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CALIFORNIA COASTAL COMMISSION
SOUTH CENTRAL COAST AREA
89 SOUTH CALIFORNIA ST., SUITE 200
VENTURA, CA 93001
(805) 585 - 1800

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Commission Action:	

STAFF REPORT: REGULAR CALENDAR

APPLICATION NO.: 4-01-075

APPLICANT: State of California, Department of Parks and Recreation

AGENT: Chris Peregrin

PROJECT LOCATION: Crags Road and Malibu Creek, Malibu Creek State Park, Los Angeles County

PROJECT DESCRIPTION: Stream corridor restoration project for Malibu Creek consisting of removal of failed creek crossing/culvert and construction of a new crossing 20 ft. wide and 170 ft. long, including series of ten, 6x6, 20 ft. long reinforced steel box culverts designed to restore stream flow and accommodate fish passage, buried concrete aprons covered by 4 ft. layer of 455 cu. yds. of rock rip-rap on the up and down stream side of crossing, and approximately 2,050 cu. yds. of excavated streambed material, 1,442 cu. yds. to be replaced. The proposed project also includes riparian and wetland mitigation and restoration of disturbed habitat, and creek bank stabilization.

LOCAL APPROVALS RECEIVED: N/A

SUBSTANTIVE FILE DOCUMENTS: State of California, Department of Parks and Recreation, Project Evaluation Form and CEQA Notice of Exemption, 11/13/00; California Department of Fish and Game, Streambed Alteration Agreement 5-2001-0119, 1/10/01; California Regional Water Quality Control Board, Clean Water Act Section 401 Water Quality Certification, File No. 01-031; U.S. Army Corps of Engineers, Memo Regarding Permit No. 2001-00884-AOA; Geotechnical/Hydrological Evaluation of Draft Construction Drawings, Malibu Creek Crossing, Malibu Creek State Park, by Group Delta Consultants, Inc., 6/18/01, Biological Assessment, Repair Arizona Crossing, Malibu Creek, 4/5/01, prepared by Chris Peregrin, Associate Resource Ecologist, State Parks.

SUMMARY OF STAFF RECOMMENDATION

Staff recommends **approval** of the proposed project with 9 Special Conditions regarding 1) Project Timing and Monitoring Responsibilities, 2) Construction Responsibilities, 3) Structural Maintenance, 4) Assumption of Risk Waiver, 5) Disposal of Excess Material and Debris, 6) Surface Water Diversion Plan 7) Erosion and Sedimentation Control Plan, 8) Riparian and Wetland Habitat Mitigation, Restoration and Monitoring Plan, and 9) Public Access and Habitat Restoration Information Program.

The applicant is proposing a stream corridor restoration project at the intersection of Crags Road and Malibu Creek within Malibu Creek State Park (Exhibit 1). The proposed project consists of removal of a failed creek crossing/culvert at Crags Road and construction of a new 20 ft. wide and 170 ft. long crossing that includes a series of ten, 6x6, 20 ft. long reinforced steel box culverts (Exhibits 2-4). The proposed creek crossing will also include buried concrete aprons covered by a 4 ft. layer of 455 cu. yds. of rock rip-rap on the up and down stream side of the crossing. Construction of the proposed creek crossing will require approximately 2,050 cu. yds. of excavated streambed material, with approximately 1,442 cu. yds. expected to be replaced. In addition, the proposed project includes riparian and wetland mitigation and restoration of disturbed habitat at the crossing site, and of an approximate 500 foot length of stream corridor just upstream of the project site, and creek bank stabilization (Exhibit 7).

