

CHAPTER 3 - CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) EVALUATION

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 Resources

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 or U.S. Fish and Wildlife Service.
- 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 California Department of Fish and Game or U.S. Fish and Wildlife Service.
- 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 Golden Gate Bridge, Highway and Transportation District (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 which 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 Environmental Impact Report/Environmental Assessment (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 - Draft Section 4(f) Evaluation 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 of the 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 a 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 of the 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. 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 Resources

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 staging areas within GGNRA lands 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 proposed staging area within 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 affect on a monarch butterfly wintering site.

Substantial adverse effect on riparian habitat or other sensitive natural community

The four staging areas within GGNRA lands 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 one proposed staging area within 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 lasiolepis*), 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 California Department of Fish and Game (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 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 was prepared (pursuant to the requirements of Section 7 of the federal Endangered Species Act) and a subsequent Biological Opinion was issued by the U.S. Fish and Wildlife Service (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 Golden Gate Bridge (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 Golden Gate National Recreational Area (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 of the 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 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 would generally cause direct adverse effects to the Bridge historic property, which has been determined eligible for listing in the NRHP. The addition of any of these physical suicide barrier systems will be an alteration to the historic property that is not consistent with the Secretary of Interior's Standards for the Treatment of Historic Properties. In general, these physical, or direct, adverse effects 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 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 significant impact.

The integrity of design would be adversely affected by the project because Alternatives 1A, 1B, 2A, and 2B significantly alter the original design of the railings and the pedestrian experience from the sidewalks of the Bridge, and by Alternative 3, 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 affect most of the materials and workmanship of this structure, the

alterations under Alternatives 1A, 1B, 2A, and 2B would adversely affect the railings, and Alternative 3 would alter the stiffening trusses, both character-defining features of the Bridge. This would be a significant impact.

For a more detailed discussion please see Section 2.3 of the EIR/EA.

Biological Resources

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.

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.¹ 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 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

The use of transparent panels is a component of several of the alternatives being considered for the suicide deterrent system, which could create a potential for bird collisions. Under one 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 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. Several factors detract from the likelihood of birds attempting to fly over the bridge or perch on structures at a height which could result in collisions with the transparent panels, such as the relatively low height of the panels (12 feet above the road surface), heavy car and truck traffic, heavy bike and pedestrian traffic on the Bridge's walkways (which would be adjacent to the transparent panels), and that the panels around the tower would encircle a visible solid surface. The horizontal netting would extend out 20 feet from the Bridge and be located approximately 20 feet below the Bridge sidewalk. The horizontal netting's proximity to the Bridge structure, as well as heavy car and truck traffic, heavy bike and pedestrian traffic on the Bridge's walkways would detract from the likelihood of birds coming in contact with the horizontal netting. However, as focused studies have not been

¹ Personal Communication with Allen Fish, Director of the Golden Gate Bird Observatory. June 30, 2008.

conducted to determine if bird collisions would be likely and to what extent they may occur, it is assumed that the use of the transparent panels or horizontal netting could adversely affect various bird species. This would be a significant impact.

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 3.2.3 above, the build alternatives would all cause direct adverse effects to the Bridge historic property, which has been determined eligible for listing in the NRHP. The

addition of any of these physical suicide barrier systems will be an alteration to the historic property that is not consistent with the Secretary of Interior's Standards for the Treatment of Historic Properties. 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 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 and within this chapter of the EIR/EA.

The project would cause significant cumulative impacts to the Bridge historic property as described in Section 2.6 of the 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 gas² (GHG) emissions reduction and climate change research and policy have increased dramatically in recent years. 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 regulations will apply to automobiles and light trucks beginning with the 2009 model 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 ARB 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.

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.

Project Impacts to Climate Change

According to a recent white paper by the Association of Environmental Professionals,³ "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. However, as the project has no traffic impacts it would contribute to cumulative increases in the sources of greenhouse gases.

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

³ 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.

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 that would be painted International Orange to match the material and color of the Bridge.

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, 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 Memorandum of Agreement (MOA) to be developed as part of the Section 106 consultation process will include photographic recordation of the existing features and views of and from the Bridge in order to partially mitigate visual impacts.

3.3.2 CULTURAL RESOURCES

To mitigate the adverse effect of the project on the historic property a draft Memorandum of Agreement (MOA) will be developed for the project and will be coordinated with the Department. The MOA will stipulate various mitigation activities that will be conducted to address adverse effects this project would have on the Bridge. The MOA will be approved by the State Office of Historic Preservation (SHPO). 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 views specifically will include the existing east and west outside railings, concrete railing at the north pylon, and exterior trusses of the Bridge, as these are the features that would be adversely affected by one or more of the proposed alternatives.

