

## **CHAPTER 3 - CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) EVALUATION**

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The project is subject to federal, and State environmental review requirements because the Golden Gate Bridge, Highway and Transportation District (District) proposes the use of federal funds and/or the project requires a federal approval action. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). The District is the project proponent and the lead agency under CEQA. The Federal Highway Administration's (FHWA) responsibility for environmental review, consultation, and any other action required in accordance with NEPA and other applicable Federal laws for this project is being, or has been, carried out by the California State Department of Transportation (Department) under its assumption of responsibility pursuant to 23 U.S.C. 327.

### **3.1 DETERMINING SIGNIFICANCE UNDER CEQA**

One of the primary differences between NEPA and CEQA is the way significance is determined. Under NEPA, significance is used to determine whether an Environmental Impact Statement (EIS), or some less extensive level of documentation, will be required. NEPA requires that an EIS be prepared when the proposed federal action (project) as a whole has the potential to "significantly affect the quality of the human environment." The determination of significance is based on context and intensity. Some impacts determined to be significant under CEQA may not be of sufficient magnitude to be determined significant under NEPA. Under NEPA, once a decision is made regarding the need for an EIS, it is the magnitude of the impact that is evaluated and no judgment of its individual significance is deemed important for the text. NEPA does not require that a determination of significant impacts be stated in the environmental documents.

CEQA, on the other hand, does require the District to identify each "significant effect on the environment" resulting from the project and ways to mitigate each significant effect. If the project may have a significant effect on any environmental resource, then an Environmental Impact Report (EIR) must be prepared. Each and every significant effect on the

environment must be disclosed in the EIR and mitigated if feasible. In addition, the CEQA Guidelines list a number of mandatory findings of significance, which also require the preparation of an EIR. There are no types of actions under NEPA that parallel the findings of mandatory significance of CEQA. This chapter discusses the effects of this project and CEQA significance.

Additionally, CEQA distinguishes three mandatory findings of significance:

- Potential to substantially degrade the environment, reduce the habitat of fish and wildlife species, cause fish or wildlife populations to drop below self-sustaining levels, threaten or eliminate a plant or animal community, reduce the number or range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or pre-history.
- Environmental effects that are individually limited but cumulatively considerable.
- Environmental effect will cause substantial adverse effects on human beings, either directly or indirectly.

## **3.2 DISCUSSION OF SIGNIFICANCE OF IMPACTS**

### **3.2.1 SIGNIFICANCE CRITERIA**

#### **Land Use**

In accordance with Appendix G of the *CEQA Guidelines* (the CEQA Checklist, Appendix A of this document), the following issues are considered when evaluating the significant land use impacts from a project. The project would have a significant impact if it would:

- Conflict with any applicable habitat conservation plan or natural community conservation plan
- Physically divide an established community
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the General Plan, Specific Plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect

#### **Recreation**

In accordance with the *CEQA Guidelines* Appendix G (the CEQA Checklist, Appendix A of this document), the project would cause a potentially significant impact to recreation facilities if it would:

- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated
- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment

### **Visual/Aesthetics**

In accordance with the *CEQA Guidelines* Appendix G (the CEQA Checklist, Appendix A of this document), the project would cause a potentially significant visual impact if it would:

- Have a substantial adverse effect on a scenic vista
- Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway
- Substantially degrade the existing visual character or quality of the site and its surroundings
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area

### **Cultural Resources**

Actions associated with implementing the project that could cause a substantial adverse change in the significance of an historic resource are actions that may have a significant effect on the environment pursuant to CEQA. A substantial adverse change includes physical demolition, destruction, relocation, or alteration of the resource such that the significance of the resource would be materially impaired. Implementing the project may have a significant effect if it would:

- Demolish or materially alter in an adverse manner those physical characteristics of a historic resource that: (1) convey its historic significance and justify its inclusion in, or eligibility for, the California Register of Historic Resources (CRHR) or National Register of Historic Places (NRHP); (2) account for its inclusion in a local register of historical resources or a qualifying historical resources survey; or (3) convey its historical significance and justify its eligibility for inclusion in the CRHR or NRHP as determined by the lead agency for purposes of CEQA
- Have the potential to eliminate important examples of the major periods of California history or prehistory
- Cause damage to a unique archaeological resource
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature

- Disturb any human remains, including those interred outside of formal cemeteries

### **Biological Environment**

In accordance with the *CEQA Guidelines* Appendix G (the CEQA Checklist, Appendix A of this document), the project would cause a potentially significant biological impact if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game (CDFG) or U.S. Fish and Wildlife Service (USFWS).
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFG or USFWS.
- 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, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species with established native resident or migratory wildlife corridors, or impeded the use of native wildlife nursery sites.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

## **3.2.2 LESS THAN SIGNIFICANT EFFECTS OF THE PROPOSED PROJECT**

### **Land Use**

#### **Conflict with Habitat Conservation Plan**

The project does not involve any changes in the existing use of the Golden Gate Bridge (Bridge) or the land surrounding the Bridge. Construction of the project would occur within the permitted area granted to the District. The project would be constructed on the Bridge structure and the project construction staging areas are located on previously established paved and graveled parking areas. No additional road rights-of-way, either permanent or temporary, would be required for this project.

As part of the environmental clearance for the seismic upgrade project, a Habitat Protection Plan (Plan) was implemented by the District to minimize or eliminate indirect impacts to common vegetation during construction phases of the seismic upgrade project. The Plan requires the use of buffers to prevent or reduce the effects of disruption in the hydrologic or edaphic (growing) environment of native or non-native vegetation. The project avoids the areas subject to the Plan and would therefore not be in conflict with the Plan.

### **Physically Divide an Established Community**

The project does not involve any changes in the existing use of the Bridge or the land surrounding the Bridge; thus, the project would not divide or disrupt an established community.

