, and to perform necropsy on all covered species collected during the trawls to determine the cause of death. As discussed below, project impacts to water quality will also be monitored.

The Commission must determine if impacts and risks from the implosion are consistent with the Commission's policies protecting Bay resources.

3. **Water Quality.** The Bay Plan Water Quality Policy 2 states: "[w]ater quality in all parts of the Bay should be maintained at a level that will support and promote the beneficial uses of the Bay as identified in the Regional Water Quality Control Board's Basin Plan. The policies, recommendations, decisions, advice and authority of the State Water Resources Control Board and the Regional Water Quality Control Board, should be the

basis for carrying out the Commission's water quality responsibilities." Policy 3 states, in part: "[n]ew projects should be sited, designed, constructed and maintained to prevent or, if prevention is infeasible, to minimize the discharge of pollutants into the Bay…."

The implosion has three potential impacts on water quality-the release of contaminated water from the caissons of the Pier, increased turbidity as a result of the blast, and impacts on water quality from rubble management operations following the implosion.

Water within the caissons of Pier 3 will be released with the implosion. Caisson water has been sampled and indicated that, except for a small volume of water near the water line, caisson water quality is comparable to ambient Bay water and below regulatory trigger limits. Near the water surface, dissolved oxygen is depressed and in some cells, elevated levels of lead, zinc, and silver was measured. Caltrans has already undertaken efforts to remove water that contains elevated levels of contaminants for treatment off site, or has treated it and released it back into the Bay after it met water quality requirements.

To minimize water quality impacts from the implosion, the controlled implosion is anticipated to occur during a peak high tide to ensure the largest water column within the bubble curtain. The lag time between the peak high tide and ebb current would create relatively still and quiescent conditions while the flood current reverses direction, allowing sediment to fall out of suspension thereby reducing sediment concentration and turbidity. Strong currents would limit the ability of the suspended sediment to move into nearby eelgrass beds. Still, a turbidity plume is expected to occur on either side of Pier E3 following the implosion, but it is expected to dissipate within two hours (Exhibit Q).

Following the implosion, water quality monitoring will be performed to detect and measure conductivity, temperature, pH, dissolved Oxygen, metals and other contaminants. Water quality monitoring will be continued during the rubble disposal period to assure that those activities don't adversely impact water quality.

On July 21, 2015, the San Francisco Bay Regional Water Quality Control Board (RWQCB) accepted the Stormwater Pollution Prevention Plan to demolish Pier E3 by controlled implosion. That acceptance concluded that "…aside from minor, temporary impacts, the implosion demolition of Pier E3 will have acceptable impacts on water quality."

The Commission should determine whether the proposed project would be consistent relevant Bay Plan policies on water quality.

B. **Review Boards**

1. **Engineering Criteria Review Board (ECRB).** The Commission's ECRB did not review the proposed project because no uses are proposed on fill.
2. **Design Review Board (DRB).** The Commission's DRB did not review the project as public access improvements are not proposed.

C. **Environmental Review.** Caltrans has stated that this project is categorically exempt from the need to prepare an environmental document pursuant to AB 14, enacted in 2005, which provided that toll bridge seismic retrofit and replacement projects were CEQA exempt.

D. **Relevant Portions of the McAteer-Petris Act**

1. Section 66605
2. Section 66610

E. **Relevant Map and Policies of the San Francisco Bay Plan**

1. Bay Plan Map 4
2. Fish, Other Aquatic Organisms, and Wildlife
3. Tidal Marshes and Tidal Flats
4. Subtidal Areas
5. Water Quality
6. Mitigation