

CALIFORNIA COASTAL COMMISSION

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**RECORD PACKET COPY****W 4a****STAFF REPORT AND RECOMMENDATION****ON CONSISTENCY DETERMINATION**

Consistency Determination No. **CD-117-99**
Staff: JRR-SF
File Date: 12/16/1999
45th Day: 01/30/2000
60th Day Extended to: 04/25/2000
Commission Meeting: 04/12/2000

FEDERAL AGENCY: Corps of Engineers**DEVELOPMENT****LOCATION:**

Lower Mission Creek, Santa Barbara (Exhibit 1)

DEVELOPMENT**DESCRIPTION:**Lower Mission Creek flood-control improvements
(Exhibit 2-9)**EXECUTIVE SUMMARY**

The Corps has submitted a consistency determination to improve flood protection on Mission Creek, in the City of Santa Barbara. The proposed project would increase the channel capacity to 3400 cubic feet per second (cfs) and would thereby provide approximately a 20-year storm level of protection. Seven bridges along the study reach would be replaced. Additionally, the project includes a new culvert bypassing the oxbow upstream of Highway 101 ("oxbow bypass"). The oxbow would be left in place as a low flow channel. The project includes planting of native riparian species along sloped banks stabilized by riprap, creation of 0.6 acres of wetlands and riparian habitat adjacent to the oxbow, and enlargement of sloped planting areas. The creek banks would consist of either a vertical wall or a combination vertical wall and riprap sideslope. The combination vertical wall and riprap sideslope would consist of vertical wall for the bottom half, while ungrouted slope would form the upper half. Native riparian vegetation would be planted within the riprap. Existing natural stream

bottom would be maintained and stream bottom that is now concrete lined would be restored to natural conditions, except for immediately underneath bridges and through the oxbow bypass.

The flood control facility within the coastal zone consists primarily of vertical walls, with two small sections that include short walls with a vegetated riprap slope above the walls. Sections 30236 and 30233 of the Coastal Act prevent the Commission from approving this stream alteration unless it is the least damaging feasible alternative. The Commission believes that there are possible alternatives to the proposed design of the flood-control facility south of Highway 101 that minimize the need to harden the banks of the creek. The most environmentally beneficial alternative appears to be a smaller version of the proposed project that expands the use of short floodwalls with vegetated riprap above the walls. The Corps did not analyze such an alternative. Without an analysis of these alternatives, the Commission cannot conclude that the proposed project is the least environmentally damaging alternative.

The proposed project includes impacts to estuarine and riparian wetland resources. Sections 30236, 30233 and 30240 of the Coastal Act prevent the Commission from approving this stream alteration unless it includes feasible mitigation and it avoids significant disruption to the sensitive habitat. The proposed project results in a degradation of habitat to federally listed threatened species, steelhead trout and tidewater goby. The Corps proposes to mitigate for this impact by designing the project to include creation of riparian habitat on the banks of the stream, widening the estuary, and adding some instream boulders. The Corps' consistency determination does not include a detailed final mitigation and monitoring plan or a consultation with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service, pursuant to Section 7 of the federal Endangered Species Act. Without this information, the Commission cannot determine if the project is consistent with the wetland fill, stream alteration and environmentally sensitive habitat policies of the Coastal Act.

Even though the Corps' consistency determination lacks sufficient information to assess the project's consistency with the habitat policies of the CCMP, the Commission is concerned that the approach taken by the Corps may result in significant disruptions of sensitive habitat and may not provide adequate mitigation for that impact. Specifically, it appears that the proposed project would significantly disrupt aquatic habitat (which supports federally listed threatened species) and degrade its habitat value over time and that the project would not mitigate for this impact.

The proposed flood-control facility includes annual dredging, vegetation removal, and herbicide use, which would degrade the water quality of the stream. Additionally, the project would reduce the buffer between the stream and urban development, which could cause an increase in non-point source pollution. Although the proposed project provides the Corps with an opportunity to mitigate for these water quality impacts by incorporating appropriate measures or

technologies into the project design that would reduce non-point source pollution discharges from streets and storm drains, the project does not include any of these measures. Therefore, the project would degrade water quality resources in a manner inconsistent with Section 30231 of the Coastal Act, and thus the project is inconsistent with the water quality policies of the CCMP.

The proposed project includes the removal of sediment from the stream. Section 30233 of the Coastal Act requires sediment removed from coastal streams to be used to restore sand supply on local beaches. Although the Corps' consistency determination does not evaluate the suitability of this sediment for beach replenishment purposes, it proposes to dispose of excess material at local landfills. Without this analysis, the Commission cannot evaluate the project for consistency with the sand supply policies of the Coastal Act.

The proposed construction of the vertical walls south of Highway 101 could adversely affect visual resources of the coastal zone. Section 30251 of the Coastal Act provides for the protection of visual resources within the coastal zone. In its environmental documents, the Corps proposes to design the project in a manner that minimizes visual impacts. However, the Corps has not evaluated an alternative to the project that does not include the construction of floodwalls, which would avoid the visual impacts. Additionally, the Corps does not provide a detailed description of its proposed measures to minimize visual impacts from the proposed project. Without this information, the Commission cannot evaluate the project's consistency with the visual policies of the Coastal Act.

The environmental documents for the Mission Creek project state that there are historic and archaeological resources potentially affected by the proposed project and commits to coordination with the State Historic Preservation Officer (SHPO). However, without the benefit of the SHPO's analysis, the Commission cannot determine if the project is consistent with Section 30244 of the Coastal Act.

SUBSTANTIVE FILE DOCUMENTS:

1. Draft Environmental Impact Statement/Environmental Impact Report for Lower Mission Creek Flood Control Project, Santa Barbara, California, December 1999
2. Biological Assessments; Lower Mission Creek Flood Control Project, Santa Barbara, California, December 1999.
3. Draft Fish and Wildlife Coordination Act Report, Lower Mission Creek Flood Control Project, Santa Barbara, California, U.S. Fish and Wildlife Service, September 1999.

STAFF SUMMARY AND RECOMMENDATION:

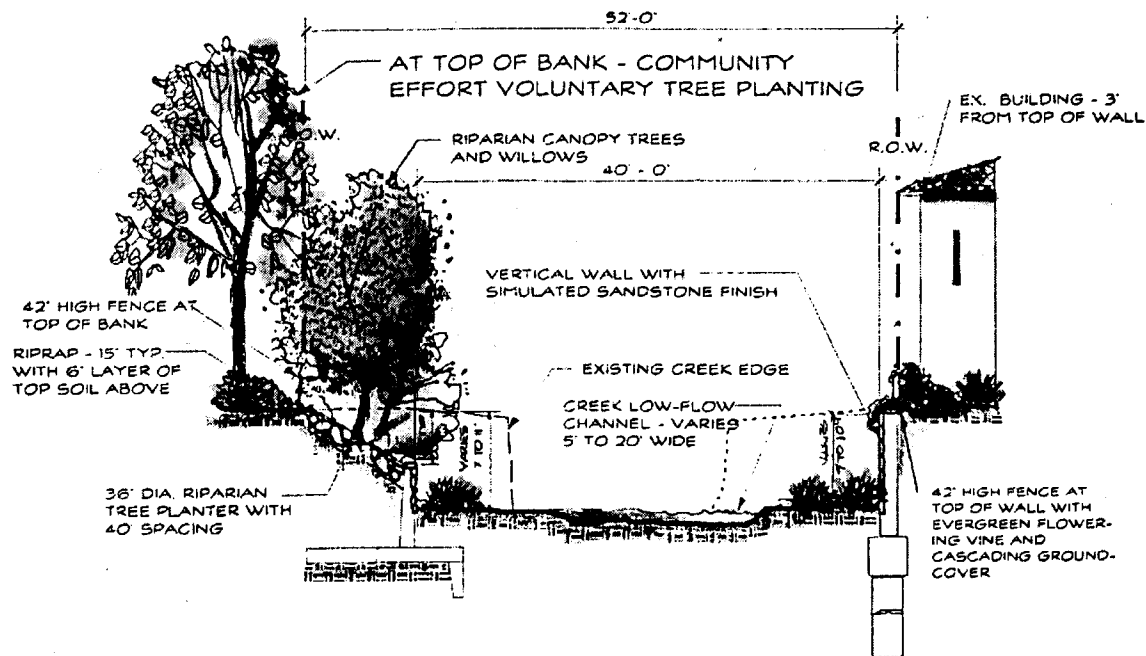
I. Project Description.

The proposed project would develop a flood-control facility on Mission Creek in Santa Barbara with a capacity of 3,400 cubic feet per second (cfs) and would thereby provide approximately a 20-year storm level of protection. Seven bridges along the study reach would be replaced including De la Guerra Street, Ortega Street, Cota Street, De la Vina Street, Gutierrez Street, Chapala Street, and Mason Street Bridges. Additionally, the project includes a new culvert bypassing the oxbow upstream of Highway 101 ("oxbow bypass"). The culvert would cross the highway, Montecito Street, and the railroad tracks before rejoining the creek just upstream of the Chapala Street Bridge. The culvert would be covered only across Montecito Street down to its confluence at Chapala Street Bridge; this portion would consist of two concrete boxes (12 ft x 10.5 ft). The open portion of the culvert beginning just upstream of Highway 101 would be a 25-foot-wide rectangular concrete channel. The open channel would be approximately 200 linear feet, while the concrete box culvert would be approximately 350 feet in length. The oxbow would be left in place as a low flow channel.

The project includes planting of native riparian species along sloped banks stabilized by riprap, creation of 0.6 acres of wetlands and riparian habitat adjacent to the oxbow, and enlargement of sloped planting areas. Land acquisitions would provide for the widening of the creek and creation of habitat expansion zones at several locations (as many as six) along Lower Mission Creek. The habitat expansion zones would be planted with trees native to coastal California. Species planted may include western sycamore (*Platanus racemosa*), cottonwood (*Populus fremontii*), coast live oak (*Quercus agrifolia*), California laurel (*Umbellularia californica*), wax myrtle (*Myrica californica*), hollyleaf cherry (*Prunus ilicifolia*), and white alder (*Alnus rhombifolia*).

The creek banks would consist of either a vertical wall or a combination vertical wall and riprap sideslope. The combination vertical wall and riprap sideslope would consist of vertical wall for the bottom half, while ungrouted riprap (15 inches thick) at a 1.5:1 (Vertical to Height ratio) slope would form the upper half. The height of the vertical wall in this combination design would vary along the entire length of the project area. Riprap would be overlain on a layer of native rock and soil, with topsoil distributed through the interstices of the riprap, and covered with 9 inches of prepared topsoil. Concrete pipes in varying sizes (up to a maximum three feet in diameter) would be placed in between the riprap to allow planting of native trees and vegetation. Several species of riparian trees, including western sycamore, cottonwood, and coast live oak would be planted from 1 gallon nursery stock into cylindrical planters embedded within the riprap and spaced 40 feet apart.

Rendering of short floodwalls with vegetated riprap¹



VEGETATED SIDE SLOPE AND VERTICAL WALL SECTION VIEW

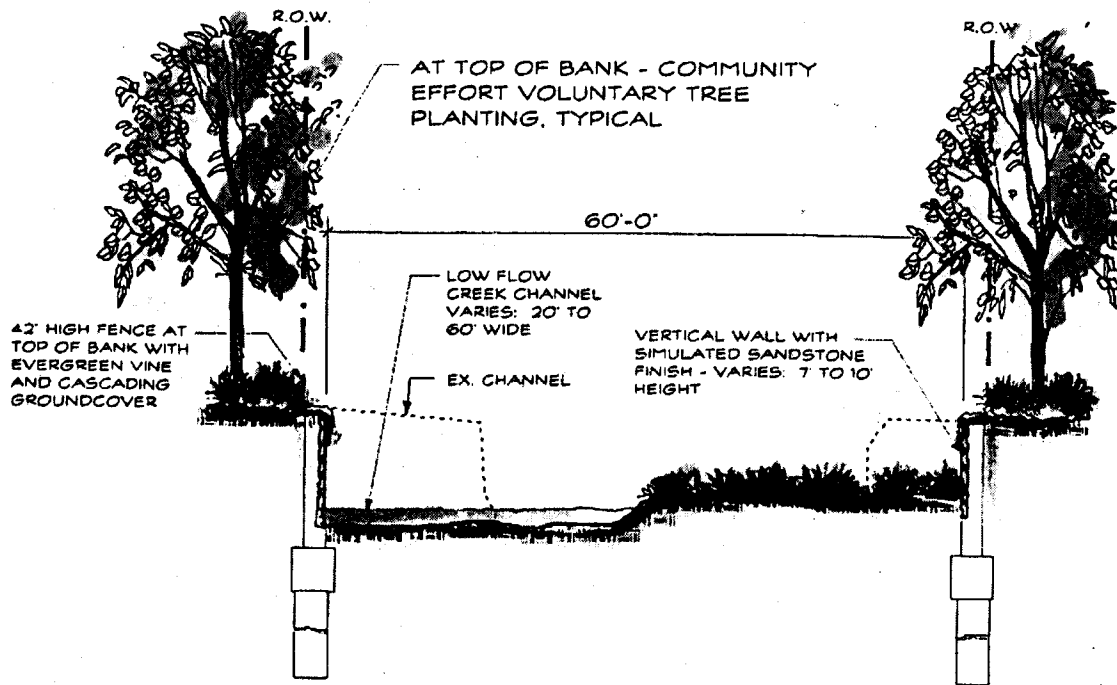
NOT TO SCALE

Willow branches would be placed into prepared soil below the riprap in dense rows with the expectation that approximately 20% would sprout vegetatively and find their way through gaps in the riprap. Other native understory species, including arroyo willow (*Salix lasiolepis*), Mexican elderberry (*Sambucus mexicana*), and coyote brush (*Baccharis pilularis*), would be seeded into the topsoil, or set out from liner stock.

Combination riprap and vertical wall would be the dominant bank treatment upstream of Highway 101, except in two short reaches just upstream of Haley-De la Vina Bridge and De la Guerra Bridge. Below Highway 101, the combination riprap and vertical wall would be applied along the southeast bank, starting from midpoint between Chapala Bridge and Mason Bridge down to midpoint between Mason Bridge and State Bridge. In total, about 4,275 feet of Mission Creek would be finished with this combination design. The remaining length of the project reach would consist of vertical walls.

¹ City of Santa Barbara, Letter Dated 2/22/00

Rendering of Vertical Flood walls²



VERTICAL WALL ON PIER FOOTING TYPICAL SECTION

NOT TO SCALE

Existing natural stream bottom would be maintained and stream bottom that is now concrete lined would be restored to natural conditions, except for immediately underneath bridges and through the oxbow bypass. Restoration to natural bottom would necessitate excavation and removal of one to four feet of streambed in the reach between De la Guerra Street bridge and Ortega Street Bridge, one to three feet of streambed between Ortega Street Bridge and Bath Street Bridge, two to three feet of streambed between Cota Street Bridge and Haley-De la Vina Bridge, and two to four feet of streambed between Haley-De la Vina Bridge and Gutierrez Street Bridge. In the reach between Chapala Street Bridge and State Street Bridge, there would be excavation and/or fill of one foot of streambed. In the final reach of Lower Mission Creek from State Street Bridge to Cabrillo Boulevard Bridge, the streambed would be cleared of leftover footing from earlier structures.

² City of Santa Barbara, Letter Dated 2/22/00

II. Status of Local Coastal Program.

The standard of review for federal consistency determinations is the policies of Chapter 3 of the Coastal Act, and not the Local Coastal Program (LCP) of the affected area. If the Commission certified the LCP and incorporated it into the CCMP, the LCP can provide guidance in applying Chapter 3 policies in light of local circumstances. If the Commission has not incorporated the LCP into the CCMP, it cannot guide the Commission's decision, but it can provide background information. The Commission has partially incorporated the Santa Barbara LCP into the CCMP.