A creek crossing is required at the project site to maintain necessary vehicular access for Park staff and emergency response personnel within this reach of Malibu Creek State Park. The existing creek crossing was inadequately designed to withstand high flows and does not have a sufficient capacity to conduct stream and sediment flow through the structure, which has resulted in long-term scouring and erosion of the channel downstream and sedimentation of the channel upstream of the crossing site. In addition, the existing creek crossing presents a barrier to fish and other aquatic life migration. Thus, the existing crossing has significantly altered the natural morphology of the stream channel resulting in degradation of water quality and sensitive resources of the site. The applicant is proposing to restore the stream corridor and adjacent habitat by removing the existing obstructions in the stream and constructing a new creek crossing and culvert system designed to withstand high flood events, improve hydraulic and sediment conveyance of the stream channel, and which is specifically designed to facilitate passage of fish and other aquatic species. Therefore, the proposed project will result in restoring a more natural movement of sediment and stream flow through the stream corridor, facilitate passage of aquatic species, and thus will enhance the water quality and sensitive resource values of the site.

The project site is located within the stream channel of Malibu Creek. The creek bed and associated habitat is designated as an environmentally sensitive habitat area (ESHA) which includes riparian, wetland and unvegetated streambed habitat (Exhibit 5). The surficial portion of the proposed creek crossing will encompass approximately the same surface area as the existing structure, however, the proposed crossing will include a new substantial foundation that will increase the subsurface footprint of the structure. As such, the proposed structure will permanently displace adjacent riparian and wetland habitat presently unoccupied by the existing structure. The applicant is proposing to mitigate and restore all areas adjacent to the project site disturbed during construction of the new crossing. Additionally, the applicant is proposing to restore an approximate 500 foot length of significantly degraded stream corridor just upstream of the project site, including riparian habitat restoration and creek bank stabilization. The proposed project and will serve to substantially restore and maintain water quality and associated marine resources and, as conditioned, is consistent with all applicable policies of the Coastal Act.

I. STAFF RECOMMENDATION:

MOTION: ***I move that the Commission approve Coastal Development Permit No. 4-01-075 pursuant to the staff recommendation.***

STAFF RECOMMENDATION OF APPROVAL:

Staff recommends a **YES** vote. Passage of this motion will result in approval of the permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

RESOLUTION TO APPROVE THE PERMIT:

The Commission hereby approves a coastal development permit for the proposed development and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act and will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

II. STANDARD CONDITIONS

1. Notice of Receipt and Acknowledgment. The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. Expiration. If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.

3. Interpretation. Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.

4. **Assignment.** The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

5. **Terms and Conditions Run with the Land.** These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

III. SPECIAL CONDITIONS

1. Project Timing and Monitoring Responsibilities

A. Project Timing and Implementation Schedule

1) ***Prior to Issuance of Coastal Development Permit 4-01-075,*** the applicant shall submit, for review and approval of the Executive Director, a detailed Project Timing and Implementation Schedule that describes timing, duration, methods, and staging areas for all construction operations and restoration plans proposed and conditioned pursuant to this coastal permit. The Project Timing and Implementation Schedule shall include a submittal schedule for all resource monitoring reports, for implementation of the proposed restoration plan, and implementing details for the Public Access and Habitat Restoration Information Program required pursuant to Special Condition 9 of this coastal permit.

2) Construction activity shall be prohibited during the rainy season (November 1-March 31) unless otherwise permitted by the Executive Director for good cause. No construction activity shall be conducted during a rainfall event. The applicant shall maintain a five-day clear weather forecast prior to commencement of any construction activity at the site. In the event that rainfall is predicted and/or does occur, protective measures to prevent erosion/sedimentation shall be implemented and maintained. Construction activities shall not resume until 72 hours following a rainfall event.

3) No vegetation removal within the project area shall occur during the primary breeding, nesting, and fledgling season for bird species (March 1-June 15), unless otherwise permitted by the Executive Director for good cause. Should the Executive Director authorize the applicant to commence vegetation removal in the project area within the time period of March 1-June 15, a qualified resource specialist shall conduct a survey for nesting birds each day prior to commencement of construction activity. In the event that any rare, threatened or endangered bird species is nesting at the project site no construction activity shall occur within the project area from March 1- September 1.