### **Conflict with Applicable Policies**

The Bridge is bordered by the Golden Gate National Recreation Area (GGNRA) and the Presidio. These agencies' management plans contain policies related to public access, transportation, pedestrian, and bicycle access. The project does not affect the existing uses of the Bridge. The existing uses of the Bridge and the land surrounding the Bridge will not change. Currently the Bridge includes pedestrian and bicycle paths that are part of the Bay Trail alignment (Bay Trail Project, 2007) and provides visual access to the Bay. The construction of any of the build alternatives would maintain the existing paths and visual access. There would be no change to the paths.

The Bay Plan implemented by the Bay Conservation and Development Commission contains policies related to public access and preservation of existing views. Visual access will be maintained under Alternatives 1A, 1B, 2A and 2B through the inclusion of transparent glass panels at the belvederes and spacing of the physical suicide barrier vertical and horizontal members. The Bridge currently provides public access with views of the Bay, which will be maintained with implementation of the project.

Please see Section 2.1, Land Use, of this Final Environmental Impact Report/Environmental Assessment (Final EIR/EA) for a more detailed discussion of the project's consistency with applicable policies.

### **Recreation**

The project does not involve any changes in the existing use of the Bridge or the land surrounding the Bridge; thus, the project would not increase the use of existing parks or expand recreational opportunities available on the Bridge.

As documented in the Section 4(f) Evaluation, the Bridge is surrounded by regional parks and facilities. The project would not affect the continued use

of these parks and facilities. Implementation of the project would, however, affect the recreational experience of users of the Bridge sidewalks. Please see Appendix B for a detailed discussion of the impact of the project to the Bridge and existing recreational uses and facilities surrounding the Bridge.

### **Visual/Aesthetics**

#### **Substantial Adverse Effect on a Scenic Vista (Views towards the Bridge)**

As discussed in Section 2.2, Visual/Aesthetics, of the Final EIR/EA, views towards the Bridge would not be significantly altered by any of the build alternatives. The physical suicide deterrent systems would not be visible from Baker Beach and only marginally visible from the Marin Headlands. They would be somewhat visible from other viewpoints depending on the distance and angle of the view, but the change to the overall views resulting from construction of the alternatives would not be significant. The major visual components of the Bridge, the towers, suspender ropes, and main cables would remain the dominant features of the Bridge viewed in the landscape.

The build alternatives would also not affect the panoramic views of the San Francisco skyline and Marin Headlands available from the viewpoints towards the Bridge. Within the overall context of the study area's visual environment, the area of changes would be small. It would appear as a thickening of a horizontal line along the lower edge of the Bridge, which would not block views through the Bridge of the urban and natural elements surrounding the Bridge. The impact would therefore be less than significant.

#### **Substantially Damage Scenic Resources**

The Bridge connects the primary regional roadways in the project area – U.S. Highway 101 and State Route 1 – connecting points of land on either side of the entrance to the San Francisco Bay. These two roadways connect approximately 0.6 miles southwest of the Bridge on the San Francisco side, and extend north as a combined road across the Bridge to Marin County. Neither of these roadways is a designated state scenic highway, although State Route 1 is eligible. The project, therefore, would not affect resources within a state scenic highway, and the impact would be less than significant.

#### **Substantially Degrade the Existing Visual Character**

The major visual components of the Bridge are the main suspension span, suspender ropes and suspension cables, and towers, and the International Orange color. Installation of the build alternatives would not noticeably alter the relationships among these elements and would therefore not

substantially degrade the existing visual character of the Bridge. The build alternatives would repeat the vertical (suspender ropes) and horizontal (public safety railing) elements of the Bridge and the symmetrical relationships among the various Bridge elements.

The relationship of the Bridge to the overall regional landscape would also not be degraded through construction of the build alternatives. The project would not change the color, materials, or location of the Bridge, which would maintain its relationship within the dramatic coastal backdrop. The features of the Bridge that contribute to its harmonious blending of the natural and built environment would not be altered. Panoramic views within the project area that include the Bridge would not be degraded. The impact would therefore be less than significant.

Please see Section 2.2, Visual/Aesthetics, of the Final EIR/EA for a more detailed description of the project impacts to views towards the Bridge.

### **New Source of Light and Glare**

Alternatives 1A, 1B, 2A, and 2B include transparent panels at the belvederes to allow areas of unobstructed views from the Bridge. Alternatives 1B and 2B include transparent winglets on top of the physical suicide barrier for aerodynamic stability. The introduction of additional transparent materials onto the Bridge will increase glare during daylight hours, but it would not represent a substantial increase because of the limited use of these materials in the context of the entire Bridge structure. The Preferred Alternative, Alternative 3, would not include the use of transparent panels and would not introduce new sources of glare. The horizontal netting would be unpainted and uncoated stainless steel and would not be anticipated to create significant daytime glare. Lighting on the Bridge itself will remain unchanged. The impact would therefore be less than significant.

### **Cultural Resources**

#### **Potential to Eliminate Important Examples of the Major Periods of California History or Prehistory**

The project does not involve any changes in the existing use of the Bridge or the land surrounding the Bridge; thus, the project will not eliminate potential examples of California history or prehistory. The impact would therefore be less than significant.

#### **Damage Unique Archaeological Resource; Destroy Unique Paleontological Resource or Unique Geologic Feature; Disturb Human Remains**

The project would be constructed entirely within the right-of-way of the Bridge. The Area of Potential Effect (APE) for cultural resources was determined through consultation with the Department. In consultation

with Brett Rushing, PQS Archaeologist, it was determined that no archaeological study and therefore, no archaeological APE, would be necessary because the construction of the project would take place on the Bridge structure and the project construction staging areas would be located on previously established paved and graveled parking areas. No additional road rights-of-way, either permanent or temporary, would be required for this project. The impact would therefore be less than significant.

## **Biological Environment**

### **Substantial adverse effect on special-status species**

Monarch butterfly wintering sites, which are considered sensitive by the CDFG, have been documented in the project area. The four staging areas within GGNRA lands on the north side of the Bridge have and/or continue to be used for similar activities associated with the Golden Gate Seismic and Wind Retrofit Project and do not border areas potentially used as winter roost sites by monarch butterflies. Therefore, the continued use of these staging areas would not adversely affect a monarch butterfly winter roost site. The fifth proposed staging area within GGNRA lands on the south side of the Bridge in the Presidio is paved and used as a parking lot. There are no trees within the parking lot and the preferred winter roost trees of monarch butterflies (i.e., eucalyptus and pine) are not present near the location. Given the above, the proposed project is not expected to have a substantial adverse effect on a monarch butterfly wintering site. Refer to Appendix F for a determination of no effect and no take for the monarch butterfly and other special-status species documented in the project area.