III. Federal Agency's Consistency Determination.

The Corps of Engineers has determined the project to be consistent to the maximum extent practicable with the California Coastal Management Program.

IV. Motion:

I move that the Commission agree with consistency determination CD-117-99 that the project described therein is consistent to the maximum extent practicable with the enforceable policies of the California Coastal Management Program (CCMP).

V. Staff Recommendation:

Staff recommends a NO vote on the motion. Failure of this motion will result in a disagreement with the determination and adoption of the following resolution and findings. An affirmative vote of a majority of the Commissioners present is required to pass the motion.

VI. Resolution To Disagree With Consistency Determination:

The Commission hereby disagrees with the consistency determination by Corps of Engineers on the grounds that the project described therein: (1) does not contain enough information for the Commission to determine if the project is consistent with the enforceable policies of the CCMP; and (2) is not consistent to the maximum extent practicable with the enforceable policies of the CCMP.

VII. Procedures

A. Necessary Information:

Section 930.42(b) of the federal consistency regulations (15 CFR Section 930.42(b)) requires that, if the Commission's objection is based on a lack of information, the Commission must identify the information necessary for it to assess the project's consistency with the CCMP. That section states that:

If the State agency's disagreement is based upon a finding that the Federal agency has failed to supply sufficient information (see Section 930.39(a)), the State agency's response must describe the nature of the information requested and the necessity of having such information to determine the consistency of the Federal activity with the management program.

As described fully in the findings below, the Commission has found this consistency determination to lack the necessary information to determine if the proposed project is consistent with Sections 30231, 30233, 30236, 30240, 30244, and 30251 of the Coastal Act. In order to evaluate the project's consistency with the CCMP, the Commission needs the following information:

1. **Endangered Species.** Final Biological Opinions from the U.S. Fish and Wildlife Service and the National Marine Fisheries Service on the project's impacts to the tidewater goby and steelhead trout.

2. **Alternatives.** An evaluation of a smaller scale version of the proposed project designed to provide protection from a 15-year flood event. That alternative should consider expanding the length of short floodwalls downstream from Highway 101.

3. **Mitigation.** Develop a detailed mitigation plan that includes the following:

- a. Identification of its habitat restoration goals.
- b. Provide more details on the biologic, hydrologic, geologic features of the restoration proposal.
- c. Revise the monitoring to use performance standards instead of limiting the monitoring to five years. The Corps should identify its restoration goals and monitor the area until those goals are accomplished. If the goals are not reached, the Corps should implement improvements to the habitat until the resource goals are met. Monitoring should continue on a periodic basis after the resource goals have been attained.
- d. Revise the mitigation plan to contain a long-term commitment to maintain restored areas.
- e. Add restrictions to the mitigation plan so it will contain an evaluation of the effect of long-term maintenance of the flood-control facility on restored habitat resources, and commitments to protect the habitat from the maintenance of the flood-control facility.
- f. Revise the mitigation plan to limit all vegetation planted as part of this project, including any ivy used as aesthetic treatment on floodwalls and fences, to be native to Santa Barbara and from local seed sources.

g. Develop a mitigation plan that avoids or compensates for the project's impacts to aquatic habitat. Such a mitigation plan should be developed in consultation with the Coastal Commission staff, U.S. Fish and Wildlife Service and the National Marine Fisheries Service.

4. **Water Quality Impacts from Construction.** The Corps should revise its consistency determination to include a runoff and erosion control plan that minimizes non-point source pollution associated with construction activities from the proposed project.

5. **Sand Supply.** The Corps' consistency determination should include an evaluation of the suitability of material removed from the creek to be used for beach replenishment. This evaluation should analyze the physical and chemical characteristics of the sediment to determine if it is suitable for beach replenishment. If the material is suitable, the evaluation should consider the feasibility of using that material for beach replenishment purposes. Additionally, since the proposed maintenance activities provide for the regular removal of sediment from the stream, these maintenance activities should also be analyzed for these concerns.

6. **Visual Resources.** The Corps should revise its consistency determination to analyze a smaller-scale version of the proposed project that may increase the amount of vegetated side slopes, and thus reduce the visual impact from the project. Additionally, the Corps' consistency determination should include a detailed description of the project's aesthetic design features.

7. **Cultural Resources.** The consistency determination should be revised to include an analysis of the effects from the project on historical and archaeological resources from the State Historic Preservation Officer.

B. Project Modifications. Section 930.42(a) of the federal consistency regulations (15 CFR § 930.42(a)) requires that, if the Commission's objection is based on a finding that the proposed activity is inconsistent with the CCMP, the Commission must identify measures, if they exist, that would bring the project into conformance with the CCMP. That section states that:

In the event the State agency disagrees with the Federal agency's consistency determination, the State agency shall accompany its response to the Federal agency with its reasons for the disagreement and supporting information. The State agency response must describe (1) how the proposed activity will be inconsistent with specific elements of the management program, and (2) alternative measures (if they exist) which, if adopted by the Federal agency, would allow the activity to proceed in a manner consistent to the maximum extent practicable with the management program.

As described in the findings below, the proposed project is inconsistent with the CCMP. Pursuant to this federal regulation, the Commission is responsible for identifying measures, if they exist, that would bring the project into compliance with the CCMP. The Commission believes that it may be possible to bring this project into compliance with the CCMP if the Corps implements the following measures:

1. **Water Quality Mitigation.** Redesign the proposed project to incorporate water quality improvements into its design. These improvements can include creation of wetland habitat, installation of filters or other sediment traps within the storm drains, placement of a filter or sediment trap at the oxbow bypass, or any other water quality protection measure that will mitigate for the impacts described in the water quality section below.

C. Consistent to the Maximum Extent Practicable:

Section 930.32 of the federal consistency regulations provide that:

The term "consistent to the maximum extent practicable" describes the requirement for Federal activities including development projects directly affecting the coastal zone of States with approved management programs to be fully consistent with such programs unless compliance is prohibited based upon the requirements of existing law applicable to the Federal agency's operations. If a Federal agency asserts that compliance with the management program is prohibited, it must clearly describe to the State agency the statutory provisions, legislative history, or other legal authority which limits the Federal agency's discretion to comply with the provisions of the management program.

The Commission recognizes that the standard for approval of Federal projects is that the activity must be "consistent to the maximum extent practicable" (Coastal Zone Management Act Section 307(c)(1)). This standard allows a federal activity that is not fully consistent with the CCMP to proceed, if compliance with the CCMP is "prohibited [by] existing Federal law applicable to the Federal agency's operations" (15 C.F.R. § 930.32). The Corps has not demonstrated that this project is consistent to the maximum extent practicable with the CCMP by citing and "statutory provision, legislative history, or other legal authority which limits [their] ... discretion to comply with the provisions of the" CCMP (15 C.F.R. § 930.32(a)). Therefore, there is no basis for the Commission to conclude that although the proposed project is inconsistent with the CCMP, it is consistent to maximum extent practicable.

VIII. Findings and Declarations:

The Commission finds and declares as follows:

A. Habitat Resources. The Coastal Act provides for the protection of stream resources. Section 30233(a) provides that:

(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

(1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.

(2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.

(3) In wetland areas only, entrance channels for new or expanded boating facilities; and in a degraded wetland, identified by the Department of Fish and Game pursuant to subdivision (b) of Section 30411, for boating facilities if, in conjunction with such boating facilities, a substantial portion of the degraded wetland is restored and maintained as a biologically productive wetland. The size of the wetland area used for boating facilities, including berthing space, turning basins, necessary navigation channels, and any necessary support service facilities, shall not exceed 25 percent of the degraded wetland.

(4) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.

(5) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.

(6) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.

(7) Restoration purposes.

(8) Nature study, aquaculture, or similar resource dependent activities.

Section 30236 of the Coastal Act provides that:

Channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to (1) necessary water supply projects, (2) flood control projects where no other method for protecting existing structures in the floodplain is feasible and where such protection is necessary for public safety or to protect existing development, or (3) developments where the primary function is the improvement of fish and wildlife habitat

Section 30240(a) of the Coastal Act provides that:

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

1. **Existing Resources.** The Corps of Engineers proposes to develop a flood-control facility on Lower Mission Creek, a 1.1-mile section of Mission Creek from the intersection of Canon Perdido and Castillo Streets to Cabrillo Boulevard, located in the City of Santa Barbara. This section of Mission Creek flows southeast through the City of Santa Barbara and eventually discharges into the ocean approximately 450 feet east of Stearn's Wharf.

The Mission Creek drainage, the largest of several coastal stream systems in the Santa Barbara region, originates from the Santa Ynez Mountains north of Santa Barbara. The drainage, including its tributaries, is approximately 11.5 square miles in size. The headwaters of Mission Creek and its major tributary, Rattlesnake Creek, occur at 3,500 feet. During the rainy season, Mission Creek ranges from a comparatively small stream carrying an average maximum of 370 cubic feet per second (cfs) during non-flood years to a creek with peak flows of 5120 cfs³. The incidental trickle moving down the channel after mid-summer appears to be primarily urban runoff that enters Mission Creek via storm drains along its course. Mission Creek also periodically receives water from the Santa Barbara water tunnels.

The condition of the natural resources varies along the length of the Mission Creek watershed. The creek flows through steep terrain in the mountains with vegetation that is relatively undisturbed in its upper reaches. On this portion of the drainage, riparian woodland vegetation occurs along Mission Creek and its tributaries, and the surrounding vegetation includes chaparral and coast live oak woodland. South of the Botanical Garden, the terrain becomes flatter and the creek shows more signs of disturbance associated with the greater density of adjacent commercial and residential development. Within the project study area,

³ Hydrology data from the U.S. Army Corps of Engineers 1995a.

between Canon Perdido Street and Cabrillo Boulevard, the natural habitat of the creek is highly modified. Only remnants of native vegetation remain in the creek and estuary, and the area adjacent to the creek consists of buildings, ornamental landscapes, parking lots, and roads. Natural habitat is significantly limited by urban development including periodic clearance of vegetation and accumulated sediments from the channel, the indiscriminate use of the channel as a dumping ground for refuse, intermittent and private hard siding of its channels, housing along both sides of the channel, bridges carrying roads over the channel, discharge of storm water lines into the channel (especially underneath bridges), and the concentration of business developments within or adjacent to residential neighborhoods.

In lower Mission Creek, three areas of concrete interrupt the natural channel bottom and banks. Approximately 0.3 miles of a concrete trapezoidal channel occurs from Los Olivos Street to Mission Street. An approximately 0.8-mile concrete trapezoidal channel occurs from Valerio Street to Canon Perdido, the point where the project study area begins. Both of these areas are outside of the project area and the coastal zone, and would not be affected by the proposed project. However, there is a 0.1-mile rectangular concrete-bottomed and stone-walled channel occurs in the project study area from the Southern Pacific Railroad tracks to Chapala Street. In addition, the banks and stream bottom in the project area have been altered with grout stone, sacked concrete, pipe and wire revetment, gabions, bulkhead structures, and other stabilization structures to prevent bank erosion and flooding of adjacent development. Thus, the physical characteristics of the creek have been modified to some extent, especially along the lower portions.

Although the Mission Creek watershed is not entirely pristine, the drainage as a whole provides important aquatic resources. Mission Creek and its main tributary, Rattlesnake Creek, are designated by Santa Barbara County as prime examples of freshwater streams in the County. This designation maintains that these creeks deserve special protection because the upper Mission Creek drainage supports extensive areas of quality riparian communities with high wildlife value. Even though the lower Mission Creek is significantly degraded, it provides habitat for two federally listed threatened species, the steelhead trout and the tidewater goby. The steelhead trout uses Lower Mission Creek as a migratory corridor to the upper reaches of the watershed, which are suitable for fish spawning. In addition, a population of tidewater gobies lives within the Mission Creek estuary.

2. Allowable Use and Alternatives. Section 30233 of the Coastal Act identifies eight allowable uses for the dredging diking and filling of coastal waters. Flood-control facilities are not defined as an allowable use under Section 30233(a). In addition, Section 30240(a) of the Coastal Act prevents the Commission from approving activities within an environmentally sensitive habitat area unless the activity is resource dependent. Since a flood-control facility is

not resource dependent, it is not consistent with Section 30240(a) of the Coastal Act.

However, Section 30236 of the Coastal Act allows for alteration of streams for flood-control purposes, provided that it meets all the requirements of that section. This section clearly anticipates dredging, diking, and filling of coastal waters for flood-control purposes. Section 30236 is a more specific policy than Section 30233(a) or 30240(a) and clearly shows legislative intent to allow alteration of streams for flood-control purposes. In other words, Section 30236 of the Coastal Act requires the Commission to approve flood-control facilities in certain circumstances, even though such activities do not comply with the allowable-use and resource-dependent tests of Sections 30233(a) and 30240(a) of the Coastal Act, respectively. Thus, the permissive language in Section 30236 provides evidence of legislative intent that, where necessary and properly designed, flood control facilities can be authorized under the Coastal Act in coastal streams and rivers.

Before the Commission can authorize a flood-control project, it must meet all of the requirements of Section 30236. That section allows alterations of streams if they are for flood-control purposes, if there are no other feasible method for protecting existing structures in the floodplain, and if such protection is necessary for public safety or to protect existing development. According to the Corps, its proposal is a flood-control facility that is necessary to protect existing development. In its Feasibility Study, the Corps states that:

The primary problem affecting the lower Mission Creek study area is the threat of flooding to property which affects the health, safety and well-being of the residents of Santa Barbara. This is substantiated by flood records dating back to 1862. Records show that the area has suffered at least 20 considerable floods since 1900. Increased urbanization of the Santa Barbara area over the last century has contributed to increased runoff, and therefore, increased flooding frequencies.

...

Records since 1900 show that floods occurred in the Santa Barbara County area in 1906, 1907, 1909, 1911, 1914, 1918, 1938, 1941, 1943, 1952, 1958, 1962, 1964, 1967, 1969, 1973, 1978, 1980, 1983, 1995, and 1998.

Additionally, the Feasibility Study, the Corps identifies the cost of damages from flooding of Mission Creek. These costs are reported in Table 1 below and include damage to both structures and contents in 1998 dollars.

Table 1. Historical Flood Damages⁴

Date of Flooding	Damages	Flood Level
March 1995	\$5,482,000	9-year
January 1995	\$11,808,000	55-year
January 1983	\$1,847,000	10-year
February 1983	\$2,086,000	11-year
January 1967	\$3,925,000	NA

According to this data, flooding on Mission Creek has damaged existing structures in the City of Santa Barbara.

The proposed project will improve the capacity of the stream from its existing capacity of 1,500 cubic feet per second (cfs), five-year level of flood protection, to 3,400 cfs, 20-year level of flood protection. The capacity improvement will be achieved through deepening and widening of the stream and through construction of floodwalls and riprap side slopes. Therefore, the Commission finds that the proposed project is for flood-control purposes and is necessary to protect existing development.

The third test of Section 30236 limits the proposed flood-control facilities to those where there are no other feasible method for protecting existing structures. This test is similar to the alternatives requirement of Section 30233 of the Coastal Act, which prevents the Commission from authorizing dredging or filling within a stream unless the activity is the least damaging feasible alternative. The Corps analyzed several different alternatives to the proposed project. These alternatives included non-structural alternatives, several different flood-control designs, and the no-project alternative. The Corps' analysis of non-structural alternatives includes flood plain management, flood proofing, and relocation. The Corps describes these alternatives as follows:

The City of Santa Barbara has been a participant in the National Flood Insurance Program which requires the City to maintain a Flood Plain Management Plan to reduce future flood plain hazards. The Reconnaissance Study also investigated the flood warning system and evacuation element of flood plain management. The

⁴ Draft Feasibility Report, Santa Barbara County Streams, Lower Mission Creek, Corps of Engineers, December 1999, p. 35.

study revealed that a flood warning system would be impractical to implement. Storm waters falling in the upper Mission Creek watershed reach the lower Mission Creek area in less than one hour, which would be too short a time for local residents to respond to any flood warning.