B. Monitoring

The applicant shall provide evidence to the Executive Director that a qualified resource specialist, with appropriate qualifications acceptable to the Executive Director, has been retained to implement all sensitive resource protective measures, restoration plans and monitoring required pursuant to this coastal permit.

1) Prior to commencement of the proposed project, the resource specialist shall conduct an initial survey of the project area, to be submitted for the review and approval of the Executive Director, to confirm the presence/absence of any listed rare, threatened or endangered species. The initial survey shall include, but not be limited to, an assessment of the presence of the following sensitive species identified as potentially existing at the project site: least Bell's vireo, southwestern willow flycatcher, western pond lizard, coast horned lizard, coastal whiptail, silvery legless lizard; coast patchnose, San Bernardino ringneck or two-striped garter snakes; southwestern pond turtle, arroyo toad, California red-legged frog, arroyo chub.

2) Should the initial survey of the project area determine that any of the sensitive species referenced above, or any other sensitive species, are present within 500 ft. of the project area, the applicant shall immediately notify the Executive Director and the Executive Director must approve an appropriate strategy to avoid potential impacts to sensitive species that will be followed by the applicant, prior to commencement of the proposed project. Should sensitive species be sighted within 500 ft. of the project area during project operations the resource specialist shall inform the applicant and the applicant must cease all work and immediately notify the Executive Director. The Executive Director must approve an appropriate strategy to avoid potential impacts to sensitive species, prior to resuming project operations. Should there be no identifiable means of avoiding adverse impacts on sensitive species, no construction activities shall be conducted in the area where the sensitive species occur.

3) The resource specialist shall be on site each day during operations and shall monitor construction activities in the project area for potential impacts to sensitive species. In the event that any sensitive species are present at the project site, or any unforeseen sensitive habitat/species issues arise, the resource specialist shall inform the applicant and the applicant must cease all work. No development shall resume until the Executive Director has approved a resource avoidance program with sufficient measures that will be followed by the applicant, including but not limited to, salvage and relocation, establishing buffer areas, and installing exclusionary fencing to prevent migration of sensitive species into the work area. Should the presence of such sensitive species require review by the United States Fish and Wildlife Service and/or the California Department of Fish and Game, no development activities shall be allowed or resume until such authorizations are received, subject to approval of the Executive Director. Should there be no identifiable means of avoiding adverse impacts on sensitive species, no

construction activities shall be conducted in the area where the sensitive species occur.

4) Within one full year and for five consecutive years following removal of Rindge Dam, should removal of the dam be undertaken in the future, the applicant shall submit to the Executive Director, a complete fisheries analysis of the proposed structure's performance efficiency and ability to facilitate passage of steelhead trout through the structure. The analysis shall include a detailed description of the structure's benefits and/or disadvantages for re-establishing steelhead migration through this reach of Malibu Creek.

2. Construction Responsibilities

No construction materials, debris, or waste shall be placed or stored in an area where it may be subject to runoff and erosion, or may result in a discharge into the stream corridor. Temporarily stockpiled material shall be located as far from the stream areas on site as feasible and, in no event, shall materials be stockpiled less than 30 feet in distance from the top edge of the stream bank. Any and all debris resulting from construction activities shall be removed from the project site within 24 hours of completion of construction.

It shall be the applicant's responsibility to assure that the following occurs during project construction: a) that construction sites and excavations shall be secured and measures to control erosion shall be implemented at the end of each day's work, b) that all grading/excavations and disturbed areas be properly covered, sand-bagged, and ditched to prevent runoff, c) that temporary netting, fiber rolls and/or sand bags shall be placed around the perimeter of the construction zones as delineated in the Erosion and Sedimentation Control Plan prepared pursuant to Special Condition 3 below; d) that grading/excavation work shall be restricted to the staging areas delineated on the Erosion and Sedimentation Control Plan prepared pursuant to Special Condition 3.