### **Substantial adverse effect on riparian habitat or other sensitive natural community**

The four staging areas within GGNRA lands on the north side of the Bridge are denuded of vegetation and are covered by gravel and compacted dirt. These areas have and/or continue to be used for staging and maintenance activities associated with the Golden Gate Bridge Seismic and Wind Retrofit Project. The fifth proposed staging area within GGNRA lands on the south side of the Bridge in the Presidio is within a paved parking lot. Given the above, and the developed condition of the Bridge, construction-related activities would not occur within areas containing vegetation. The impact would therefore be less than significant.

However, the staging areas within GGNRA are located adjacent to well-developed coastal scrub habitat. This plant community is characterized by a dense growth of native species such as coyote brush (*Baccharis pilularis*), California blackberry (*Rubus ursinus*), poison oak (*Toxicodendron diversilobum*), California sagebrush (*Artemisia californica*), arroyo willow (*Salix lasalepis*), and various lupine species (*Lupinus* sp.), as well as non-



native invasive species such as French broom (*Genista monspessulana*), wild radish (*Raphanus sativus*), and fennel (*Foeniculum vulgare*).

Based on the CDFG List of California Terrestrial Natural Communities (CDFG, 2003), the coastal scrub habitat bordering the staging areas is not denoted on the list as “high priority for inventory in the California Natural Diversity Database (CNDDDB) and thus is not considered a sensitive plant community. Additionally, given that the staging areas are fenced and actively used, they are not part of an expected wildlife movement corridor and their use would not result in habitat fragmentation.

### **Substantial adverse effect on federally protected wetlands**

As part of the Golden Gate Bridge Seismic and Wind Retrofit Project, a Biological Assessment (October 1995) was prepared (pursuant to the requirements of Section 7 of the federal Endangered Species Act) and a subsequent Biological Opinion (August 1995) was issued by the USFWS. These documents addressed potential impacts from construction activities and use of staging areas within GGNRA lands on federally-listed species and other sensitive biological resources. No federally protected wetlands were identified on or near the construction staging areas.

### **Conflict with any local policies or ordinances protecting biological resources**

The project proposes to construct a physical suicide deterrent system along both sides of the Bridge. Construction-related activities would be limited to the Bridge and to five staging areas, which are denuded of vegetation and are either paved or graveled. The avoidance measures being implemented as part of the Golden Gate Bridge Seismic and Wind Retrofit Project to protect sensitive biological resources bordering and near the staging areas within GGNRA lands would continue to be implemented as part of the proposed project. The project would continue the avoidance measures and would therefore not be in conflict with existing District policies protecting biological resources.

### **Conflict with Habitat Conservation Plan**

As part of the environmental clearance for the seismic upgrade project, a Habitat Protection Plan (Plan) was implemented by the District to minimize or eliminate indirect impacts to common vegetation during construction phases of the seismic upgrade project. The Plan requires the use of buffers to prevent or reduce the effects of disruption in the hydrologic or edaphic (growing) environment of native or non-native vegetation. The project avoids the areas subject to the Plan and would therefore not be in conflict with the Plan.

### 3.2.3 SIGNIFICANT ENVIRONMENTAL EFFECTS

#### Visual / Aesthetics

##### **Substantial Adverse Effect on a Scenic Vista (Views from the Bridge)**

As described in Section 2.2, Visual/Aesthetics, of the Final EIR/EA Alternatives 1A, 1B, 2A, and 2B would have adverse to strongly adverse visual impacts to views from the Bridge, in particular the sidewalk and car views. Primary visual changes associated with these alternatives to views from the Bridge include raising the height of the outside Bridge railing such that it would extend across a viewer's total field of view. These alternatives would be dominant visual features, with moderate to low visual compatibility with the existing landscape features and moderate view blockage. This would be a significant impact.

As Alternative 3 (Preferred Alternative) would be located beneath the Bridge span, it would have a negligible visual impact to views from the Bridge. However, Alternative 3 would be visible from the sidewalk at the Bridge tower (Viewpoint 14) introducing a horizontal element that would visually widen the base of the Bridge. This would create low visual compatibility with moderate view blockage from the Bridge, demonstrating an adverse visual impact from this particular view from the Bridge. This would be a significant impact.

#### Cultural Resources

##### **Demolish or Materially Alter in an Adverse Manner Those Physical Characteristics of a Historic Resource That Convey Its Historic Significance and Justify Its Inclusion in National Register of Historic Places (NRHP).**

Construction of project Alternatives 1A, 1B, 2A, 2B, or 3 (Preferred Alternative) would generally cause a substantial adverse change in the Bridge historic property, which has been determined eligible for listing in the National Register of Historic Places (NRHP) and is listed in the California Register of Historical Resources (CRHR). The addition of any of these physical suicide barrier systems would include an adverse material alteration of physical characteristics of the historic resource that: (1) convey its historic significance and justify its inclusion in, or eligibility for, the CRHR or NRHP; and (2) account for its inclusion in a local register of historical resources or a qualifying historical resources survey; and (3) convey its historical significance and justify its eligibility for inclusion in the CRHR or NRHP as determined by the lead agency for purposes of CEQA.

In general, these physical, or direct, adverse changes include complete or partial removal of character-defining features of the Bridge (railings), and/or alteration of character-defining features of the Bridge (railings

and/or stiffening truss). The alternatives also would cause indirect adverse effects, including introduction of visual elements out of character with the property, change in the character of its use as a historic property, addition of physical suicide barrier systems where none were originally, use of non-historic material (transparent panels, transparent winglets, metal rods, and cable netting), as well as alteration of the pedestrian experience on the Bridge. This would be a substantial adverse change in the property, which is a significant impact on the environment.