Flood proofing measures examined in the Reconnaissance Study include blocking flood water from entering a structure, jacking the first floor of a structure above a flood surface elevation, and constructing a flood wall or ring dike. Blocking the flood waters at individual structures was not considered feasible due to likely failure of the structures' walls as a result of hydrostatic and hydrodynamic forces. Raising (jacking) structures above flood water elevations was determined to be too expensive and uneconomical given the frequency of flooding in the area. Flood walls or ring dikes were not considered a feasible alternative due to inadequate space, aesthetic considerations, and the difficulty in ensuring proper closure of openings in the wall or dike during a flood.

Finally, relocation of structures in the flood plain was considered. However, Santa Barbara is a highly developed area which has very little space to relocate structures out of the floodplain.

The Commission agrees that the lower Mission Creek is an urban stream and relocation or retrofitting existing development would likely be cost prohibitive and infeasible. However, in considering the structural alternatives, the Commission believes that there maybe a feasible less damaging alternative.

The proposed flood-control facility within the coastal zone would consist primarily of vertical walls, with two small sections that include short walls with a vegetated riprap slope above the walls. The portion of the project outside of the coastal zone consists mostly of short floodwalls with vegetated riprap slopes above the walls. In a response to concerns raised by Commission staff, the City of Santa Barbara sent a letter explaining why a flood-control alternative that uses vegetated slopes within the coastal zone is not feasible (Exhibit 10). The City argues that such an alternative would require substantial acquisition of land and significantly increase the cost of the project. Additionally, the City would be required pursuant to state and federal law to mitigate for impacts to low-income housing and historic resources. That mitigation would also substantially increase the cost of the facility. According to the City, the cost increases required for such an alternative would result in a benefit-cost ratio of less than one⁵, which

⁵ If the economic benefits from a project are greater than its costs, then the benefit-cost ratio is greater than one and the project is acceptable to the Corps for federal participation. The Corps usually proposes the alternative with the highest ratio, also known as the "NED Alternative."

means that the Corps could not fund the proposal. Therefore, the City concludes that that alternative is not feasible.

Another alternative that was not considered by the Corps of Engineers is a smaller version of the proposed project. In its Feasibility Study, the Corps considered two alternatives that provide protection from a 15-year flood, as opposed to the 20-year flood protection provided by the proposed project. Those alternatives were not considered in the Corps' EIS or consistency determination because the benefit-cost ratio for those projects is less than one. The two 15-year flood protection alternatives evaluated in the Feasibility Study are a stepped wall alternative and a vertical wall alternative. The Corps also considered 20-year flood protection alternatives of these projects. However, the Corps did not consider a 15-year flood protection version of the proposed project that would incorporate short walls with vegetated riprap slopes above the wall. Such an alternative could have significant advantages over the proposed project or the other alternatives. First, it may allow the use of vegetated riprap slopes within the coastal zone without the significant land acquisition costs. Second, its impacts to the estuary may be less than the proposed project because the stream corridor will be narrower. Finally, its costs maybe significantly less, and thus it may have a benefit-cost ratio of greater than one. Since the Corps did not evaluate this alternative, there is no information on the feasibility or environmental effects of such an alternative. Without information on that alternative, the Commission cannot determine if the proposed project is the least damaging feasible alternative. Therefore, the Commission finds that the consistency determination lacks sufficient information for the Commission to conclude that the proposed project is the least damaging feasible alternative.

3. Mitigation. The proposed project includes excavation of streambed removing sediment and aquatic vegetation, widening of the stream banks and removing native and exotic vegetation from the banks. Additionally, the project includes annual maintenance of the facility including removal of vegetation, through mechanical and chemical means, and removal of sediment. The net result of the project on the stream resources is to remove all vegetation within the stream and along its banks and increase maintenance activities within the stream. The loss of aquatic vegetation could adversely affect stream resources by decreasing the stream's ability to absorb pollution and reducing the amount of nutrients available to organisms in the water. In addition, the widening of the stream and the loss of bank vegetation may also result in significant water temperature increases because of the expanded surface area exposed to the sun and loss of shading. Finally, the increased maintenance from the project will cause annual disturbances to the stream including removal of recently established vegetation, application of pesticides, removal pools, riffles, and other stream resources that may have formed since the previous year, removal of benthic organisms and burrowing male gobies, and other annual disturbances to stream resources. Although the Commission recognizes that the County flood-control district currently conducts maintenance activities on this stream, the proposed project will change the irregular maintenance schedule that currently

occurs (the last maintenance activity occurred in 1997) to an annual maintenance schedule. In summary, the proposed flood-control project could have significant effects on stream resources by increasing water temperature, increasing pollution inputs, removal of vegetation, and increased streambed disturbances.

In evaluating the Corps' analysis of biological impacts, habitat benefits, and mitigation, the Commission believes that the consistency determination does not contain enough information to fully assess the adequacy of the proposed mitigation measures. However, based on the information contained in the Corps' consistency determination, the Commission believes that, the project may result in significant disruptions of environmentally sensitive habitat areas and that the mitigation is not adequate to address this impact.

a. **Lack of Information.** The Corps' consistency determination contains an analysis of impacts to threatened species that is not complete. As required by the federal Endangered Species Act, the Corps must consult with both the U.S. Fish and Wildlife Service (Service) and the National Marine Fisheries Service (NMFS). The Corps is in the process of coordinating with these agencies. The consultation process is not completed and the Commission does not have the benefit of the complete input from the Service and NMFS on the issue of protection of threatened species. Without a completed Section 7 consultation, the Commission cannot determine if the Corps' mitigation measures would adequately minimize impacts to the listed species. This issue is of particular concern in this case because the Corps has identified some potential impacts to these species from its proposed project, but relies on the Section 7 process to resolve these concerns. Specifically, the Corps states that:

The potential effects on foraging behavior and migration through the estuary of mechanical vibration transmitted through the ground and water cannot be evaluated based on any experimental data known to the USACOE. That such a disruption of normal behavior may occur seems probable. The level of such an effect must be weighed during Section 7 Consultation.

Construction on the banks would remove what little vegetation now grows along the estuary. To the extent that plant growth provides important cover for steelhead as they enter the estuary, its removal could perhaps have a direct effect [on] their migratory behavior. The level of such an effect also cannot be evaluated for lack of experimental data. Section 7 Consultation must also evaluate this possible effect.

...

Construction upstream of Yanonali Street will still be constrained: no mechanized equipment permitted in significant stream flows between December 15 and the end of March. As construction

moves farther upstream, silt curtains will be deployed below the immediate area of construction to reduce suspended sediments in the water. In all likelihood, these fences probably will not trap all sediments and some will be carried downstream to the estuary. The concentration of such sediments cannot be estimated, hence the possible indirect effects to steelhead that may be present somewhere downstream after the end of March cannot be evaluated at this time. The magnitude of such indirect effects must also be evaluated during Section 7.⁶

A similar analysis is in the Biological Assessment for the tidewater goby. The Corps clearly identifies these issues as unresolved and is relying on the Section 7 process to address these potential impacts. Without further information on the nature of these impacts and mitigation, if necessary, the Commission can not make the findings that the proposed project will not significantly disrupt habitat for these species.

Additionally, the Corps' mitigation plan is inadequate for the Commission to assess its compliance with the requirements of the Coastal Act. The Corps' mitigation plan consists of a matrix that briefly describes the impact, mitigation, and monitoring (Exhibit 11). It does not provide any details on the mitigation and monitoring measures. In other words, the Commission believes that the proposed mitigation plan is incomplete. The following issues need further elaboration:

1. The mitigation and restoration plan does not identify its habitat restoration goals.
2. The mitigation/restoration plan needs to provide details in order for the Commission to determine its consistency with the Coastal Act.
3. The monitoring is limited to five years and is not based on performance standards. The Corps should identify its restoration goals and monitor the area until those goals are accomplished. If the goals are not reached, the Corps should implement improvements to the habitat until the resource goals are met. Monitoring should continue on a periodic basis after the resource goals have been attained.
4. The mitigation plan does not contain a long-term commitment to maintain restored areas.
5. An evaluation is needed of the effect of long-term maintenance of the flood-control facility on restored habitat resources.

⁶ Biological Assessment, p. 14-15

In conclusion, without a detailed final mitigation and monitoring plan, the Commission cannot determine if the Corps' mitigation would adequately replace the habitat resources that would be affected by the proposed project.

b. Possible Inconsistencies. Even though the Corps' consistency determination lacks sufficient information to assess the project's consistency with the habitat policies of the CCMP, the Commission is concerned that the proposed project may result in significant disruptions to environmentally sensitive habitat and that the project may not include adequate mitigation to address this impact. In summary, the Commission believes that the project's habitat improvements will benefit bank habitat and the mitigation will reduce construction impacts, but the proposed project will result in a fundamental change in the aquatic habitat that would affect federally listed threatened species.

The Corps evaluated the habitat effects of the project using a modified Habitat Evaluation Procedure (HEP), a biological assessment technique developed by the U.S. Fish and Wildlife Service. The HEP analysis uses Habitat Units (HU), which is a product of the area of the habitat and the Index of Habitat Suitability, to measure the project's beneficial and adverse impacts. The Corps describes the Index of Habitat Suitability as a measure of a stable successional community appropriate to the site. The higher the index, with a maximum value of 1.0, the closer the habitat is to pristine conditions. The second measure of Habitat Units, the area, is the geographic extent of the habitat. The HEP uses simple multiplication to combine these two measures to create a Habitat Unit ($HU = \text{Habitat Index} \times \text{Area}$). In the past, the Commission has expressed strong objections to the use of HEP as a tool to measure habitat values.⁷

However, in this case, the HEP is useful to illustrate the projects adverse impacts to stream resources. According to the Corps' HEP analysis, the habitat benefits from the project, including both aquatic and bank habitat impacts, results in habitat units for the entire project site increasing from 1.29 units to 1.33 units. However, under closer inspection, the aquatic habitat units from the proposed project decrease from 0.80 units to 0.30 units.

⁷ See Commission finding for approval of Amendment 12 to the Port of Los Angeles Master Plan for a full discussion of these issues.

Table 2, Habitat Evaluation Procedure Results⁸

	Stream Corridor Without Project (Habitat Units)	Stream Corridor With Project (Habitat Units)
Aquatic Habitat	0.80	0.30
Stream Bank	0.49	1.03
Total	1.29	1.33

In addition, this decrease incorporates removal of concrete streambed and widening of the estuary. Therefore, based on the Corps' own habitat evaluation, the proposed project will decrease the value of the aquatic resources of the stream. This impact is even more significant when one considers the fact that the project will increase the geographic extent (area) of the streambed, which is one of the factors used to determine the habitat units. In other words, the proposed project results in a tradeoff of bank habitat for aquatic habitat. In some cases, the Commission might consider such a tradeoff. However, in this case, the existing aquatic habitat supports endangered species and the existing bank habitat consists mostly of hardened structures, unvegetated banks, and exotic plant species. Therefore, the Commission concludes that the proposed project will have a significant effect on the aquatic resources of the stream, which supports federally listed threatened species.

In evaluating the project's biological impacts, the Corps determined that the proposed project will have a net benefit to biological resources from the planting of native vegetation on the banks of the stream, development of habitat expansion areas where the Corps acquires property, installing two small boulder fields within the stream, removing existing cement from the streambed, and increasing the size of the estuary. In addition, the Corps proposes to avoid construction impacts to the steelhead by avoiding the season that the steelhead migrates through the lower Mission Creek. Finally, the Corps describes its methodology for avoiding construction impacts to the tidewater goby by dividing a section of the creek lengthwise with a water proof barrier, capturing and removing gobies from one side of the barrier, and dewatering the cleared section. The Corps describes its mitigation measures as follows:

The project construction will restore a soft bottom to Mission Creek or retain that soft bottom if it is already present. ... With thorough planning of construction schedules, these potential impacts [to steelhead trout] can be avoided entirely. For all construction

⁸HEP for Flood-Control Project on Mission Creek, Santa Barbara, CA, EIS/EIR Appendix C.

activities which alter the banks or stream bottom above Yanonali Street, machinery must be excluded from the channel and stream bottom any time significant flows pass down Mission Creek between mid-December and mid-May. All construction activities above Yanonali Street should be restricted to the months between the beginning of June and the end of November. During those months, a double strand of silt fencing material should be strung across the channel below the current area of work to retain sediments dislodged from the banks or creek bottom. The strands need to be at least 30 feet apart to facilitate the lower fence trapping any sediments which swirl past the upper.

....

The estuarine waters through which steelhead would swim to reach spawning sites higher in the watershed are the very habitat occupied throughout the year by gobies. Mitigation measures is [sic] included in the project construction schedule that complete all work between Yanonali Street and Cabrillo Boulevard between April and June, because gobies will be more inclined to enter the estuary as summer conditions begin to prevail.⁹

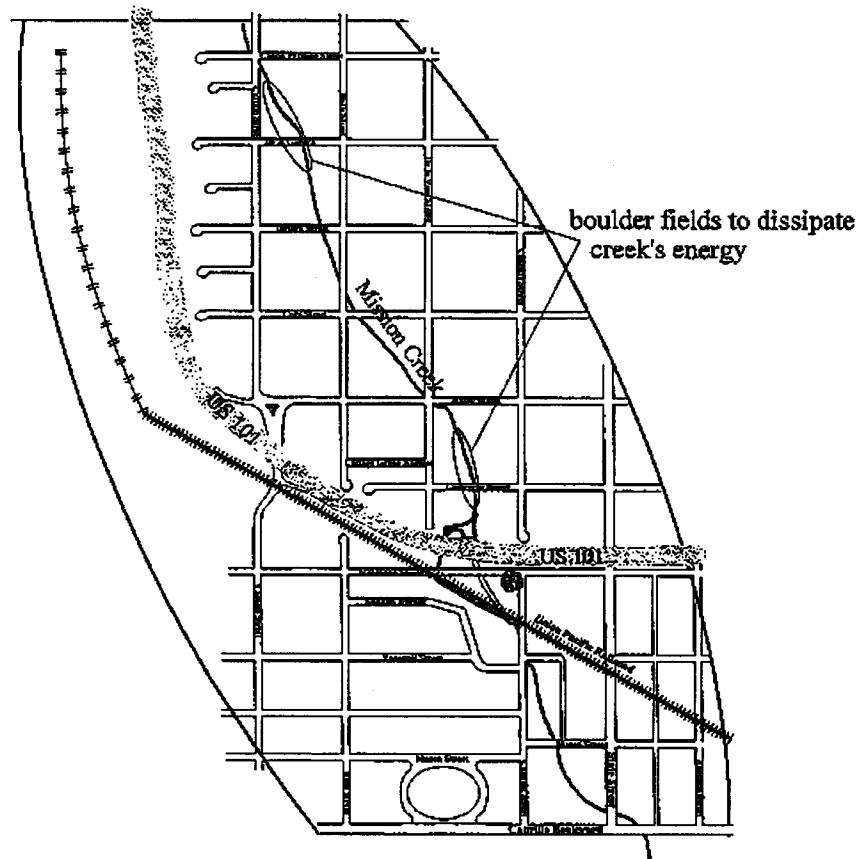
The Commission is concerned that the proposed mitigation is not adequate to address project impacts. As described above, the proposed project will significantly change the nature of the stream and estuary. These changes include potential increases in water temperature, sedimentation, and pollution. In addition, the annual maintenance activities will result in regular disturbances to this sensitive habitat. Finally, the removal of aquatic vegetation and bank vegetation within the estuary will result in a reduction in the input of nutrients into the stream and estuary. The Commission believes that these changes will significantly reduce the value of Mission Creek for both the tidewater goby and the steelhead trout. This conclusion is supported by the Corps' own analysis, which shows that the habitat value of the aquatic area will be significantly reduced.