3. Erosion and Sedimentation Control Plan

Prior to the issuance of Coastal Development Permit 4-01-075, the applicant shall submit, for the review and approval of the Executive Director, an Erosion and Sedimentation Control Plan designed by a licensed engineer or other qualified resource conservation specialist acceptable to the Executive Director. The plan shall provide the following:

(1) The plan shall delineate areas to be disturbed by grading, excavation or construction activities and shall include any temporary access roads, staging areas, and stockpile areas. Natural areas on the site shall be clearly delineated on the project site with fencing or survey flags.

(2) The plan shall specify that the applicant shall install or construct temporary sediment basins (including debris basins, desilting basins or silt traps), temporary drains and swales, sand bag barriers, silt fencing, stabilize any stockpiled fill with geofabric covers or other appropriate cover, install geotextiles or mats on all cut or fill slopes and close and stabilize open trenches as soon as possible. These erosion control measures shall be required on the project site prior to or concurrent with the initial grading/excavation operations and maintained throughout the development process to minimize erosion and sedimentation from runoff waters during construction. All excess sediment should be retained on-site until removed to an appropriate, approved dumping location either outside the coastal zone or to a site within the coastal zone permitted to receive fill.

(3) The plan shall also include temporary erosion control measures should grading or site preparation cease for a period of more than 30 days, including but not limited to: stabilization of all stockpiled fill, access roads, disturbed soils and cut and fill slopes with geotextiles and/or mats, sand bag barriers, silt fencing; temporary drains and swales and sediment basins. These temporary erosion control measures shall be monitored and maintained until grading or construction operations resume.

(4) The Erosion and Sedimentation Control Plan shall also include a non-structural Best Management Practices (BMP) component to sufficiently address erosion and sedimentation impacts on the stream bank and channel associated with run-off conveyed from the High Road adjacent to the restoration site. Consistent with the requirements of Special Condition 8, the Riparian and Wetland Mitigation and Restoration Plan, the Erosion and Sedimentation Control Plan shall include non-structural BMP measures designed to control the volume, velocity and sediment load of run-off on the creek bank through means such as developing energy dissipating measures at the terminus of outflow drains, systems of vegetated and/or gravel filter strips, sediment basins, swales, or other media filter devices. The non-structural BMPs shall be designed to trap sediment, particulates and other solids, and remove or mitigate contaminants through infiltration and/or biological uptake. BMPs shall be maintained in a functional condition, and shall be repaired should any of the BMPs fail. No direct runoff from the adjacent roadbed shall outlet into the stream corridor prior to being treated and filtered through a system of energy dissipaters, vegetated and/or gravel filter strips, sediment basins, swales, or other media filter devices.

4. <u>Disposal of Excess Material and Debris</u>

Prior to the issuance of Coastal Development Permit 4-01-075, the applicant shall provide evidence to the Executive Director of the location of the disposal site for all excess excavated material and debris from the project site. Excess excavated materials

and debris shall be deposited at an approved dumping location either outside the coastal zone or to a site within the coastal zone permitted to receive such material.

5. Structural Maintenance

The applicant shall maintain the concrete crossing and stream culverts approved pursuant to this coastal permit such that it does not constitute a barrier to the free movement of aquatic life at any time. The structural integrity of the concrete crossing shall be maintained and stream culverts shall be clear of debris at all times so as to maintain appropriate water depth, temperature, and velocity to facility aquatic life migration. Should any portion of the crossing fail and/or become dislodged that portion shall be repaired and/or recovered in a timely manner. Prior to commencing with any necessary repair or recovery operation the applicant shall submit project plans and a detailed description of the proposed work to the Executive Director to determine if it shall be necessary to obtain a new coastal development permit from the Commission.

6. Assumption of Risk Waiver of Liability and Indemnity

Prior to issuance of Coastal Development Permit 4-01-075, the applicant shall submit a written agreement, in a form and content acceptable to the Executive Director, which states that the applicant acknowledges and agrees (1) that the site may be subject to hazards from erosion and flooding; (2) to assume the risks to the applicant, the public and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (3) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (4) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.