The integrity of design of the property would be substantially changed by the project because Alternatives 1A, 1B, 2A, and 2B alter the original design of the railings and the pedestrian experience from the sidewalks of the Bridge, and by Alternative 3 (Preferred Alternative), which would introduce a non-historic visual element to the trusses at the sides of the Bridge. The integrity of materials and workmanship of the railings would be significantly diminished under Alternatives 1A, 1B, 2A, and 2B. Although this construction would not change most of the materials and workmanship of this structure, the alterations under Alternatives 1A, 1B, 2A, and 2B would adversely materially change the railings, and Alternative 3 would materially change the stiffening trusses, both character-defining features of the Bridge. This would be a substantial adverse change in the property, which is a significant impact on the environment.

For a more detailed discussion please see Section 2.3, Cultural Resources, of the Final EIR/EA.

### **Biological Environment**

#### **Substantial adverse effect on candidate, sensitive, or special-status species**

The proposed project does not include the development or direct disturbance of plant communities or aquatic habitats. The Bridge is in a developed condition and the proposed staging areas are denuded of vegetation and are covered by gravel and compacted dirt, or paved. However, given the proximity of the proposed staging areas within GGNRA lands to large expanses of coastal scrub habitat, and the known presence of Mission blue butterfly and the potential presence of special-status plant species within adjacent and nearby areas, the use of the staging areas could result in the loss of special-status species and the degradation of adjacent habitats. Potential impacts to special-status species and coastal scrub habitat are discussed below.

#### ***Mission Blue Butterfly***

Mission blue butterfly, a federally Endangered species, is known to occur in areas near the staging areas on the north side of the Bridge. No direct loss of habitat for this species would occur. However, in the absence of

avoidance measures, the use of the staging areas could result in other types of impacts to this species, which would be a significant impact.

1. Construction-related traffic: vehicular traffic, especially at higher speeds, can collide with and kill or injure flying Mission blue butterflies.
2. Unauthorized intrusion into Mission blue butterfly habitat: Potential intrusion by construction equipment and workers into the coastal scrub habitat bordering the staging areas within GGNRA lands could result in trampling of larval host or adult nectar plants.
3. Dust: The proposed project does not include grading, vegetation and soil removal, or soil storage, which are often associated within increased dust levels. However, the use of the staging areas within GGNRA lands could result in increased dust levels, which may affect both larval and adult Mission blue butterflies.

As included in Appendix E, the Department's informal consultation with the USFWS under Section 7 documents that the project, including the incorporation of the avoidance, minimization, and/or mitigation measures (included in Section 3.3.3), would not affect listed species. Appendix E and Appendix F also include a no effect and no take determination in regards to special-status species.

#### *Plant Species*

Special-Status plant species could occur in areas bordering or near the staging areas within GGNRA lands, such as Franciscan thistle, San Francisco Bay spineflower, blue coast gilia, San Francisco gumplant, marsh microseris, San Francisco owl's clover, and potentially other species. No direct loss of suitable habitat for special-status plant species would occur. However, unauthorized intrusion by construction equipment and workers into the coastal scrub habitat bordering the staging areas could result in trampling of special-status plant species. This would be a significant impact.

#### *Peregrine Falcon*

Peregrine falcons, a state Endangered species (and Candidate for Delisting), have been reported using the Bridge year-round from 1989 to the present, with nesting being attempted under the roadway on at least two occasions and the towers being used by non-nesting falcons.<sup>1</sup> The proposed project does not include the removal of any potential nesting habitat for the species or barriers to areas potentially used for nesting. However, should an active eyrie (i.e., nest) be present, construction-related

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<sup>1</sup> Personal Communication with Allen Fish, Director of the Golden Gate Raptor Observatory. June 30, 2008.

activities could result in the abandonment of the eyrie. This would be a significant impact.

**Substantially interfere with the movement of any native resident or migratory species**

As documented in this Final EIR/EA, four of the build alternatives (Alternatives 1A, 1B, 2A, and 2B), considered the use of vertical transparent panels for the physical suicide deterrent system, which could create a potential for bird collisions. The transparent panels would be installed at the belvederes, 24 widened areas (each 12.5 feet wide) located on both the east and west sidewalks, and around portions of the two Bridge towers representing approximately 5 percent of the total length of the Bridge.- The transparent panels would be placed on top of the existing or modified rails (which are 4 feet in height) and would extend up to 8 feet above the rails. The potential for the use of transparent panels to adversely affect various bird species was identified as a significant impact. In addition to being taller than the current 4 foot high outside handrails, the proposed transparent panel barriers would present new hazards for birds to strike the panels as they attempt to fly through the panels since they would not be visible. In addition, the reflective nature of the transparent panels when hit by the sun may disorient or “blind” birds. As a result, bird collisions would be more prevalent with the implementation of Alternatives 1A, 1B, 2A or 2B than with implementation of the net system chosen as the Preferred Alternative.

Under Alternative 3 (Preferred Alternative) horizontal netting would be used as part of the physical suicide deterrent system, with which birds could potentially collide and become entangled or otherwise harmed. The horizontal netting would extend out 20 feet from the Bridge and be located approximately 20 feet below the Bridge sidewalk. While no transparent panels would be used, the horizontal netting could result in an adverse effect to avian species traveling through or nesting within the vicinity of the Bridge.

As discussed in Section 2.4, Biological Environment, an Avian Impact Study was prepared in April 2009 and revised in November 2009 to further evaluate the potential for adverse effects to avian (bird) species from the implementation of Alternative 3 (Preferred Alternative). The Avian Impact Study provided existing information regarding bird use of the Bridge and surrounding area and bird collision data for bridges or other similar structures. Bird movement patterns on, under, over, and around the Bridge were documented and developed as a visual model of bird use for specific portions of the Bridge structure. The Avian Impact Study also identified bird behavior adjacent to the footprint of Alternative 3 to assess whether the net system would have the potential to cause any changes in their behavior, or cause injury or death, to any birds.