Since the aquatic habitat supports threatened species, the Commission believes that the mitigation proposed by the Corps should focus on this resource. However, the Corps' mitigation focuses on improving bank habitat and avoiding construction impacts. Although the Commission recognizes that the Corps proposes some aquatic habitat enhancements, these benefits are inadequate to address long-term habitat impacts to the aquatic resources. The aquatic benefits include placement of boulders within the two small sections of the stream corridor as energy dissipaters, removal of existing cement from the streambed, and widening of the estuary. The proposed boulder fields will increase stream habitat

⁹ EIS/EIR for Mission Creek Flood Control project, pp. 10-1 – 10-50

by adding riffles and pools to the stream. Additionally, the Corps will allow some aquatic vegetation to exist within the boulder field. However, the benefits of these improvements are limited to two small portions of the creek (as shown in the map below) and will not significantly add to the habitat value of the stream.

Map of Mission Creek with proposed boulder fields¹⁰



Approximate locations and extent of boulder fields to be placed in the stream bed as energy dissipators.

Additionally, the improvements are upstream of Highway 101 and provide no benefit to the estuary, which supports tidewater gobies. The Corps argues that the gobies' foraging resources will benefit from the widening of the estuary. Although the estuary widening will increase the foraging habitat, it will also result in increased water temperatures, removal of aquatic vegetation, and increased maintenance activities, which include annual dredging, vegetation removal, and use of herbicides. These measures will have a negative impact on the habitat value of the estuary, as is reflected in the Corps' HEP analysis. Finally the

¹⁰ Draft EIS for Mission Creek Flood-Control Project

removal of the existing cement will increase the amount of natural-bottom streambed, but the 0.1 of a mile of cement removal equates to approximately an addition of 0.2 acres of new habitat. Even with the benefits of a wider estuary and removal of hardened streambed, the HEP, which incorporates these benefits, shows a significant reduction in the aquatic habitat value.

Finally, the Commission is concerned about the alleged bank habitat benefits from the proposed project. The Commission believes that these benefits may be overrated by the Corps. The Commission has several concerns about these benefits. First, the proposed bank improvements will be of limited value. The improvements will consist of planting native riparian vegetation above the floodwalls. However, these improvements will not result in the creation of a viable riparian habitat. The vegetation will be isolated from the stream by the floodwall, which will limit the amount of water available to the vegetation (it is possible that the vegetation will require permanent irrigation) and reduce the nutrient inputs into the stream from the vegetation. The isolation will significantly reduce the water quality benefits from the vegetation and prevent the valuable interaction of the vegetation with the water flow, which create pools, overhangs, and other valuable stream features. Additionally, the placement of the riparian vegetation over riprap slopes and the restricting the trees to planters will reduce the ability of the habitat to expand and grow naturally. Another concern is the temporal delays before the habitat benefits can be achieved. The Corps estimates that it will take 30 years before the riparian area would provide its full habitat potential. Finally, the value of the riparian plantings would be reduced because the Corps proposes to also plant the area with non-native ivy on the floodwalls and the fences above the facility. This type of vegetation is likely to spread into the riparian plants and even further reduce their value.

The Commission also notes that the proposed benefits from the riparian improvements will have little value to the coastal zone. Most of the bank treatments described above will be inland of the coastal zone. Within the coastal zone, the flood-control improvements consist mainly of vertical walls without any riparian vegetation. Therefore, the riparian improvements will have little benefit to coastal zone resources. The long-term-value of the riparian improvements is also questionable. The Corps proposes to monitor and maintain the riparian vegetation for five years. However, the Corps' own evaluation indicates that it will take 30 years before the habitat goals are attained. There are many factors that could affect the vegetation in the 25 years between the time the Corps stops monitoring and maintaining the vegetation and the time that it reaches its full potential.

4. Conclusion. In conclusion, the Commission finds that the proposed project is necessary to protect existing structures from flooding. However, the Corps' consistency determination does not contain enough information for the Commission to determine if the proposed project is the least damaging feasible alternative. Additionally, the proposed habitat improvements and mitigation are inadequate and are not described in sufficient detail to

completely assess the project's consistency with the CCMP. Therefore, the Commission finds that the consistency determination lacks sufficient information to completely assess the project's consistency with the habitat and stream alteration policies of the CCMP. Additionally, the general direction of the mitigation and habitat improvements appears not to address the potentially significant impacts to the sensitive coastal zone resources. The Corps' underlying assumption that improvements to one type of habitat can compensate for impacts to another type of habitat is not correct. In this case, the Corps conclusion that the improvements to the bank habitat will mitigate for the project's impact to aquatic habitat ignores the fact the benefits and impacts are to two different habitat types and that the aquatic habitat is an ESHA. Based on information currently available, it is difficult for the Commission to see how it can find that the project avoids significant disruption to the environmentally sensitive habitat areas and includes adequate mitigation for those impacts that are unavoidable.

B. Water Quality. The Coastal Act protects the quality of coastal waters, including streams. Section 30231 of the Coastal Act provides that:

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Mission Creek is located in a relatively urban part of the City of Santa Barbara. The water quality of Mission Creek has been degraded by the discharge of non-point source pollution associated with urban land uses. As stated above, Mission Creek provides habitat for two federally listed threatened fish species. These resources can be adversely affected by increased water pollution. The proposed project has the potential to adversely affect these sensitive species by increasing point and non-point sources of pollution. First, the Corps may increase sedimentation into the creek during construction. In similar situations, the Commission has required a pollution prevention plan to address these construction-related impacts. The environmental documents for this project indicate that the Corps would prepare a runoff and erosion control plan. However, the details of this plan are necessary for the Commission to evaluate water quality impacts from the proposed project. Without this plan, the Commission cannot determine if the project is consistent with the water quality policies of the Coastal Act.

The second water quality concern is from discharges associated with flood-control maintenance activity. The Corps' consistency determination allows for annual maintenance activities that include sediment and vegetation removal and the use of herbicides to control aquatic vegetation. The annual sedimentation removal would likely increase turbidity in the stream with the potential to adversely affect both the steelhead trout and the tidewater goby. Additionally, the use of herbicides in the aquatic environment would also degrade the water quality of the stream and adversely affect sensitive species. Additionally, the annual removal of vegetation will result in reducing the habitat's capability to absorb pollutants. Finally, the Corps proposes to widen the stream to increase its water carrying capacity. This stream widening will reduce the buffer between existing urban development adjacent to the creek and would likely increase the amount of pollution from non-point sources that reach the stream.

In order to address these impacts, the Commission believes that the project can be designed to also provide water quality benefits. The proposed flood-control facility provides the Corps with an opportunity to restore water quality resources in Mission Creek by incorporating appropriate measures or technologies into the project design. The reconstruction of the flood-control facility, including the replacement of bridges, installation of a culvert under Highway 101, and construction of wetlands just north Highway 101, provide the Corps with an opportunity to design the facility to incorporate measures into the project in order to reduce non-point source pollution. Section 30231 of the Coastal Act requires the restoration of water quality resources where feasible. The Corps could install devices at street storm drains or at the Highway 101 culvert that capture or filter discharges.

The Commission has raised these concerns to the Corps, which responded by stating that water quality management is the City's responsibility. The Corps described the need for the City to address non-point source pollution through Phase II of the Stormwater NPDES permit and elaborated on other measures the City is currently implementing to address non-point source pollution. Although the City's activities will address some of the non-point source pollution issues, they do not mitigate for impacts associated with construction, expansion, and maintenance of the flood-control improvements to Mission Creek. Therefore, the Commission finds that the proposed project will adversely affect water quality resources of the coastal zone.

In conclusion, the Commission finds that the proposed project has the potential to adversely affect water quality resources. Although the project provides the Corps with opportunity to avoid some of these impacts and improve water quality through project improvements, these measures are not part of the project. Therefore, the Commission finds that the proposed project is not consistent with the water quality policies of the CCMP.

C. Sand Supply. Section 30233(d) of the Coastal Act provides for the use of suitable material removed from coastal streams to be used for beach replenishment purposes. This section provides that:

(d) Erosion control and flood control facilities constructed on water courses can impede the movement of sediment and nutrients which would otherwise be carried by storm runoff into coastal waters. To facilitate the continued delivery of these sediments to the littoral zone, whenever feasible, the material removed from these facilities may be placed at appropriate points on the shoreline in accordance with other applicable provisions of this division, where feasible mitigation measures have been provided to minimize adverse environmental effects. Aspects that shall be considered before issuing a coastal development permit for such purposes are the method of placement, time of year of placement, and sensitivity of the placement area.

The proposed project includes the removal of sediment from the stream. With such activities, the Coastal Act requires the use of suitable sediment for beach replenishment purposes, if it is feasible. However, in this case, the Corps proposes to dispose of this sediment at nearby landfills. The Corps' environmental documents do not evaluate the suitability of this material for beach replenishment or the feasibility of using it for that purpose. In order to make such an evaluation, the Corps must analyze the physical and chemical characteristics of the sediment. If the material is predominately sand and relatively free of contaminants, the Corps should use the material for beach replenishment purposes, unless it can demonstrate that beach replenishment is not feasible. Additionally, the proposed maintenance activities provide for the regular removal of sediment from the stream. These maintenance activities must also be analyzed for sand supply concerns. Without these evaluations, the Commission cannot determine if the project is consistent with the sand supply policies of the Coastal Act. Therefore, the Commission finds that the proposed project does not contain enough information to evaluate the project for consistency with the sand supply policies of the Coastal Act.

D. Visual Resources. The Coastal Act protects visual resources of the coastal zone. Section 30251 of the Coastal Act provides that:

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by

the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

The proposed construction of the vertical walls south of Highway 101 could adversely affect visual resources of the coastal zone. In its environmental documents, the Corps proposes to design the project in a manner that minimizes visual impacts. The Corps describes addresses visual quality as follows:

Aesthetic values would be increased by planting native riparian types of vegetation on the upper slope of the creek. Establishment of vegetation on the creek banks would enhance aesthetic values of the project area compared to other alternatives and existing conditions. Vertical walls would not be visible to people walking along the creek banks, as the upper banks would be covered with vegetation. Aesthetic treatment would be applied to visible lower banks to minimize impacts of the vertical walls. During the public scoping meeting, people voiced their concerns regarding aesthetic resources located within the project area. The new constructed channel would be pleasing and natural looking. Their concerns are addressed by implementation of this alternative. The visual quality of the project reach would have positive impacts on tourists visiting the City of the Santa Barbara. Within a few years, planted vegetation would be mature, and trees would increase the visual value of the project area. Lower vertical walls may not be visible to people walking on a side of the creek banks due to the vegetation growth on upper banks. It should be noted, however that full height vertical walls would be used for most of the distance between State and Mason Streets. These walls would also receive aesthetic treatment, including the use of colored concrete and forms that would mimic the appearance of sandstone or natural vertical creek banks.

As stated above, most of the Creek within the coastal zone would be developed with vertical walls and would not appear as a natural stream. Although the area is already developed with some man made structures, it still has some natural appearance. The proposed project would change that appearance to a channelized hardened stream.

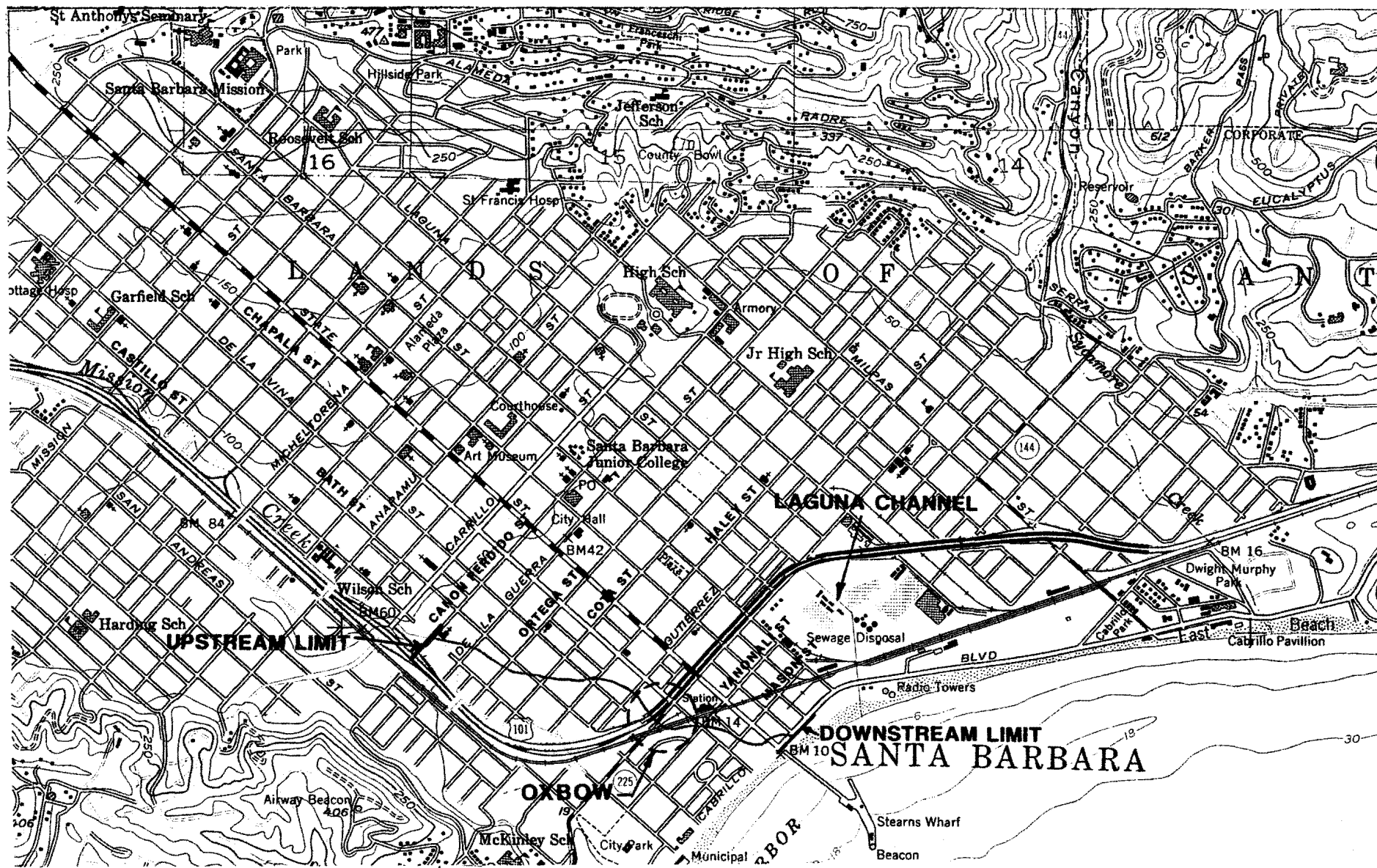
The Commission has two concerns with respect to the Corps' analysis of visual impacts. First, as described in the Habitat Section above, it is not clear that the construction of vertical walls is necessary. Until the Corps provides additional information that justifies the need for the walls, the Commission considers the use of vegetated slopes to be a less visually damaging alternative. If the Corps can demonstrate that the vertical walls are necessary, the second concern of the Commission is that aesthetic design improvements proposed by the Corps are not described in detail and the Commission cannot determine if the improvements would sufficiently mitigate for visual impacts. Without this

information, the Commission cannot determine if the project is consistent with the visual policies of the Coastal Act. Therefore, the Commission finds that the consistency determination for the proposed project does not provide enough information to determine if the project is consistent with the view protection policies of the Coastal Act.