The photographs will be processed for archival permanence in accordance with Historic American Engineering Record (HAER) photographic specifications. If necessary, each view will be perspective-corrected and fully captioned.

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.

- Copies of the documentation will be offered to the San Francisco Public Library, Marin Public Library, Environmental Design Archives (UC Berkeley), Golden Gate National Recreation Area, Presidio Trust, Department District 4 Office of Cultural Resource Studies, and the Department's Transportation Library and History Center at Department Headquarters in Sacramento. The documentation also will be offered in printed and electronic form to any repository or organization upon which the District, the Department, and State Historic Preservation Office (SHPO), through consultation, may agree. The electronic copy of the report could be placed on an agency or organization's Web site.
- Preparation of a historical and educational brochure presenting the history of suicide prevention efforts at the Bridge. 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) during the construction period.

- Installation of interpretive signs or display panels 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 District will ensure the protection of the remainder of the historic property within the project limits during construction of the physical suicide barrier, as well as the Fort Point National Historic Site, located below the Fort Point Arch component of the Bridge. The District will ensure 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. These reports will be submitted to the District and GGNRA.

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 RESOURCES

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, 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.
- 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) and implement and oversee the below activities/measures.
- The biological ECM will flag and stake native vegetation near the staging areas within GGNRA lands 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.
- 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.

- The District will retain the services of a qualified avian biologist to further evaluate the potential of birds to collide with the transparent panels potentially used as part of the suicide deterrent system. At a minimum, the expected flight patterns of migratory and resident birds relative to the installation locations of the transparent panels will be evaluated, as well as the potential of the transparent panels and associated reflections to alter regular flight patterns and encourage collisions. Should it be found that the use of the transparent panels or netting pose a substantial risk to birds, appropriate design measures would be implemented. These measures may include, but are not limited to visual deterrents such as patterning the transparent material with a UV coating that birds can see but humans cannot; utilizing etching, fritting, and opaque patterned glass to reduce transparency; utilizing bird-legible patterns on the transparent material; limiting the amount of transparent panels or amount of panels without a visual deterrent; modifying the horizontal netting; or other effective means of deterring bird collisions or entrapment.
- Prior to the implementation of construction activities occurring during the nesting season of native bird species, the biological ECM 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.

CHAPTER 4 - COMMENTS AND COORDINATION

4.1 DOCUMENTING COORDINATION

Early and continuing coordination with the general public and appropriate public agencies is an essential part of the environmental process to determine the scope of environmental documentation, the level of analysis, potential impacts and mitigation measures, and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including project development team meetings, interagency coordination meetings, stakeholder meetings, and public meetings and workshops. This chapter summarizes the results of the Golden Gate Bridge, Highway and Transportation District's (District) efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

4.1.1 PUBLIC INVOLVEMENT PROGRAM OVERVIEW

A public involvement program has been developed to guide the District through a public information and outreach process for the project. The public involvement program provides a variety of communication methods to educate the public on the current scope of the study, including its impacts and benefits. Thorough information will be provided to educate the public about the study, and at targeted project milestones the study team will solicit input and feedback from the public and agencies as to their specific needs, issues, concerns, and recommendations. By educating through a variety of informative communication tools, the community and agencies will be well-equipped to provide meaningful public input.

Key elements of the public involvement plan include:

- Educating the public and agencies through effective communication tools
- Providing multiple opportunities for input on study alternatives
- Managing and organizing comments received, and presenting input in a concise manner to decision-makers

Public Website and Public Comment System

On May 11, 2007, public outreach activities were initiated by launching the public Web site (www.ggbsuicidebarrier.org). The Web site was developed with a fully integrated public comment system and provides a fair and

factual presentation of the evaluation process and ongoing opportunities for public input. The interactive public comment system is designed to provide stakeholders with a Web-based platform for submitting comments on the study and the environmental document. The public comment system is altered at key milestones to solicit input specific to key phases of the project.

Wind Study Report

On May 24, 2007, a Wind Study Report was released which detailed the effects of wind on long-span bridges, documented the wind testing, summarized the results, and provided initial concepts for a deterrent system. The report was presented to the Building and Operating Committee of the District's Board of Directors (Board) at their regularly scheduled meeting at 10:00 a.m. on Thursday, May 24, 2007. A media briefing packet was circulated and the report was posted on the public Web site. For approximately two months following the release of the report, the public comment system was structured to solicit specific feedback on the wind study report and the design concepts presented.

Bridge District Board Meetings

As all Board meetings are open to the public, public comments received during formal public comment periods will be part of the public record and will be incorporated into the process and the environmental document. In addition, all comments received at District Board meetings will be reviewed by the project team for consideration as they may relate to the Golden Gate Bridge Physical Suicide Deterrent System Study.