Based on the background research and field surveys, the Avian Impact Study found that Alternative 3 would have the potential to adversely affect migrating and nesting birds, as migrating birds could collide with the net, particularly during inclement weather. The study also found that birds could be lured to nest or perch in an inappropriate spot on or adjacent to the net where mortality risk is high.

For a more detailed discussion, refer to Section 2.4, Biological Environment, of this Final EIR/EA.

#### *Nesting Bird Species*

The proposed project does not include the removal of any trees or vegetation potentially used by nesting bird species protected by the California Fish and Game Code and/or the Migratory Bird Treaty Act. However, construction-related activities could still disturb and potentially result in nest abandonment of active bird nests potentially occurring near the staging and construction areas. This would be a significant impact.

### **3.2.4 UNAVOIDABLE SIGNIFICANT ENVIRONMENTAL EFFECTS**

#### **Visual/Aesthetics**

##### **Substantial Adverse Effect on a Scenic Vista (Views from the Bridge)**

To meet the purpose and need for the project, it is necessary to construct a physical suicide deterrent system that would impede the ability of an individual to jump from the Bridge. During preliminary engineering design it was determined that a physical suicide barrier with a total height of between 10 and 12 feet would be needed to successfully meet this criterion. The designs of Alternatives 1A, 1B, 2A, and 2B have incorporated elements of the existing Bridge structure (materials, symmetry, International Orange color), and have provided transparent panels at the belvederes to maintain uninterrupted visual access points along the sidewalks. Nonetheless, these build alternatives substantially reduce the views from the Bridge towards the urban and natural visual environments. Because the heights and vertical/horizontal members of these physical suicide deterrent systems are needed to meet the purpose and need of the project, the resulting substantial reductions to views from the Bridge would be a significant and unavoidable impact.

### **Cultural Resources**

#### **Demolish or Materially Alter in an Adverse Manner Those Physical Characteristics of a Historic Resource That Convey Its Historic Significance and Justify Its Inclusion in National Register of Historic Places (NRHP).**

To meet the purpose and need for the project, it is necessary to construct a physical suicide deterrent system that would impede the ability of an individual to jump from the Bridge. As described in Section 3.2.3, Significant Environmental Effects, above, the build alternatives would all cause a substantially adverse change to the Bridge historic property, which has been determined eligible for listing in the NRHP. A project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. Mitigation measures are proposed to insure that (1) the Bridge is properly recorded through photography, written documentation, and educational/interpretive material; (2) this documentation and educational/interpretive material is appropriately distributed; and (3) other portions of the historic property within the project study are protected and monitored (see Section 3.3, Mitigation Measures for Significant Impacts Under CEQA, of this chapter). While these measures would ensure that a visual record is provided of the Bridge in context, as well as details of its historic engineering features, contributing elements, and character-defining features, the physical alteration to the historic property from implementation of the build alternatives would still occur. The impact to the Bridge historic property is therefore significant and unavoidable.

### **3.2.5 MANDATORY FINDINGS OF SIGNIFICANCE**

The project does not involve any changes in the existing use of the Bridge or the land surrounding the Bridge. The project would be constructed entirely on the Bridge and the construction staging areas would be located on previously established paved and graveled parking areas. No additional road rights-of-way, either permanent or temporary, would be required for this project. The project would not substantially degrade the environment, affect habitat or wildlife, or eliminate important examples of California history.

The project would indirectly cause a substantive adverse impact to human beings through the reduction in views from the Bridge sidewalks. See discussion in Section 2.2, Visual/Aesthetics, and within this chapter of the Final EIR/EA.

The project would cause significant cumulative impacts to the Bridge historic property as described in Section 2.7, Cumulative Impacts, of the Final EIR/EA.

### **3.2.6 GROWTH-INDUCING IMPACTS**

The project does not involve any changes in the existing use of the Bridge or the land surrounding the Bridge; thus, the project would not affect the location, density, or growth rate of the human population of the area.

### **3.2.7 CLIMATE CHANGE**

#### **Regulatory Setting**

While climate change has been a concern since at least 1988, as evidenced by the establishment of the United Nations and World Meteorological Organization's Intergovernmental Panel on Climate Change (IPCC), the efforts devoted to greenhouse gas<sup>2</sup> (GHG) emissions reduction and climate change research and policy have increased dramatically in recent years. These efforts are primarily concerned with the emissions of GHG related to human activity that include carbon dioxide (CO<sub>2</sub>), methane, nitrous oxide, tetrafluoromethane, hexafluoroethane, sulphur hexafluoride, HFC-23 (fluroform), HFC-134a (s,s,s,2 –tetrafluoroethane), and HFC-152a (difluoroethane).

In 2002, with the passage of Assembly Bill 1493 (AB 1493), California launched an innovative and proactive approach to dealing with GHG emissions and climate change at the state level. AB 1493 requires the Air Resources Board (ARB) to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designated to apply to automobiles and light trucks beginning with the 2009-model year; however, in order to enact the standards California needed a waiver from the U.S. Environmental Protection Agency (EPA). The waiver was denied in December 2007. See *California v. Environmental Protection Agency*, 9<sup>th</sup> Cir. Jul. 25, 2008, No. 08-70011. However, on January 26, 2009, it was announced that the EPA will reconsider their decision regarding the denial of California's waiver. On May 18, 2009, President Obama announced the enactment of a 35.5 mpg fuel economy standard for automobiles and light duty trucks which will take effect in 2012. On June 30, 2009, EPA granted California the waiver. California is expected to enforce its standards for 2009 to 2011 and then look to the federal government to also allow California to implement

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<sup>2</sup> Greenhouse gases related to human activity include: Carbon dioxide, Methane, Nitrous oxide, Tetrafluoromethane, Hexafluoroethane, Sulfur hexafluoride, HFC-23, HFC-134a\*, and HFC-152a\*.



even stronger standards in the future. The State is expected to start developing new standards for the post-2016 model year later this year.

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this Executive Order is to reduce California's GHG emissions to (1) 2000 levels by 2010, (2) 1990 levels by 2020, and (3) 80 percent below the 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006. AB 32 sets the same overall GHG emissions reduction goals while further mandating that CARB create a plan, which includes market mechanisms, and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." Executive Order S-20-06 further directs state agencies to begin implementing AB 32, including the recommendations made by the state's Climate Action Team.