E. Archaeological Resources. The Coastal Act provides for protection of historic and archaeological resources. Section 30244 of the Coastal Act provides that:

Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

The proposed project is located in an area that contains both historic structures and archaeological sites. The environmental documents for the Mission Creek project state that there are historic and archaeological resources potentially affected by the proposed project. The Corps commits, in its EIS, to coordinating with the State Historic Preservation Officer (SHPO). However, the Coastal Act requires implementation, or at least identification, of the mitigation measures to protect resources identified by the SHPO. Without the benefit of the SHPO's analysis, the Commission cannot determine if the project is consistent with Section 30244 of the Coastal Act. Therefore, the Commission finds that it cannot determine if the proposed project is consistent with the archaeological policies of the Coastal Act.



Source: USGS 1:24,000, Santa Barbara, California

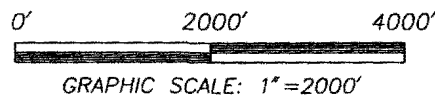


EXHIBIT NO. 1

APPLICATION NO. CD-117-99

SANTA BARBARA COUNTY STREAMS
LOWER MISSION CREEK

LOCATION MAP



California Coastal Commission

REVISIONS	DATE	APPROVAL

LOWER MISSION CREEK FEASIBILITY STUDY
SANTA BARBARA COUNTY, CALIFORNIA
3400 CFS ALTERNATIVE
REPAIR SIDE SLOPE WALL ALTERNATIVE
ALTERNATIVE 12

DESIGNED BY: MT	CHECKED BY: MT	DATE: 10/17/99	SHEET: 34P1
U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS THOMAS H. SAOE, P.E. CHIEF, DESIGN BRANCH			
OUTPOST FILE NO. 3400			

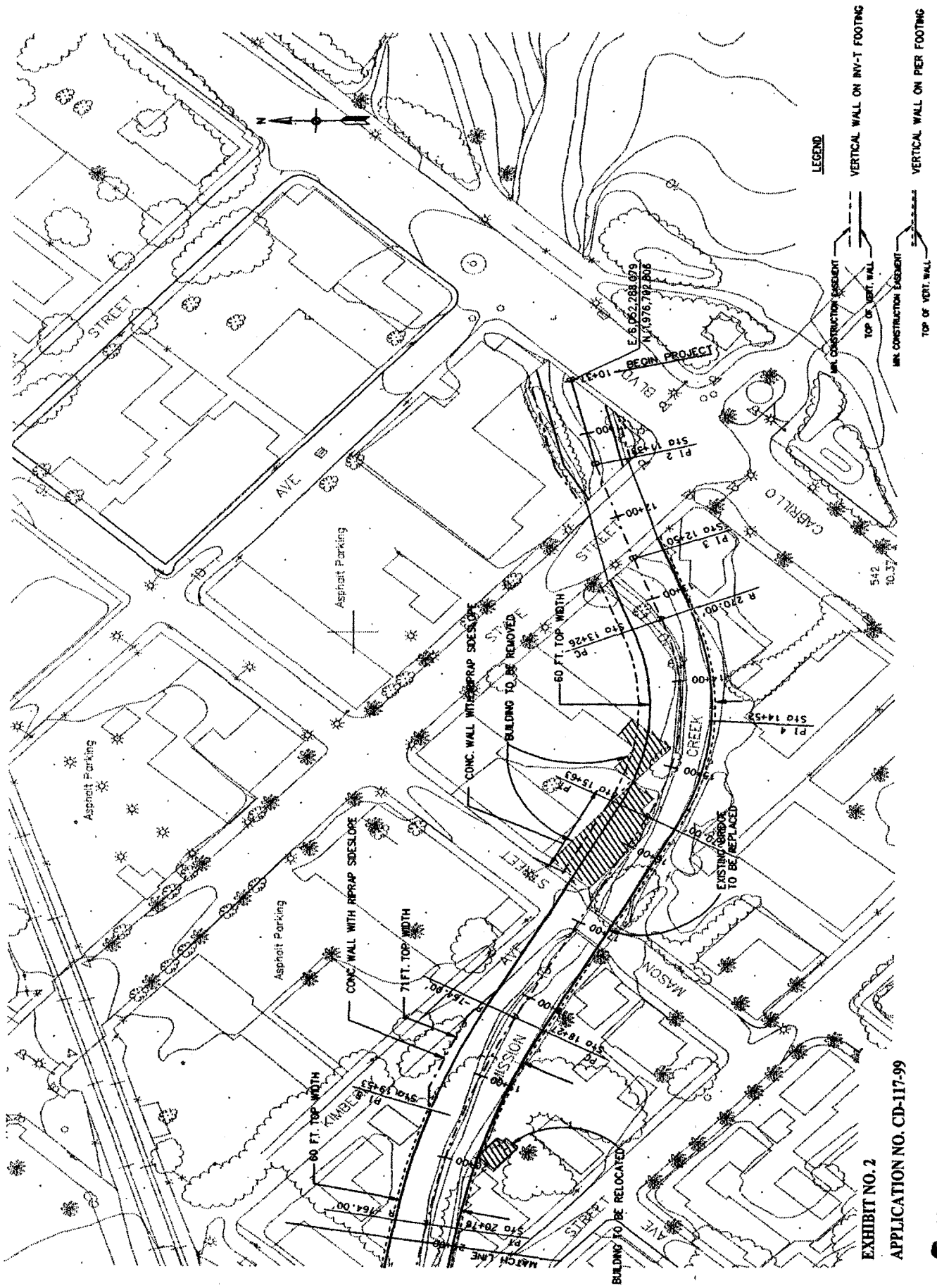
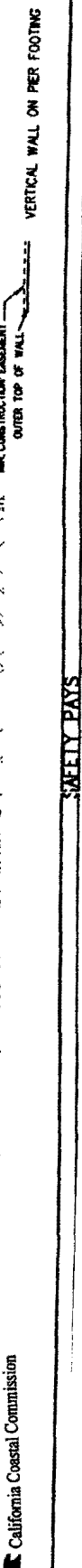


EXHIBIT NO. 2

APPLICATION NO. CD-117-99



California Coastal Commission

REVISIONS	DATE	APPROVAL

LOWER MISSION CREEK FEASIBILITY STUDY
 SANTA BARBARA COUNTY, CALIFORNIA
 3400 CFS ALTERNATIVE
 RIPRAP SLOPE WALL ALTERNATIVE
 ALTERNATIVE 12

U.S. ARMY ENGINEER DISTRICT
 LOS ANGELES
 COMPS OF ENGINEERS
 THOMAS H. SAGE, P.E.
 CIVIL DESIGN BRANCH
 SHEET NO. 3494
 CDS FILE NO. 3494

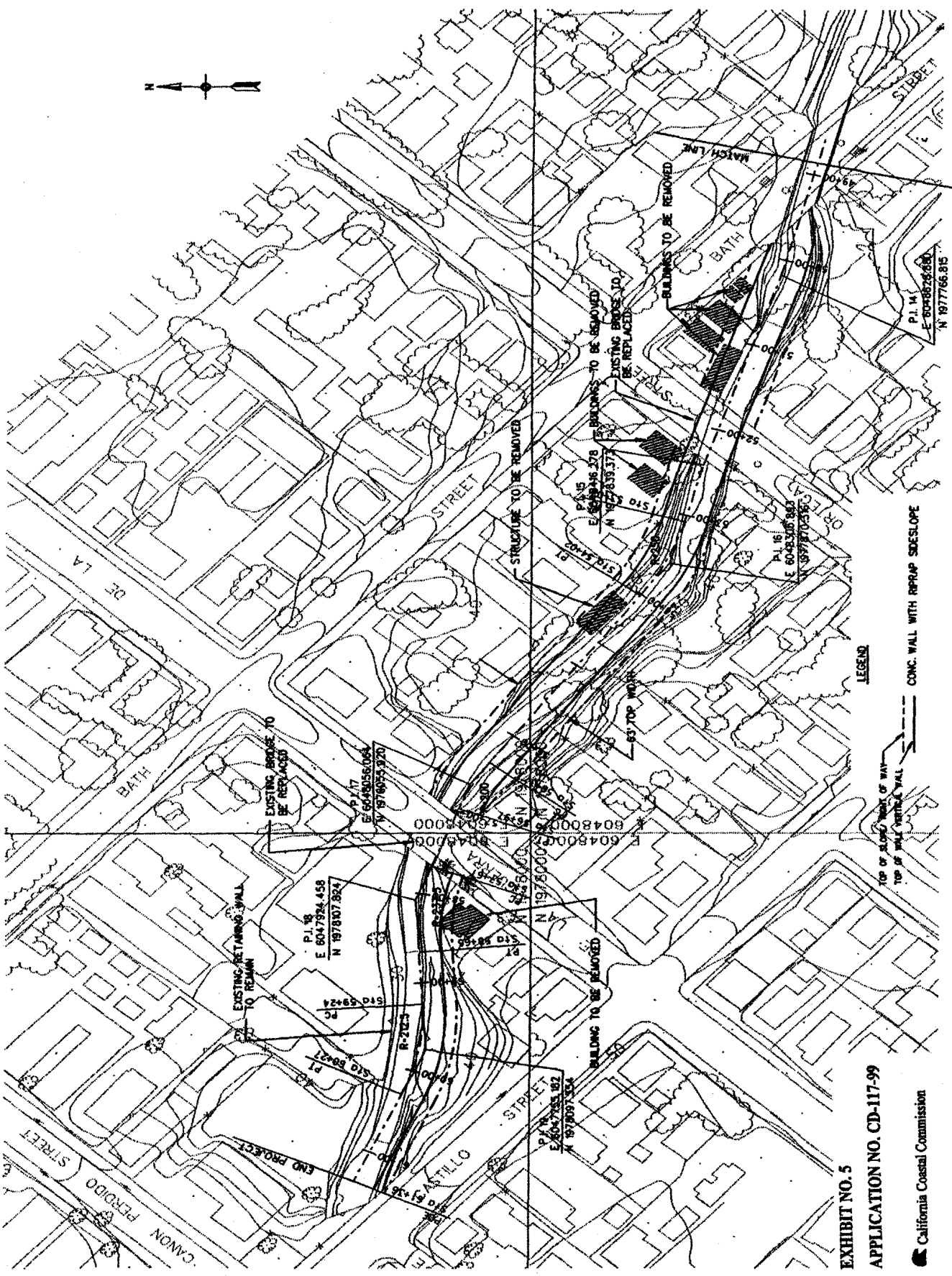
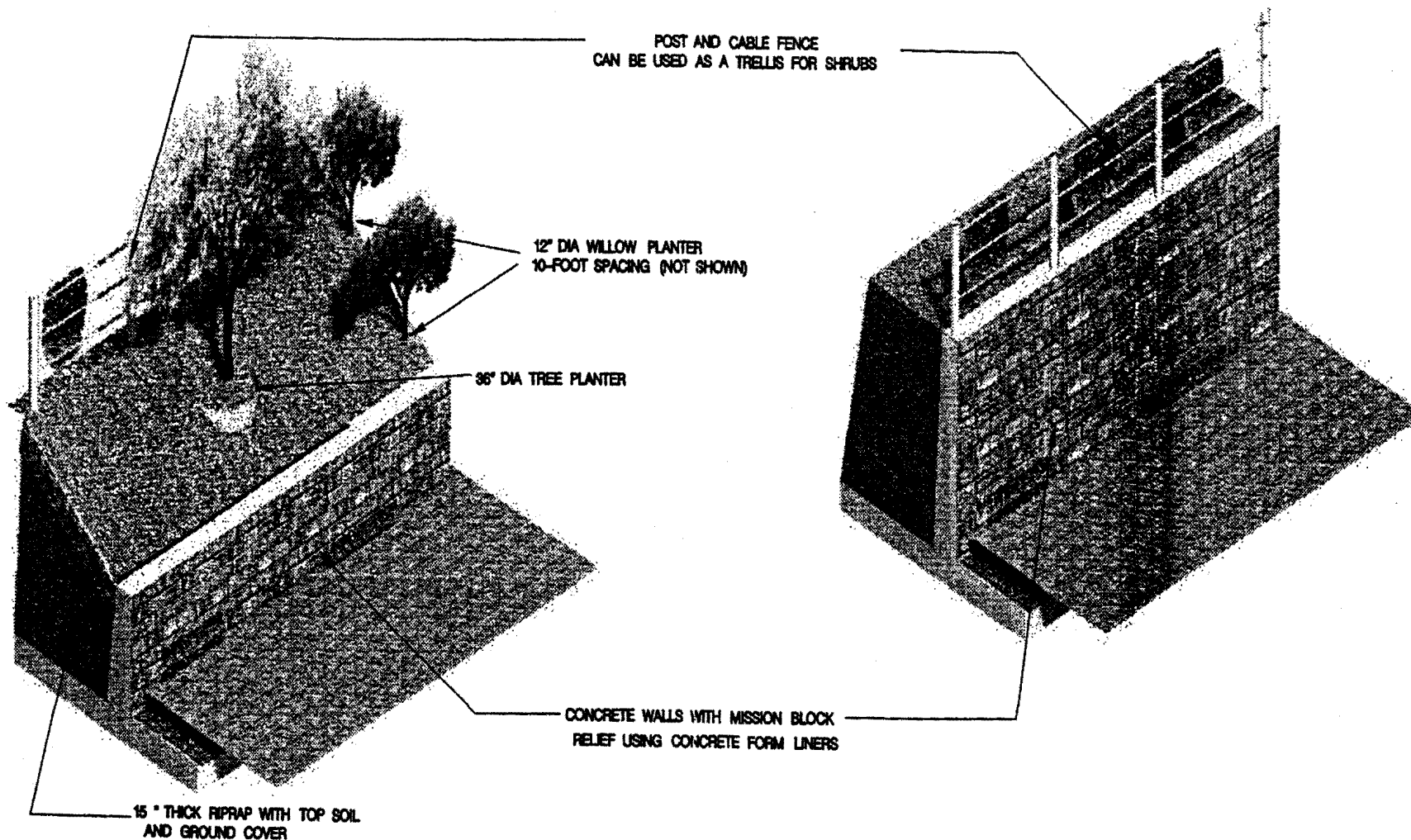