Release of the Draft EIR/EA

The release of the Draft EIR/EA is a major opportunity for public involvement and education. With the release of the document, the environmental impacts of the alternatives, including visual, historic, and cultural resources, will be disclosed. Two public open houses will be held to provide information about the project alternatives and to allow the public, agencies and organizations to provide comments. Informational materials, including a Citizens' Guide and a fact sheet, will be developed to help the public digest the complex technical data contained in the environmental document. These tools will aid the public in understanding the study and help solicit focused comments on the facts of the environmental document.

Media Relations

The District Public Affairs Director will conduct all media communications, create media packets and attend public meetings, as necessary.

4.1.2 AGENCY CONSULTATION AND COORDINATION

Notice of Preparation

On June 14, 2007 the Notice of Preparation (NOP) was issued for the environmental document. The NOP was mailed to more than 70 agencies to solicit input on which alternatives and issues should be evaluated in the environmental document. The distribution list for the NOP is included in Appendix C.

On July 17, 2007 an agency consultation meeting was held at the District to receive comments on the NOP. Attendees included Jeffrey Lee, Denis Mulligan, John R. Eberle, Mary Curry, and Michael Conneran from the District; Steve Morton and Mike Barbour from DMJM Harris; Phyllis Potter and Heidi Rothrock from CirclePoint; Kerri Davis and Rafael Montes from the San Francisco Bay Conservation and Development Commission (BCDC); Hsien Tang and Kelso Vidal from California State Department of Transportation (Department); and Andrea Lucas from the Golden Gate National Recreation Area/National Park Service (GGNRA/NPS).

State Office of Historic Preservation Consultation

The District, in conjunction with the Department, is continuing consultation with the State Historic Preservation Officer (SHPO) following 36 CRF 800.6, to arrive at a resolution of the adverse effect. The Department, in accordance with Stipulation XI of the Section 106 PA, will prepare a draft Memorandum of Agreement (MOA) to memorialize measures that would mitigate the adverse effect this undertaking will have on the historic property. The MOA signatory parties will be the District, the Department, and SHPO. The District sent a letter to interested parties in April 2008 notifying interested individuals and organizations that the project is anticipated to have an adverse effect on the Bridge and to solicit their input. Any responses to this letter will be included in future drafts of this document and the environmental document.

- The District, in conjunction with the Department, initiated consultation with SHPO following 36 CRF 800 and held a project meeting on site at the Bridge to discuss Section 106 process on November 20, 2007. The meeting included the Department's Local Assistance staff and Architectural Historian Alicia Otani (Department PQS), as well as Office of Historic Preservation (OHP) staff historians, and the deputy SHPO in attendance.
- The District prepared a draft letter to parties interested in historical resources. The letter was circulated in late April 2008 to seek comment and information pertaining to the historic significance of the Bridge and the potential effect the project may have on the character-defining features of the property. Copies of the letter, the list of recipients, and the responses received are in Appendix C. Responses to this letter will be incorporated in this document upon receipt.

- The Draft Historic Property Survey Report (HPSR), including Historical Resources Evaluation Report (HRER), and updated DPR523 forms, were submitted to the Department in April 2008.

4.1.3 ONGOING PUBLIC PARTICIPATION

This section will be expanded upon after submittal of this draft report as the Section 106 process continues for the project, and will describe all steps taken to ensure public concerns were taken into account. If concerns are raised by public agencies or other interested parties, this section will identify all actions taken by the project to ensure public concerns are incorporated into the Section 106 process. The District also will continue to maintain the public information Website for the project at www.ggbsuicidebarrier.org.

- Ongoing public participation opportunities include District Board meetings, which are open to the public. Public comments received during formal public comment periods will be part of the public record and will be incorporated into the process and the environmental document. In addition, all comments received at District Board meetings will be reviewed by the project team for consideration as they may relate to the project.
- The District, in conjunction with the Department, is continuing consultation with SHPO following 36 CRF 800.

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San Francisco Main Library
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Presidio Library
3150 Sacramento Street
San Francisco, CA 94115

Santa Rosa Main Library
211 E Street
Santa Rosa 95404

MTC-ABAG Library
Joseph P. Bort MetroCenter
101 8th Street
Oakland, CA 94607

Alameda Library
2400 Stevenson Blvd
Fremont, CA 94538

Contra Costa Library
Pleasant Hill Library
1750 Oak Park Blvd.
Pleasant Hill, CA 94523

Presidio Trust Library
34 Graham St.
(on the Main Post)
San Francisco, CA 94129

Mill Valley Public Library
375 Throckmorton Avenue
Mill Valley, CA 94941

Petaluma Regional Library
100 Fairgrounds Drive
Petaluma, CA 94952

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CHAPTER 7 - REFERENCES AND TECHNICAL STUDIES

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