With Executive Order s-01-07, Governor Schwarzenegger set forth the low carbon fuel standard for California. Under this executive order, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020.

Climate change and GHG reduction is also a concern at the federal level; however, at this time no legislation or regulations have been enacted specifically addressing GHG emissions reductions and climate change. California, in conjunction with several environmental organizations and several other states, sued to force the U.S. Environmental Protection Agency (EPA) to regulate GHG as a pollutant under the Clean Air Act (Massachusetts vs. Environmental Protection Agency et al., 549 U.S. 497 (2007)). The court ruled that GHG does fit within the Clean Air Act's definition of a pollutant, and that the EPA does have the authority to regulate GHG. Despite the Supreme Court ruling, there are no promulgated federal regulations to date limiting GHG emissions.

According to Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate change in CEQA Documents (March 5, 2007), an individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may participate in a potential impact through its incremental contribution combined with the contributions of all other sources of GHG. In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable." See CEQA Guidelines sections 15064(i)(1) and 15130. To make this determination the incremental impacts of the project must be compared to the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects in order to make this determination is a difficult if not impossible task.

As part of this supporting documentation for the Draft Scoping Plan, CARB recently released an updated version of the GHG inventory for California (June 26, 2008). Caltrans and its parent agency, the Business, Transportation, and Housing Agency, have taken an active role in addressing GHG emission reduction and climate change. Recognizing that 98 percent of California's GHG emissions are from the burning of fossil fuels and 40 percent of all human made GHG emissions are from transportation (see Climate Action Program at Caltrans (December 2006), Caltrans has created and implemented the Climate Action Program at Caltrans that was published in December 2006. This document can be found at: <http://www.dot.ca.gov/docs/ClimateReport.pdf>.

### **Project Impacts to Climate Change**

According to a recent white paper by the Association of Environmental Professionals,<sup>3</sup> “an individual project does not generate enough greenhouse gas emissions to significantly influence global climate change.” Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of greenhouse gases. While the project has no traffic impacts and would therefore not contribute to cumulative increases in sources of GHGs over long-term project operation, construction of Alternative 3, the Preferred Alternative, would produce combustion emissions from various sources. Sources of construction related GHG emissions include the emissions from heavy-duty diesel trucks used to haul materials to and from the project site from various parts of the Bay Area; the motor vehicles used by the construction workers to travel to and from the project site; and on-site construction equipment engines, such as cranes, wheeled loaders, and boom trucks. Mobile sources of GHG emissions, such as the heavy-duty haul trucks and construction worker motor vehicles, would be higher on peak materials delivery days when heavy diesel truck trips are combined with employee trips and operation of on-site construction equipment.

However, construction activities would be temporary and localized in nature, as the construction areas would be confined to the Bridge structure and the five designated construction staging areas. As discussed in Section 2.6, Construction Impacts, construction of the new physical suicide deterrent system would be performed in sections, beginning on the west side of the Bridge and ending on the east side of the Bridge. It is anticipated that construction would occur over a 12 to 18 month time period per side, or 24 to 36 months in total. Additionally, Best Management Practices (BMPs) for the construction staging areas would be

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<sup>3</sup> Hendrix, Micheal and Wilson, Cori. Recommendations by the Association of Environmental Professionals (AEP) on How to Analyze Greenhouse Gas Emissions and Global Climate Change in CEQA Documents (March 5, 2007), p. 2.

incorporated into the construction contracts and project specification that could reduce impacts associated with GHG emissions. Control measures, consistent with the Bay Area Air Quality Management District (BAAQMD) Rules and Regulations, for diesel emissions, such as reducing construction vehicle idling, would also be incorporated into the construction contracts and project specifications.

### **3.3 MITIGATION MEASURES FOR SIGNIFICANT IMPACTS UNDER CEQA**

#### **3.3.1 VISUAL RESOURCES**

The range of alternatives was developed to minimize the visual changes to the Bridge to the maximum extent possible, while providing feasible concepts that responded to the established criteria. All of the build alternatives would be constructed primarily of steel. Alternatives 1A, 1B, 2A, and 2B would be painted International Orange to match the material and color of the Bridge. While the steel horizontal support system under Alternative 3, the Preferred Alternative, would be painted International Orange to match the color of the existing Bridge structure, the net would be unpainted and uncoated stainless steel to reduce the visual intrusion of the net, as the unpainted and uncoated stainless steel would appear transparent against the blue green water of the San Francisco Bay.

There would be no visual impacts associated with the No-Build Alternative.

Measures incorporated into the design of Alternatives 1A and 2A are the use of ½ inch vertical rods which remain consistent with the strong vertical line form created by the Bridge towers, suspender ropes, and light posts. Measures incorporated into the design of Alternatives 1B and 2B are the use of 3/8-inch horizontal cables, which are consistent with the design of the public safety railing and the horizontal line form established by horizon of the blue-green waters of the San Francisco Bay. These alternatives also include transparent panels at the belvederes and around the Bridge towers so as to continue to provide unobstructed viewing opportunities from the sidewalks.

Alternative 3, the horizontal net system and Preferred Alternative, represents the strongest contrast with the strong verticality of the Bridge but provides unobstructed views across the San Francisco Bay from the Bridge sidewalks. The net would disrupt a small portion of the views towards the San Francisco Bay looking down from the Bridge sidewalks. The vertical barrier, painted International Orange, at the North Anchorage Housing as part of the refinement to Alternative 3 would reduce visual effects from Viewpoint 4, Vista Point, as the vertical barrier would maintain the continuous vertical line form of the Bridge and would be consistent

with the vertical plane of the concrete pylon at the North Anchorage Housing.

The Memorandum of Agreement (MOA) executed as part of the Section 106 consultation process includes photographic recordation of selected existing features of the Bridge (see Section 2.3, Cultural Resources).