EXHIBIT NO. 5
 APPLICATION NO. CD-117-99

California Coastal Commission

NOTE: RED PLAN EXCLUDES RESTORATION COMPONENTS

SAFETY PAYS



WALL WITH RIPRAP SIDESLOPE

NOT TO SCALE

EXHIBIT NO. 6

APPLICATION NO. CD-117-99

California Coastal Commission

VERTICAL WALL

NOT TO SCALE

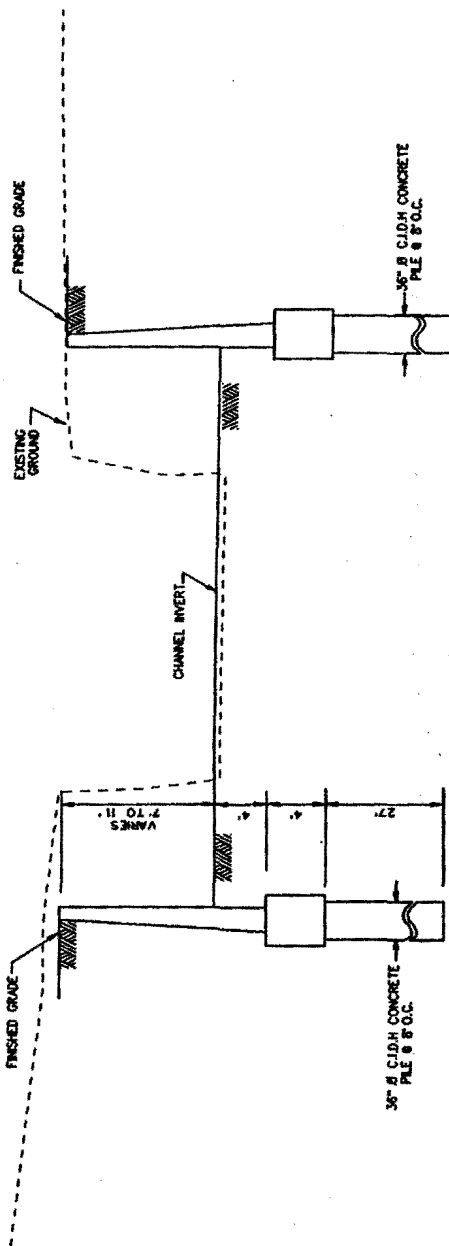
LOWER MISSION CREEK FEASIBILITY STUDY
SANTA BARBARA COUNTY, CALIFORNIA
3400 CFS ALTERNATIVE
CHANNEL WALL TYPICAL ESTHETIC FEATURES

DESIGNED BY: U.S. ARMY ENGINEER DISTRICT
CHECKED BY: CORPS OF ENGINEERS
DRAWN BY: THOMAS H. SADE, P.E.
DISTRICT FILE NO. 3400

LOWER MISSION CREEK FEASIBILITY STUDY
SANTA BARBARA COUNTY, CALIFORNIA
TYPICAL CROSS SECTIONS

REVISIONS		
NO.	DESCRIPTION	DATE
1		
2		
3		
4		
5		

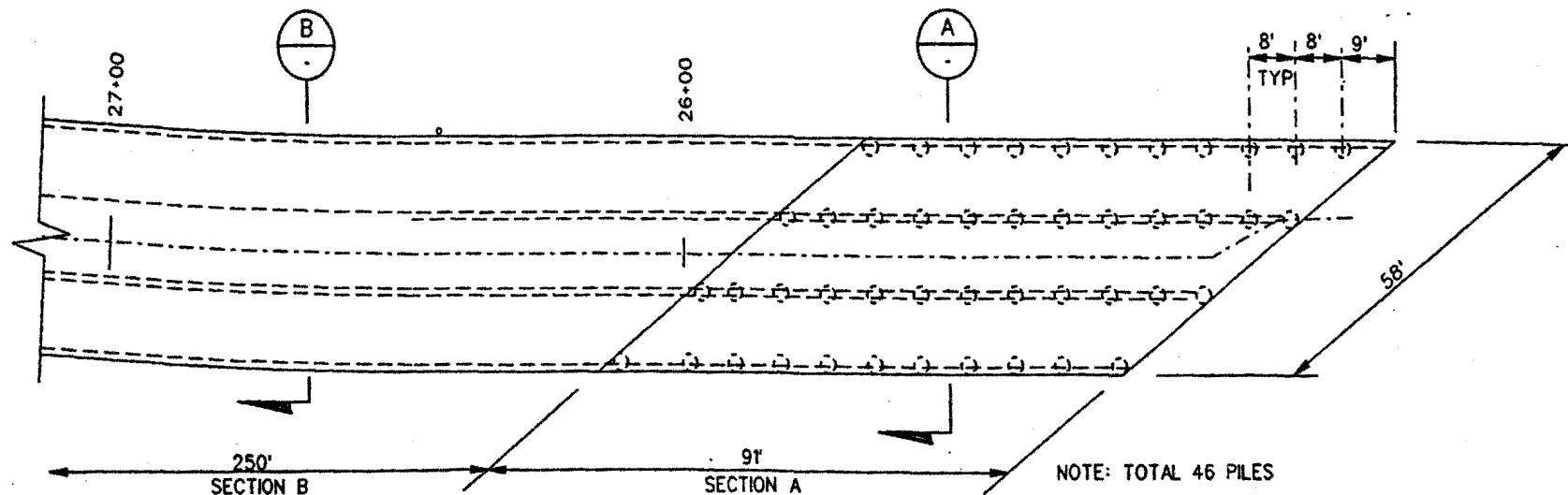
DESIGNED BY: JAMES M. CRUICKSHANK CHECKED BY: JAMES M. CRUICKSHANK DATE: 10/1/99	
DRAWN BY: JAMES M. CRUICKSHANK DATE: 10/1/99	
PROJECT FILE NO. 9907	
SHEET NO. 10	



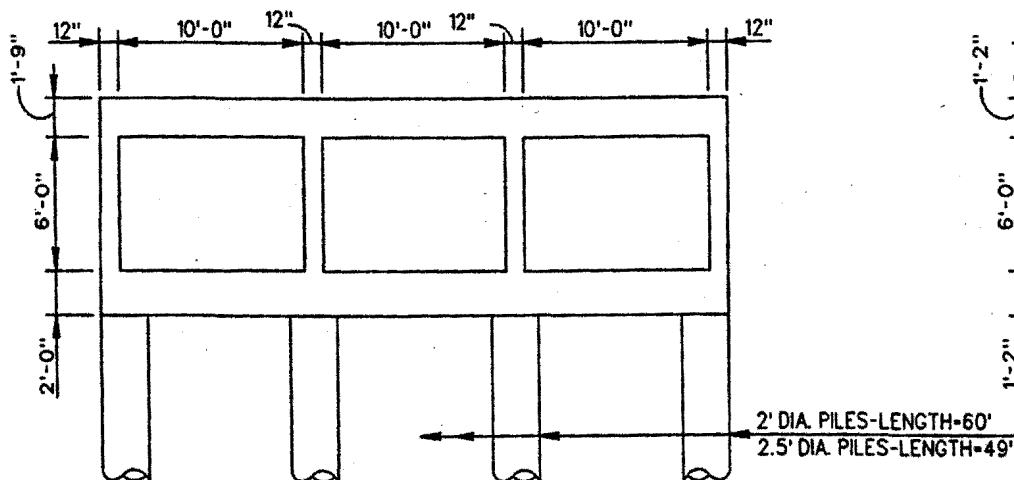
TYPICAL CROSS SECTION
VERTICAL WALL ON PIER FOOTING
*NOT TO SCALE

EXHIBIT NO. 8
APPLICATION NO. CD-117-99

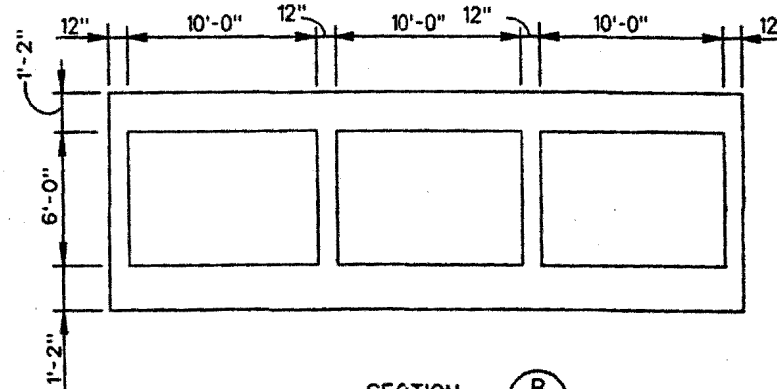
California Coastal Commission



BOX CULVERT PLAN
SCALE: N.T.S.



SECTION A
SCALE: N.T.S.



SECTION B
SCALE: N.T.S.

EXHIBIT NO. 9
APPLICATION NO. CD-117-99

California Coastal Commission

U. S. ARMY CORPS OF ENGINEERS, LOS ANGELES DISTRICT

LOWER MISSION CREEK FEASIBILITY STUDY				FIGURE 7 OF 7
6' HIGH x 10' WIDE THREE-CELL BOX CULVERT				
DESIGNED BY M. LY	CHECKED BY X	DATE SEPT 2, 1999	FILE NO. LMC	

CITY OF SANTA BARBARA



COMMUNITY DEVELOPMENT DEPT.

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 Housing & Redevelopment Division .. 564-5461
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February 22, 2000

Mr. James Raives
 California Coastal Commission
 45 Fremont St., Suite 2000
 San Francisco, CA 94105-2219

SUBJECT: Lower Mission Creek Flood Control Project, Coastal Consistency Determination (CD-117-99)

Dear Mr. Raives:

We have reviewed the memorandum you wrote to John Moeur at the U.S. Army Corps of Engineers (Corps) and the Draft Staff Report and Recommendation on the above-stated project. We understand that the Corps will be responding to most of the issues you have raised. However, the City of Santa Barbara has additional comments as well. These comments primarily focus on the vertical walls between Yanonali and State Streets and on water quality issues.

Replacement of Vertical Walls Between Yanonali and State Streets

Coastal Commission staff has raised the question of why the U.S. Army Corps of Engineers is not proposing to do either a short vertical wall with vegetated riprap slope above or a full vegetated riprap bank below the Freeway. There are several reasons why this is not being pursued. Alternative 12 (the Preferred Alternative) is projected to cost approximately \$18 million (this includes revisions to reflect the gross appraisal of acquisition costs prepared for the City and changes to the project design to reduce land acquisition costs). Alternative 9, which includes the low vertical toe wall and vegetated riprap above and is the alternative that most closely complies with the California Coastal Commission's request, is even more expensive. For additional information regarding how the Corps calculated real estate costs, as well as additional information on the hydrologic models, we have included a copy of the Technical Appendices for the Main Report (Exhibit 1). There are also additional costs that were not considered in the Corps estimation of costs. These are outlined in more detail below.

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Additional Property Acquisition Costs

In order to include short vertical walls and a vegetated riprap slope and keep the proposed 3400 cfs capacity, it would be necessary to widen the channel at the top of the bank by 20 feet. If the channel is designed with a full vegetated riprap slope, it would be necessary to widen the channel at the top of the bank by 32 feet. This would result in the need to demolish or relocate several buildings not considered for demolition as part of Alternative 12. These buildings are outlined in Exhibit 2 (attached). Land acquisition and relocation costs would increase from approximately \$4.1 million to \$8.1 million, increasing the project cost to at least \$22 million. It should be noted that the Corps estimates for acquisition for this area are substantially less than the \$4 million estimated by the independent appraisal performed as part of the required gross appraisal.

Required Replacement of Low and Moderate Income Housing in the Coastal Zone

There are nine (9) units contained in the buildings that would be affected by construct ag Alternative 9. At least some of the units affected may be housing inhabited by low/moderate income residents. If this is the case, in addition to the standard relocation costs included above, it may be necessary to meet the provisions of California Government Code Article 10.7, Low- and Moderate-Income Housing Within the Coastal Zone, Section 65590, which states, in subsection (b):

"(b) The conversion or demolition of existing residential dwelling units occupied by persons and families of low or moderate income, as defined in Section 50093 of the Health and Safety Code, shall not be authorized unless provision has been made for the replacement of those dwelling units with units for persons and families of low or moderate income. Replacement dwelling units shall be located within the same city or county as the dwelling units to be demolished. The replacement units shall be located on the site of the converted or demolished structure or elsewhere within the coastal zone if feasible, or, if location on the site or elsewhere within the coastal zone is not feasible, they shall be located within three miles of the coastal zone. The replacement dwelling units shall be provided and available for use within three years from the date upon which work commenced on the conversion or demolition of the residential dwelling unit. In the event that an existing residential dwelling unit is occupied by more than one person or family, the provisions of this subdivision shall apply if at least one such person or family, excluding any dependents thereof, is of low or moderate income. ...

"The requirements of this subdivision for replacement dwelling units shall not apply to the following types of conversion or demolition unless the local government determines that replacement of all or any portion of the converted or demolished dwelling units is feasible, in which event replacement dwellings shall be required:

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"(1) The conversion or demolition of a residential structure which contains less than three dwelling units, or, in the event that a proposed conversion or demolition involves more than one residential structure, the conversion or demolition of 10 or fewer dwelling units.

"(2) The conversion or demolition of a residential structure for purposes of a nonresidential use which is either "coastal dependent," as defined in Section 30101 of the Public Resources Code, or "coastal related," as defined in Section 30101.3 of the Public Resources Code. ...

"(3) The conversion or demolition of a residential structure located within the jurisdiction of a local government which has within the area encompassing the coastal zone, and three miles inland therefrom, less than 50 acres, in aggregate, of land which is vacant, privately owned and available for residential use.

"(4) The conversion or demolition of a residential structure located within the jurisdiction of a local government which has established a procedure under which an applicant for conversion or demolition will pay an in-lieu fee into a program, the various provisions of which, in aggregate, will result in the replacement of the number of dwelling units which would otherwise have been required under this subdivision."

Replacement of lost low/moderate income housing in the Coastal Zone or anywhere in the City of Santa Barbara is extremely expensive, given the value of land in the Santa Barbara area (much less the Coastal Zone itself). The median cost of a single family home on the South Coast of Santa Barbara County was recently reported at \$475,000, well above affordability for most people. Condominiums in the area are priced in the mid \$250,000 range and above. Two-bedroom units currently rent at \$1200 per month and above. It would require a subsidy of approximately \$100,000 per unit to construct additional housing as required by Government Code Section 65590.

Use of Redevelopment Agency Funds

Commenters have suggested that City Redevelopment Agency funds could be used to provide for an alternative that includes the low vertical walls with vegetated side slope or a full vegetated riprap bank. The Community Redevelopment Law (Health and Safety Code §33000 et seq.) limits project purposes for which redevelopment funds may be used. Case law has indicated that unless such purposes are stated specifically in the Community Redevelopment Law, funds should generally not be used for such purposes. Capital recreation projects intended to foster private redevelopment of physically and economically blighted areas might be considered. However, payment for flood control facilities is not included in the list of projects. Redevelopment funding can be used to improve project aesthetics or to provide for needed recreation. However, as

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indicated above, the additional funds required to purchase property to allow vegetated banks would be approximately \$4 million. The City Redevelopment Agency has agreed to set aside \$2.5 million to be used for project enhancements or betterments, provided that such enhancements are consistent with and foster the statutory objectives of Redevelopment law. This is not enough to buy the necessary property. In the Waterfront Area, south of U.S. 101, there are already significant recreation and park facilities, so the primary recreation focus has been on providing small passive park areas and/or "tot lots" north of the freeway, in the West Downtown area, where there are no park spaces and the residential density is much higher. Redevelopment funds would also be used to improve the appearance of the bridges to be replaced to make sure that they continue to fit the small-scale, semi-residential character of their neighborhoods. Redevelopment funds would be used to expand the number of trees and other plants used in the project reach and in the habitat expansion areas, in order to assure as much of a canopy and understory as possible. Finally, redevelopment funds would be used to provide interpretive signs that would enhance the creek experience and promote public education on creek systems.

Cost of Mitigation for Lost Historic Resources

The City is very concerned about the potential loss of significant historic resources as a result of the project. All of the buildings west of Mission Creek on Chapala and Mason Streets in the Waterfront Area are eligible for listing on the National Register of Historic Places, the California Register of Historic Resources and for designation as either a City Landmark or City Structure of Merit. The 100 Block of Chapala Street also appears to be eligible for designation as a National Register Landmark District. There is no acceptable mitigation for the loss of these structures, which would be significant and unavoidable. Even partial mitigation, which would include full Historic American Buildings Survey documentation, at a minimum, would be costly. It is estimated that documentation of the four historic buildings on the west side of the creek would cost approximately \$6,000. The best partial mitigation would be to try to relocate the structures to other parcels, which would be even more expensive than standard residential or business relocation costs, because of the need to both purchase a parcel on which to place the building and to actually move the building itself. At least one of the buildings may not be physically able to be relocated due to the type of construction involved. Costs could be expected to exceed \$1 million.