### **3.3.2 CULTURAL RESOURCES**

To mitigate the adverse effect of the project on the historic property an MOA has been executed for the project and coordinated with the Department. The MOA stipulates various mitigation activities that will be conducted to address adverse effects this project would have on the Bridge. The MOA has been approved by the State Office of Historic Preservation. The Department will be responsible for carrying out these measures, insuring that (1) the Bridge is properly recorded through photography, written documentation, and educational/interpretive material; (2) this documentation and educational/interpretive material is appropriately distributed; and (3) other portions of the historic property within the project study are protected and monitored. Prior to the start of any work that could adversely affect any characteristics that qualify the Bridge as a historic property, the Department shall ensure that the recordation measures specified are completed. Mitigation measures proposed for the project include the following:

- Large-format (four- by five-inch, or larger negative size) black and white photographs will be taken showing the Bridge in context, as well as details of its historic engineering features, contributing elements, and character-defining features. The photographs will specifically include the existing east and west outside railings, concrete railing at the north pylon (North Anchorage Housing), and exterior trusses of the Bridge. The Department will ensure that the photographs will be processed for archival permanence in accordance with Historic American Engineering Record (HAER) photographic specifications.

The recordation will follow the National Park Service's (NPS) HAER Guidelines, and the report format, views, and other documentation details will be coordinated with the Western Regional Office of the NPS, Oakland, California. Oblique aerial photography will be considered as a photographic recordation option in these coordination efforts. It is anticipated that the recordation of the Bridge will be completed to Level I or Level II HAER-written data standards, and will include archival and digital reproduction of historic images, plans, and drawings.

- The Department will ensure that copies of the documentation will be offered to the San Francisco Public Library, Marin County Free Library, Environmental Design Archives (UC Berkeley), Golden Gate National Recreation Area, Presidio Trust, and the Department's Transportation

Library and History Center at Department Headquarters in Sacramento.

- During the project approval process, the Department will ensure that within one year of project implementation, the District will complete and submit a National Historic Landmark nomination for the Bridge to the National Historic Landmarks Program at the NPS.
- The Department will ensure that an educational brochure will be prepared presenting information on the historic elements of the Bridge affected by the proposed project, prefaced by an explanation of the need for the barrier installation. The brochure will be made available on-site at the Bridge, Presidio National Historic Landmark, select Golden Gate National Recreation Area locations, and online at the District Web site ([www.goldengate.org](http://www.goldengate.org)) during the construction period.

The Department will ensure that copies of *The Golden Gate Bridge Report of the Chief Engineer, Volume II (2007)* will be provided to libraries and repositories at the San Francisco Architectural Heritage, California Historical Society, San Francisco Public Library, Marin County Free Library, Environmental Design Archives at U.C. Berkeley, GGNRA, Presidio Trust, and the Department Transportation Library and Historic Center at Department Headquarters in Sacramento.

- The Department will ensure that interpretive signs or display panels will be installed at the Round House Gift Center and the Vista Point to describe the project for the duration of construction. Signs will incorporate information from the contextual history prepared for the brochure.
- The Department will ensure the protection of the remainder of the historic property, as well as the Fort Point National Historic Site, located below the Fort Point Arch component of the Bridge.- The District will protect against incidental damage to the remainder of the Bridge historic property and the Fort Point property by hiring an independent Environmental Compliance Monitor (ECM) who will periodically monitor the site during construction and will prepare monthly reports documenting compliance and protection. The Department will ensure that these reports will be provided to the District, the SHPO, and GGNRA, the property owner.

As noted previously, while these measures would provide a visual record of the Bridge in context, as well as details of its historic engineering features, contributing elements, and character-defining features, the physical alteration to the historic property from implementation of the build alternatives would still occur. The impact to the Bridge historic property following implementation of these measures therefore remains significant.

### 3.3.3 BIOLOGICAL ENVIRONMENT

#### **Impacts to Sensitive Species**

The proposed project would use staging areas within GGNRA lands that have been and/or continue to be used to facilitate the Golden Gate Bridge Seismic and Wind Retrofit Project. As part of that project, a Biological Opinion was issued by the USFWS and measures were implemented to prevent the loss of Mission blue butterfly and its habitat, as well as other sensitive biological resources.

The following avoidance measures have been developed through ongoing coordination with the GGNRA, consultation with the USFWS, recommendations of the Revised Natural Environment Survey (July 2009) prepared as part of this project, and existing measures implemented as part of the Golden Gate Bridge Seismic and Wind Retrofit Project. Appendix E includes the Department's informal consultation with the USFWS indicating that the project, including implementation of the avoidance, minimization, and mitigation measures, would not affect listed species. Appendix E also includes a letter from the District documenting that the project would not result in the take of a special-status species and Appendix F provides a list of special-status species documented in the project area for which the project would have no effect.

The following avoidance measures, which have successfully been implemented as part of the Golden Gate Bridge Seismic and Wind Retrofit Project, would continue to be implemented as part of the proposed project in order to prevent adverse affects to Mission blue butterfly, special-status plant species, and coastal scrub habitat. Avoidance measures will also be implemented for the peregrine falcon.

#### ***Mission Blue Butterfly***

- The District will provide specifications for erosion and dust control to the contractor, which will be implemented. This erosion and dust control plan will be prepared as part of the final project design and will be reviewed and approved by GGNRA Natural Resources staff prior to construction of the suicide deterrent system.
- Contractor's vehicles traveling on access roads within GGNRA lands would be restricted to a maximum speed of 20 mph during the period of March 15 to July 4, which is the flight season for the Mission blue butterfly. The contractor will post and enforce this speed limit.
- To prevent the introduction of non-native vegetation or other deleterious materials to GGNRA lands, the District and contractor will inspect all construction equipment prior to accessing the staging areas. If any vegetation or deleterious materials are present, the contractor will decontaminate its equipment with a high-pressure washer and

properly dispose of the wastewater and debris prior to entering GGNRA lands.

### ***Plant Species***

- A qualified biologist or biologists will be retained by the District prior to the start of construction to act as a biological Environmental Compliance Monitor (ECM), will work in consultation with GGNRA Natural Resources staff and implement and oversee the below activities/measures.
- The biological ECM will flag and stake native vegetation near the staging areas within GGNRA lands located north of the Bridge as “Environmentally Sensitive Areas” and will oversee the contractor’s installation of protective fencing around the designated ESA(s). Signs will be installed indicating that the fenced area is “restricted” and that all construction activities, personnel, and operational disturbances are prohibited.
- The biological ECM will prepare and provide worker educational materials that describe the value and importance of the coastal scrub habitat bordering the staging areas and the importance of not disturbing the habitat.
- The biological ECM will conduct regular visits of the staging areas to inspect if any damage to adjacent habitats has occurred, to evaluate if dust control measures need to be implemented or increased, to ensure that erosion control devices located near native vegetation and ESA(s) are functioning properly, and to evaluate if weed control measures need to be implemented.
- Based on the findings of the site visits, the biological ECM will make recommendations to be implemented regarding weed control, re-vegetation of disturbed areas, and other measures to protect biological resources. Any chemical weed control must be approved by the GGNRA Integrated Pest Management specialist.
- The biological ECM will prepare monthly monitoring reports for the District that will address the effectiveness of the avoidance measures being implemented and identify any other measures to be implemented.
- Prior to the implementation of construction activities occurring during the nesting season of peregrine falcon (typically February through July), the District will consult with the Golden Gate Raptor Observatory (GGRO) to determine if breeding pairs of peregrine falcon are currently nesting in the vicinity of the Bridge and may be disturbed by the proposed project. This consultation will also serve to determine if surveys for nesting peregrine falcon should be conducted prior to project implementation. If nesting pairs are identified by the GGRO or by site surveys, then a construction exclusion zone would be established

around the active nest. The size of the exclusion zone will be determined by the CDFG and will take into account existing noise levels at the nest location. Construction activities may commence within the exclusion zone only upon determination by a qualified biologist that the nest is no longer active.

### **Impacts to Native or Wildlife Species**

Potential impacts could occur to nesting peregrine falcon, other nesting birds, and various bird species from bird collisions. The below avoidance measures would be implemented to address these potential impacts.

- District personnel, in coordination with a qualified avian biologist, the GGNRA Natural Resources staff, and USFWS, where applicable, will conduct observations of the net to determine if bird carcasses are present. These observations will be conducted at least two times per month for the 12 months following project implementation during the core of the spring and fall bird migration periods from February to May and August to November. These surveys will include observations from the Bridge sidewalk on the east and west sides of the Bridge.

Observations will be conducted within three hours of sunrise immediately following a storm or foggy night when collisions with the Bridge structure are most likely. Observers will document the presence of any bird carcasses with photographs and data forms that include the date, time, weather conditions, and location of the observation, and will submit the photographs to biologist staff at GGNRA for identification and interpretation within three days.

If mortality levels are beyond pre-established limits (i.e. greater than 10 native birds of any species per month for one month; or one individual peregrine falcon, two individuals of any other raptor species, or four individuals of other special status species during one year) additional observations will be made for six months to determine patterns of bird strike, such as the time of day and visibility conditions. In coordination with the CDFG and the USFWS, additional mitigation measures will be designed and implemented, including changes to the netting structure as feasible, to reduce mortality. After these modifications are made, the system will be monitored for six months, including periods where conditions associated with the documented mortality are most likely to be present, or for a period of time determined by the CDFG and the USFWS. If mortality decreased to below the established limits, the changes will be deemed acceptable and monitoring will no longer be required.

- The District will ensure that the horizontal netting does not become an attractive nuisance to nesting birds. The District will ensure that no new stable, wide beams or wind sheltered areas will be created that may be attractive for nesting and that trash and other large objects shall be



removed from the net as needed to minimize the attraction for foraging and nesting material or substrates for nesting. The horizontal netting design will also incorporate the largest mesh size possible to reduce the attraction and viability for nests.

- Regular observations of the horizontal netting will be made by trained District personnel or a qualified avian biologist for one year after installation of the net to determine if bird carcasses are present in or on the net and whether these carcasses are juvenile birds that may have fledged from a nest adjacent to or on the Bridge during the first breeding season after construction. These observations will be conducted weekly during the period when nests are most likely to contain young (i.e. the months of February to July) and may be combined with the migration monitoring visits. These surveys will include searching for nests on the Bridge and bird carcasses in the net and photographing any observed, for identification by GGNRA staff within three days. If District personnel are used, a training program for such personnel will be developed by a qualified avian biologist that will document the methods for detecting and photographing nests on the Bridge structure.

If mortality levels are greater than the pre-established limits (i.e. greater than 10 birds of any native species per month for one month; or one individual peregrine falcon, two individuals of any other raptor species, or four individuals of other special status species during one year) in coordination with the CDFG and the Migratory Bird Division of the USFWS, additional mitigation measures will be designed and implemented, including changes to the horizontal netting, as feasible, to reduce mortality. These changes will be implemented prior to the following breeding season (i.e. prior to December of the current year). The modified horizontal netting will be monitored twice per week during the following breeding season (i.e. December to July of the following year). If mortality is reduced to below the levels identified above during this following breeding season, the changes will be deemed acceptable, and further monitoring will not be required. If mortality levels are not reduced below the recommended levels, the District will consult with the CDFG, USFWS, and GGNRA staff to develop a feasible alternative mitigation strategy.

- Prior to the implementation of construction activities occurring during the nesting season of native bird species, the biological ECM work in consultation with the GGNRA Natural Resources staff and the USFWS where applicable and will conduct surveys for nesting birds. The survey area will include potential nesting habitat within and bordering the staging and construction areas, as well as all areas that would be subject to elevated construction-related noise levels. If active nests are found, then a construction exclusion zone would be established around the active nest. The size of the exclusion zone will be determined by the

CDFG and will take into account existing noise levels at the nest location. Construction activities may commence within the exclusion zone only upon determination by a qualified biologist that the nest is no longer active. The biological ECM will also survey for nesting birds during their regular site visits of the staging areas.

Implementing these measures would reduce impacts to biological resources to a less than significant level.