Aesthetics

The appearance of the vertical walls is another issue in this section of the creek. A Mission Creek Design Subcommittee was formed in 1999 and has met regularly for the last several months. The Subcommittee includes representatives from the City's Historic Landmarks Commission (which has design jurisdiction over most of the creek south of U.S. 101), the Architectural Board of Review (which has design review jurisdiction where the Historic Landmarks Commission does not), the Planning Commission and the Parks and Recreation Commission. The concept of vegetated side slopes with short vertical toe walls was developed

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with the assistance of the Design Subcommittee, based on the Alternative supported by the original Mission Creek Consensus Group. This alternative includes vertical walls where necessary to minimize impacts on historic structures and avoid prohibitively expensive acquisition of property, housing and businesses. The Design Subcommittee also made recommendations regarding various aesthetic improvements to the Corps project. The City forwarded these recommendations to the Corps and the Corps has agreed to incorporate these design changes into the project (see Exhibit 3 - 5 sheets showing the project reach by reach and Exhibit 4 - several pages showing design details). These drawings show that the concrete walls would be formed, textured and colored to resemble the sandstone walls so prevalent in Santa Barbara.

The preferred project (Alternative 12 plus the City and County preferred design changes) replaces significant sections of existing full height hard bank protection with vegetated side slopes with short toe walls. This approach is most feasible above the freeway where property costs are substantially less than in the areas below the freeway and development adjacent to the creek is somewhat less dense. However, as discussed below, there are two small habitat expansion zones in this area.

Habitat Expansion Zone Areas

While it may not be feasible to provide non-vertical walls for the entire project area south of Yanonali Street, it should be noted that there are two habitat expansion zones included in this area. Both are on the easterly side of the creek. One is between the creek and Kimberly Avenue, north of Mason Street. The second is immediately south of Mason Street. There are several ways to design these Habitat Expansion Zones. They can be designed so that there is vegetated riprap for the entire area. This would create locations for Tidewater gobies to hide in vegetation during high flows. It may also be feasible to redesign the area between State Street and Cabrillo Boulevard, which is proposed to have a low toe wall and vegetated riprap, to allow for more vegetation closer to the creek bottom.

Summary

For all of these reasons, including increased project costs, effects on housing and loss of cultural resources, we do not believe that it is feasible to redesign the project below U.S. 101 to include either low vertical walls with vegetated riprap side slopes or full vegetated riprap banks in the final design. We would further point out that the wider creek cross-section might also be more difficult to shade than the present vertical wall design. However, as indicated above, we believe that it may be possible to design both the habitat expansion zones in this area and the section between State Street and Cabrillo Boulevard to provide better habitat for the Tidewater goby.

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Water Quality

Background

Mission Creek water quality was studied as part of the South Coast Watershed Characterization Study and reported on in the Study's final report dated August 1999 (Exhibit 5). This study was undertaken to investigate four Santa Barbara County South Coast streams in reaction to the coming mandate to develop a National Pollution Discharge Elimination System (NPDES) work plan under Phase II of the NPDES regulations. The study concluded that the major contamination problem for South Coast streams is bacteriological contamination. Specifically regarding Mission Creek, the study concluded:

- Bacteria are the principal pollutants of concern
- Much of the uppermost watershed has acceptable levels of bacteria
- Storm drains and creek encampments are probable sources of high levels of bacteria in the middle portions of the watershed
- Storm drains and lagoon fauna, such as birds, are probable sources of high levels of bacteria in the lower watershed
- No direct link between septic system and beach closures has yet been established
- Stormwater carries several times the low flow levels of bacteria

Concurrent and subsequent investigations by the City have identified the existence of encampments in the lower watershed as one primary cause of high bacteria levels. In addition, Old Mission Creek, the abandoned former channel of Mission Creek prior to channel relocation of the middle reach of Mission Creek, is also a significant contributor to elevated bacteria levels downstream of its connection to the current main channel of Mission Creek.

Current Activities

The City and County of Santa Barbara are cooperatively continuing efforts to clean up local creeks. The reaches of Mission Creek with high bacteria levels are within the boundaries of the City of Santa Barbara, so efforts in this creek are largely those of the City. The cooperative public education and information program, however, is a joint effort that is key to gaining public acceptance of the many activities and improvements that will be needed to improve creek water quality in Mission Creek and other South Coast creeks.

The City's efforts in Mission Creek include a variety of activities directed toward improving creek water quality. This group of activities is called the Creek Water Quality Improvement Project. The Creeks Strategic Plan Program is also investigating Creek restoration. Both of these approaches should result in improvements to the water quality in the City's creeks.

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The Creek Water Quality Improvement Project includes the elements of a work plan required by Phase II of the NPDES stormwater management program. Activities include:

- Monitoring of creek water quality, including increased investigation of "hot spots"
- Increased enforcement of City ordinances related to prohibition of discharges of contaminated water
- Public information and education
- Municipal government good housekeeping
- Increased cleanups of catch basins and creeks
- Removal of illegal encampments within creek corridors
- Enhanced street sweeping

The City is also investigating the possibility of a pilot project for installation of one or more stormwater interceptors for storm drains that flow into lower Mission Creek.

The Creek Strategic Plan Program is doing a creeks inventory to determine restoration possibilities in City creeks, investigating revising City policies that are related to creek water quality and overall enhancement, and implementing a small number of opportunity restoration projects within City creeks. The creeks inventory is expected to present a larger list of restoration opportunities within City creeks. The opportunity projects of most interest for Mission Creek are enhancements to the Lower Mission Creek Flood Control Project and restoration of habitat and environmental education in a park along Old Mission Creek.

Future Activity in Mission Creek

The investigations underway indicate that lower Mission Creek has poor bacteriological water quality because it receives surface runoff from the City's commercial areas, has homeless encampments, and is the recipient of trash from a number of sources including neighboring residential areas and bridges. Old Mission Creek, which has elevated bacteria counts from a number of sources, provides the base flow for lower Mission Creek during periods of low flow. It is considered a "hot spot" and is a target for increased investigation to determine the exact sources of contamination. Because Mission Creek is the most visible City creek and is the subject of the flood control project, City staff is focusing efforts on this creek. The focused effort includes:

- Increased monitoring within the creek to determine sources of contamination dynamics (this includes weekly creek walks to document location and extent of contamination sources)
- Stormwater interceptor pilot project
- Installation of catch basin filters in the State Street commercial area (this area drains to lower Mission Creek)
- Cleanup of Old Mission Creek hot spot(s)

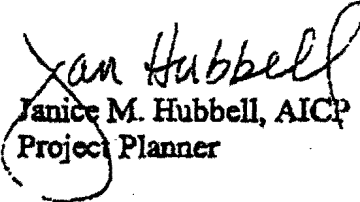
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The Lower Mission Creek Flood Control Project, with the approved consensus-based enhancements, is considered to be an important creek restoration element for the improvement of water quality in the creek. We expect the creek restoration and the improved flood control maintenance elements of the project to be important additions to the water quality improvement activities described above. The improved creek bottom vegetation that is part of the project enhancements will act as a biofilter for the residual contamination. Improved flood control maintenance can act as a backup or enhancement to planned cleanup efforts. All these efforts will be needed to bring the water quality of the creek to the level expected by the residents of the City of Santa Barbara.

In conclusion, we believe that concerns regarding the use of vertical walls below Yanonali Street and the improvement of water quality can be resolved. If you have any questions, please contact Pat Kelly at (805) 564-5366 or Jan Hubbell at (805) 564-5470.

Sincerely,


Pat Kelly
City Engineer/Assistant Public Works Director


Janice M. Hubbell, AICP
Project Planner

Exhibits

1. Lower Mission Creek Flood Control Feasibility Study, Technical Appendices, December 1999
2. Estimate of Additional Right-of-Way Costs for Sloped Vegetated Side Slopes with Short Vertical Walls, State Street to Yanonali Street
3. City and County recommended Design Changes
4. City and County recommended Design Details
5. South Coast Watershed Characterization Study, August 1999, prepared by URS Greiner Woodward-Clyde for the Counties of Santa Barbara and Ventura and the Cities Santa Barbara and Carpinteria

cc: Dan Young, U.S. Army Corps of Engineers
Tom Fayram, Santa Barbara County Flood Control District


APPENDIX - H (for Alternative 12)
MITIGATION MONITORING PLAN
LOWER MISSION CREEK FLOOD CONTROL PROJECT

Resource	Description of Impact	Environmental Commitment/Mitigation	Start Date or Event	Responsible Party	Duration	Frequency	Level of Success Expected
Water Quality	Minor short-term increase in turbidity levels during construction and future maintenance.	<ul style="list-style-type: none"> - Stream water diversion shall use pipes/pilot channel and other standard methods to create low flow diversion channel during construction and future sediment removal. - No construction or sediment removal shall occur in flowing water or during heavy rains. Construction and future maintenance shall not occur during months of December 15 through April 1, when flow is high in the creek. - Conditions identified in the Water Quality Certifications shall be followed during construction as well as for future maintenance. - No discharge/leaks or spills of fuels, solvents or lubricants in the creek bed. A Storm Water Pollution Prevention Plan (SWPP) shall be required prior to project construction and implemented. 	<p>Construction: from initiation of construction to completion of construction.</p> <p>Future Maintenance: Between July and November</p>	<p>Construction: USACOE or Construction Contractor.</p> <p>Future Maintenance: Santa Barbara County or Contractor</p>	<p>Construction</p> <p>Approx. 2-years or until construction is completed</p> <p>Future Maint. About 15 to 30 days; every year</p>	<p>In the beginning every week; once construction is established once a month until construction is completed</p> <p>Future maintenance : Once a week.</p>	As conditions identified by the Water Quality Control Board.

Note: Only, resources are included in this table which require mitigation measures or environmental commitments and monitoring.

EXHIBIT NO. 11

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 California Coastal Commission

APPENDIX - H (for Alternative 12-Continued)
MITIGATION MONITORING PLAN
LOWER MISSION CREEK FLOOD CONTROL PROJECT

Resource	Description of Impact	Environmental Commitment/Mitigation	Start Date or Event	Responsible Party	Duration	Frequency	Level of Success Expected
Air Quality	During construction and future sediment removal, short term increase in fugitive dust; no long term impacts on air quality.	<p>Construction: Water the excavation site, storage piles and unpaved roads twice each day of construction; once in the morning and at the end of the construction day; cover material transported in haul trucks; these conditions are applicable for construction and future maintenance.</p> <p>Limit vehicle speeds to 15 mph maximum within the construction site and maintenance areas (construction and future maintenance).</p> <p>Cease grading and earth movement when wind speeds exceed 20 mph, or as confirmed by SBCAPCD during construction and future maintenance activities.</p> <p>Future Maintenance: Same as Construction</p>	<p>Construction: from initiation of construction to completion of construction.</p> <p>Future Maintenance: Between July and November</p>	<p>Construction: USACOE or Construction Contractor.</p> <p>Future Maintenance: Santa Barbara County or Contractor</p>	<p>Construction: Approx. 2-years or until construction is completed</p> <p>Future Maint. About 15 to 30 days; every year</p>	<p>In the beginning every week; once construction is established once a month until construction is completed</p> <p>Future maintenance: Once a week.</p>	As directed by the Santa Barbara County Air Pollution Control District.

APPENDIX - H (for Alternative 12-Continued)
MITIGATION MONITORING PLAN
LOWER MISSION CREEK FLOOD CONTROL PROJECT

Resource	Description of Impact	Environmental Commitment/Mitigation	Start Date or Event	Responsible Party	Duration	Frequency	Level of Success Expected
Noise	<p>Short term increase in noise levels due to use of the construction equipment and truck traffic. Noise levels will exceed 65 dBA at sensitive receptors.</p> <p>Residents located in the vicinity of the project area will experience increased noise levels during construction as well as during future maintenance.</p>	<p>Construction and future maintenance: Follow noise ordinance of the City of Santa Barbara. The project area is located within densely populated area; therefore, no loading or unloading of equipment or material shall be performed between 7:00 p.m. and 7:00 a.m., nor shall there be any heavy equipment operation prior to 8:00 a.m. and after 7:00 p.m. Monday through Saturday. No Sunday or holiday operation.</p> <p>Truck traffic shall be on designated truck routes established in coordination with the City of Santa Barbara.</p>	<p>Construction: from initiation of construction to completion of construction.</p> <p>Future Maintenance: Between July and November</p>	<p>Construction: USACOE or Construction Contractor.</p> <p>Future Maintenance: Santa Barbara County or Contractor</p>	<p>Approx. 2-years or until construction is completed</p> <p>Future Maint. About 15 to 30 days; every year</p>	<p>In the beginning every week; for a month; if complains received than continue monitoring every week otherwise every two months or after a complain received from the citizens.</p> <p>Future maintenance: Once at every event.</p>	Follow City's local noise ordinance guideline.

APPENDIX - H (for Alternative 12-Continued)
MITIGATION MONITORING PLAN
LOWER MISSION CREEK FLOOD CONTROL PROJECT

Resource	Description of Impact	Environmental Commitment/Mitigation	Start Date or Event	Responsible Party	Duration	Frequency	Level of Success Expected
Biological Resources							
Steelhead	All potential impacts to steelhead can be avoided by appropriate mitigation measures.	<p>No construction within flowing water between December 15 and March 31 to avoid impacts to steelhead.</p> <p>Qualified biologist would survey the area prior to the construction for presence of steelhead.</p> <p>Use of silt fences</p> <p>Strategic placement of large rocks as energy dissipators; soft bottom throughout flood control project</p>	<p>Construction: from initiation of construction to completion of construction.</p> <p>Future Maintenance: Between July and November</p>	<p>Construction: USACOE or Construction Contractor.</p> <p>Future Maintenance: Santa Barbara County or Contractor</p>	<p>Approx. 2-years or until construction is completed</p> <p>Future Maint. About 15 to 30 days; every year</p>	<p>In the beginning every week; for a month; depending upon water level in the creek, during construction of low-flow channel or installation of pipe, during heavy rainfall.</p> <p>Future maintenance: Once at every event.</p>	<p>Construction determined by the National Marine Fisheries Service, follow conditions identified in the biological opinion.</p> <p>Future Maintenance: Same as construction</p>

APPENDIX - H (for Alternative 12-Continued)
MITIGATION MONITORING PLAN
LOWER MISSION CREEK FLOOD CONTROL PROJECT

Resource	Description of Impact	Environmental Commitment/Mitigation	Start Date or Event	Responsible Party	Duration	Frequency	Level of Success Expected
Biological Resources - Continued							
Tidewater Gobies	Incidental and temporary	<p>Tidewater gobies would be excluded from half the estuary at a time, and fish moved to the wet half while construction zone is dewatered slowly.</p> <p>Construction between April and end of June in estuary</p> <p>Soft bottom throughout flood control project; expansion of estuary by 220%.</p>	<p>Construction: from initiation of construction to completion of construction.</p> <p>Future Maintenance: Between July and November</p>	<p>Construction: USACOE or Construction Contractor.</p> <p>Future Maintenance: Santa Barbara County or Contractor</p>	<p>Approx. 2-years or until construction is completed</p> <p>Future Maint. About 15 to 30 days; every year</p>	<p>Construction: Area supporting tidewater gobies/i.e. in vicinity of lagoon, during construction of low-flow channel or dewatering of the construction full time monitoring, otherwise twice a week</p> <p>Future maintenance: If maintenance occurs in area supporting tidewater gobies, same conditions as identified for construction.</p>	<p>Construction: 90% As identified in the biological opinion and coordination act report.</p> <p>Future Maintenance: Same as construction</p>

APPENDIX - H (for Alternative 12-Continued)
MITIGATION MONITORING PLAN
LOWER MISSION CREEK FLOOD CONTROL PROJECT

Resource	Description of Impact	Environmental Commitment/Mitigation	Start Date of Event	Responsible Party	Duration	Frequency	Level of Success Expected
Biological Resources - Continued							
Aquatic habitat maintenance	net impact equivalent to 0.5 habitat	Strategic placement of large rocks as energy dissipaters; soft bottom throughout flood control project; expansion of estuary by 220%. Construction of wetlands, 0.25 acres, at natural oxbow.	Construction: from initiation of construction to completion of construction. Future Maintenance: Between July and November	Construction: USACOE or Construction Contractor. Future Maintenance: Santa Barbara County or Contractor	Approx. 2-years or until construction is completed Future Maint. About 15 to 30 days; every year	After completion of the project, after first installation annually	100% or as identified in the biological opinion or directed by the USFWS.

APPENDIX - H (for Alternative 12-Continued)
MITIGATION MONITORING PLAN
LOWER MISSION CREEK FLOOD CONTROL PROJECT

Resource	Description of Impact	Environmental Commitment/Mitigation	Start Date or Event	Responsible Party	Duration	Frequency	Level of Success Expected
Biological Resources Continued							
Isolated Native Trees	Probable removal 13 - 18 trees.	Design plantings would yield more than 200 mature native trees after 30 years.					
Stream Bank Vegetation	Projected average environmental quality equivalent to about 1¼ habitat units. Stream bank habitat would increase by 0.75 habitat units compared to Alternative 1.						

Planted* Vegetation along riprap and habitat expansion zone		A temporary, above ground irrigation systems shall be installed and maintained. Invasive weeds (principally giant reed, castor bean, salt cedar, and sweet fennel). Any native trees which die within the first five years shall be removed and replaced by the same species from 1-gallon stock.	Construction: After completion of the project construction. Future Maintenance: After two years of completion of the project.	USACOE or Construction Contractor for first year of planting; after first year Santa Barbara County	for five years to ensure that planted trees/vegetation established in ground twice a year for the first two years, and annually for the next three years	Monitoring of the planted vegetation need be performed twice a year for five years First two years- USACOE or Construction Contractor Remaining three years: Santa Barbara County.	After a year of planting 60% success; After two years 80% success and after five years 100% success.
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***Note:** Planting along riprap, habitat expansion zone and wetland are part of the project design. It is not a mitigation measures. But planted vegetation need to be monitor to document success of planted vegetation.

APPENDIX - H (for Alternative 12-Continued)
MITIGATION MONITORING PLAN
LOWER MISSION CREEK FLOOD CONTROL PROJECT

Resource	Description of Impact	Environmental Commitment/Mitigation	Start Date or Event	Responsible Party	Duration	Frequency	Level of Success Expected
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Land Use	<p>(1) No impacts to agricultural lands, Long-term Permanent Impacts: Buildings or property located within the project right-of-way will be removed or demolished for project construction. Therefore, land use would change from residential to natural creek bed or open space. However, most of the buildings located within the project reach are very old and all property located within the flood plains is subject to severe flood damage during heavy rains or flooding. Land use will change from residential to natural creek bed or open space within the construction right-of-way.</p> <p>(2) This alternative would require demolition of 14 complete and 2 partial structures (includes 1 complete removal of commercial building; 4 single family residential units and 5 multiple family units; 1 patio deck and 1 garage). 1 commercial building would be removed partially. Relocation of existing tenants may be difficult due to the cost of housing.</p> <p>No impact to oxbow area. Culverts would be installed away from the creek. During construction, temporary impacts near fig tree.</p>	The local sponsor will purchase the property and provide compensation to the property owner and tenants and/or property will be relocated	Prior to initiation of project	Santa Barbara County	About six months or negotiation is completed with the property owner.	One time - prior to the project construction.	As identified in state and local regulations for the property acquisition.
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APPENDIX - H (for Alternative 12-Continued)
MITIGATION MONITORING PLAN
LOWER MISSION CREEK FLOOD CONTROL PROJECT

Resource	Description of Impact	Environmental Commitment/Mitigation	Start Date or Event	Responsible Party	Duration	Frequency	Level of Success Expected
Socio-economics	<p>(1) Long Term Impacts: Some of the property located along the creek bank would be removed. There would be economic loss to the property owner. However, property located within the flood plain would be protected from flooding hazards in future.</p> <p>Demolition of structures/building refer to Land Use Section. Relocation of existing tenants may be difficult due to the cost of housing.</p> <p>(2) Alternative 12 would require removal of 14 full structures and 2 partial. See details on type of the structures in Land Use Section.</p>	The local sponsor would purchase the property or relocate the housing or commercial units to a safer zone. The property owner would receive compensation equal or more to their property value; therefore, project related impact is not significant. All property removal would be fully mitigated.	Prior to initiation of the project construction	Santa Barbara County.	About six months.	One time-prior to the project construction.	As identified in state and local regulations for the property acquisition.

APPENDIX - H (for Alternative 12-Continued)
MITIGATION MONITORING PLAN
LOWER MISSION CREEK FLOOD CONTROL PROJECT

Resource	Description of Impact	Environmental Commitment/Mitigation	Start Date or Event	Responsible Party	Duration	Frequency	Level of Success Expected
Aesthetics	<p>(1) Short-term: During construction, equipment and stockpile material would degrade aesthetic value of the project area. However, this impact is short term and would not be significant.</p> <p>(2) Long Term: Aesthetics/visuals of the creek banks would be improved with stabilization of banks. Implementation of this alternative will provide maximum aesthetic value. Creek will be more natural looking. Provides maximum vegetation cover. Bottom of the creek can not be seen from top because riprap will be planted with native and riparian vegetation. Aesthetic treatment would be provided to the vertical walls.</p> <p>(3) For safety reasons, some type of fencing shall be installed along the banks. If chain-link type of fencing is used, aesthetic treatment would be needed, including planting of vines to reduce impacts.</p>	<p>Alt. No. 12: Upper banks will be planted with the natural vegetation. Create pocket parks. To enhance environmental value, construction of wetland near oxbow area would be performed. Vertical Walls: Plant vines along the vertical walls to minimize impacts; cover concrete with natural color and texture.</p> <p>If fencing is installed in the project design for safety purposes, plant vines along fencing to minimize impacts. Upgraded fence materials shall be used in areas visible or accessible to the public.</p>	After stabilization of the side-slopes.	<p>USACOE or Construction Contractor.</p> <p>Future Maintenance: Santa Barbara County (repair of the damaged banks)</p>	<p>About a year.</p> <p>Future Maintenance: For the life of the project.</p>	<p>Inspection every year, and if damage is reported repair would occur on needed basis.</p>	Not applicable.

APPENDIX - H (for Alternative 12-Continued)
MITIGATION MONITORING PLAN
LOWER MISSION CREEK FLOOD CONTROL PROJECT

Resource	Description of Impact	Environmental Commitment/Mitigation	Start Date or Event	Responsible Party	Duration	Frequency	Level of Success Expected
Recreation	Short-term: During construction, stock piled material, equipment etc. will restrict recreational use of the creek. However, all sections would not be constructed at the same time; therefore, this impact is temporary and not significant. Long-term impacts: This alternative provides maximum recreational opportunity compare to other alternatives. These opportunities include: bird watching, walking along the creek bank, enjoying natural vegetation planted on upper slope of the creek. However, access to the creek bottom will be restricted and the creek's use as a connective corridor will be lost.	Alt. 12: Planting of native and riparian type of vegetation along the upper slope of the creek banks and within open areas. Create habitat expansion zones (pocket parks) and construction of wetland at oxbow.	After completion of the project.	Initial responsibility is of USACOE or Construction Contractor. Future Maintenance: maintain sideslope and habitat expansion zone by Santa Barbara County.	Approximately a year after completion of the project, Future Maintenance: For the life of the project.	One time after completion of the project. Future Maintenance: as needed basis for the life of the project.	Not applicable.

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Resource	Description of Impact	Environmental Commitment/Mitigation	Start Date or Event	Responsible Party	Duration	Frequency	Level of Success Expected
*HTRW	<p>Two HTRW sites are located within the project reach, at 324 De la Vina and 220 W. Gutierrez Streets. The De la Vina property was used by former dry-cleaning establishment.</p> <p>Testing of sediments would be required at West Gutierrez Street.</p> <p>Sediment contamination by construction equipment-related leaks or spills of fuels, solvents, or lubricants; possibility of encountering PCE contaminated soil and/or shallow groundwater in the vicinity of the West Gutierrez Street Bridge. This event could potentially cause releases of this substance to the environment; and, possibility of encountering deep sediment contaminated by HTRW.</p>	<p>(1) Equipment shall be in proper condition; no gasoline or oil change shall occur in the creek bed. Prior to construction, samples of creek sediments will be analyzed to determine contamination. Plan will be developed in coordination with the regulatory agencies (RWQCB, County Department of Environmental Health Services).</p> <p>(2) If sufficient information is available, a work plan shall be developed to determine characterization of the plume and impact to the shallow groundwater and sediment testing.</p>	<p>(1) Construction: from initiation of construction to completion of construction.</p> <p>(2) When construction occurs in vicinity of 324 De la Vina and 220 W. Gutierrez Street.</p> <p>Future Maintenance: at every maintenance activity</p>	<p>Construction: USACOE or Construction Contractor</p> <p>Future Main.: Santa Barbara County</p>	<p>Construction: Approx. two years.</p> <p>Future Maintenance: About 15 to 30 days for the life of the project</p>	<p>Construction: Initially every week, after construction is established once a month until construction is completed. Future Maintenance: Once when maintenance is initiated.</p>	As directed by the WQCB.

* Hazardous Toxic and Radioactive Waste (HTRW)

APPENDIX - H (for Alternative 12-Continued)
MITIGATION MONITORING PLAN
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Resource	Description of Impact	Environmental Commitment/Mitigation	Start Date or Event	Responsible Party	Duration	Frequency	Level of Success Expected
Traffic	Short-term/Long-term: During project construction and future sediment removal, some residents may not have direct access to their residences. Street closure would be required in some locations. This impact is a short-term, temporary increase in truck traffic along selected haul routes. Particular concerns would arise during the replacement of the De la Vina/ Haley Street bridge which would impact a major commuter route on Haley Street.	Project construction would be performed by sections. No access to the residents or commercial establishment would be eliminated. Appropriate detours and traffic control officers would be provided to direct traffic. Alternative routes shall be coordinated with the City of Santa Barbara.	Construction: Throughout the project construction. Future Maintenance: Between July and November every year	Construction: USACOE or Construction Contractor. Future Maintenance: Santa Barbara County	Construction: Approx. two years. Future Maintenance: Approx. 15 to 30 days for the life of the project.	Construction: Initiation of construction every week; once a month until project construction is completed. Future Maintenance: Once during maintenance activities.	As determined by the City of Santa Barbara

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Resource	Description of Impact	Environmental Commitment/Mitigation	Start Date or Event	Responsible Party	Duration	Frequency	Level of Success Expected
Safety	<p>Short-term Impacts: During construction, truck traffic will increase, potentially causing accidents.</p> <p>Long-term Impacts: After completion of the project, it could be possible that people could enter within the creek bed and injured.</p> <p>In addition people may get into by-pass tunnel and criminals may live and hide in culvert.</p>	<p>Short-term Impacts: During construction, traffic control officers would be provided to divert traffic to minimize accidents.</p> <p>Long-term Impacts: Fencing or other type of the protection shall be provided for public safety. Access points shall be provided to facilitate safe rescue.</p> <p>Install bars at end of tunnel to restrict passage to people (applicable to oxbow bypass Alts)</p>	<p>Construction From initiation of the project construction</p> <p>Future Maintenance: Between Months of July and November</p>	<p>Construction: USACOE or Construction Contractor.</p> <p>Future Maintenance: Santa Barbara County</p>	<p>Construction Approx. Two years.</p> <p>Future Maintenance: Approx. 15 to 30 days at every year for the life of the project.</p>	<p>Construction Initially once a week, after construction is established once a month.</p> <p>Future Maintenance: Once during each event.</p>	Not applicable.

APPENDIX - H (for Alternative 12-Continued)
MITIGATION MONITORING PLAN
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Resource	Description of Impact	Environmental Commitment/Mitigation	Start Date or Event	Responsible Party	Duration	Frequency	Level of Success Expected
	<p>Structures impacted under NEPA:</p> <ol style="list-style-type: none"> 1. Sandstone Diversion revetment retaining wall. Partial removal. 2. Chapala St. Bridge. Proposed for removal. 3. 116 Chapala St. Proposed for removal. 4. 536 Bath St. - Proposed for removal. 5. West Downtown Neighborhood - Loss of buildings that contribute to status. 6. Waterfront Neighborhood - Loss of structures that contribute to status. <p>Additional structures impacted under CEQA:</p> <ol style="list-style-type: none"> A. 15 W. Mason St. - Proposed for removal. B. Potter Hotel Footbridge - Proposed for removal. C. 134 Chapala St. - Proposed for partial removal. D. 434 De la Vina St. - Proposed for removal. E. 306 W. Ortega St. - Proposed for removal. 	<p>Primary mitigation under NEPA is Historic American Building survey (HABS) recordation for historic building(s) adversely affected. For the sandstone retaining wall, Historic American Engineering Record (HAER) recordation will be used. The Chapala Street Bridge is already listed on the HAER record.</p> <p>Mitigation Under CEQA:</p> <ol style="list-style-type: none"> 1. Extend box culvert downstream of Chapala Street Bridge. 2. Same as #1. Depending on design, may not mitigate to less than significant. 3. Realign proposed channel or relocate house on-site. 4. Relocate on-site. If not feasible, relocate off-site & complete biography of Karl Obert. Relocation off-site results in significant unavoidable impacts. 5. & 6. Save buildings on-site. Complete survey to determine boundaries and contributing elements. <ol style="list-style-type: none"> A. HABS recordation. Significant unavoidable impact. B. See #1. HAER recordation & relocation would result in significant unavoidable impact. C. HABS recordation, photographic study & short history. D. Same as C. E. Begin vertical wall further upstream or otherwise redesign to avoid house. Also acceptable, HABS recordation & relocation on-site. 	<p>Construction: Prior to initiation of the project.</p> <p>Future Maintenance: Not applicable</p>	<p>NEPA: USACOE or Construction Contractor</p> <p>CEQA: City of Santa Barbara and County</p>	<p>Not determined yet.</p>	<p>Once prior to the project construction</p> <p>Future Maintenance Not applicable</p>	<p>NEPA: As determined by SHPO</p> <p>CEQA: As identified by State and Local agencies</p>

APPENDIX - H (for Alternative 12-Continued)
MITIGATION MONITORING PLAN
LOWER MISSION CREEK FLOOD CONTROL PROJECT

Resource	Description of Impact	Environmental Commitment/Mitigation	Start Date or Event	Responsible Party	Duration	Frequency	Level of Success Expected
Utilities	Water, sewer and telephone lines are located within the project reach. Relocation of these utility lines would be required. Residents may experience temporary loss of services for short periods.	Relocation of utility lines would be performed in such a manner as to minimize disruption in service and accidental spills. If there is disruption, property owners and tenants will be notified	Construction Prior to the initiation of construction Future Maintenance: Not applicable	Santa Barbara County or utility companies	Not determined yet	Once prior to construction	As identified in specification of the City of Santa Barbara and guideline for relocation of utilities.