7. Surface Water Diversion Plan

Prior to Issuance of Coastal Development Permit 4-01-075, the applicant shall submit a Surface Water Diversion Plan, for the review and approval of the Executive Director, to be implemented to temporarily divert stream flow around the construction site. The surface water diversion plan shall include project plans with a detailed description of and locations for all temporary structures necessary to safely and effectively divert stream flow around the project site. The diversion plan shall also include a schedule detailing the timing, method, and duration in which stream flow is to be diverted and restored to its natural course.

The Surface Water Diversion Plan shall ensure that stream flow is executed in a manner that shall prevent pollution, excess siltation and erosion in the stream channel. Stream flow from upper reaches of the creek to areas downstream of the project site shall be maintained at all times in a condition of sufficient quality and quantity to support aquatic life above and below the diversion and discharge locations. Natural stream flow shall be restored immediately upon completion of the proposed project.

8. Riparian and Wetland Habitat Mitigation, Restoration and Monitoring Plan

Prior to issuance of Coastal Development Permit 4-01-075, the applicant shall submit, for the review and approval of the Executive Director, a Riparian and Wetland Mitigation and Restoration Plan, prepared by a qualified resource specialist with appropriate qualifications acceptable to the Executive Director, for the entire project area affected by the scope of work approved pursuant to this coastal permit, and for the designated mitigation site. The Riparian and Wetland Mitigation and Restoration Plan shall include, but not be limited to the following components:

A. Riparian and Wetland Mitigation and Restoration Plan

1) All habitat areas disturbed by the proposed project activities shall be revegetated and restored to the maximum extent feasible with appropriate native plant species endemic to the riparian, wetland and upland habitat areas on site. The applicant shall submit, for review and approval of the Executive Director, a Preliminary Ecological Assessment of the riparian, wetland and upland areas to be affected by the proposed project activities, which clearly identifies all native vegetation to be disturbed by the proposed operations.

2) Invasive and non-native plant species shall be removed from the stream channel/riparian vegetation corridor and wetland areas. The Riparian and Wetland Mitigation and Restoration Plan shall include vegetation specifications providing information on removal methods for exotic species, salvage of existing native vegetation, revegetation methods and vegetation maintenance. The plan shall include details regarding the types, sizes, and location of plants to be removed and those plants to be planted for mitigation and restoration purposes. Invasive, non-indigenous plant species which tend to supplant native species shall not be used for revegetation efforts.

3) All wetland and riparian native vegetation proposed to be removed during construction activities, as identified in the Preliminary Ecological Assessment reviewed and approved by the Executive Director, and/or vegetation inadvertently destroyed or damaged during implementation of the project shall be replaced in kind at a 3:1 or greater ratio.

4) The plan shall detail necessary maintenance measures, including but not limited to supplemental watering requirements and techniques, and continued weed eradication, etc., that will be necessary to ensure long-term success of restoration efforts. Restoration plantings shall be maintained in good growing condition throughout the life of the project and, whenever necessary, shall be replaced with new plantings consistent with the mitigating ratio requirements described in section 3 of this special condition to ensure continued compliance with applicable restoration requirements.

5) Portions of the restoration site creek bank presently eroded and/or rutted as a result of sheet run-off or outlet drains from the upper roadbed (High Road) shall be restored to the maximum extent feasible to minimize erosion and sedimentation. The applicant shall implement non-structural Best Management Practices (BMPs) designed to minimize erosion and sedimentation into the stream channel consistent with the criteria specified in Special Condition 3.

6) The plan shall include a statement of goals, objectives, and performance standards for the restoration efforts to ensure restoration success. Performance standards shall incorporate information relative to ground and canopy coverage, species composition and expected survival rates typical to riparian, wetland and upland habitat vegetation in the Santa Monica Mountains, for which an adequate means for analyzing restoration success can be established. The plan shall describe in detail existing habitat conditions, expectations for the project's restored habitat conditions upon completing construction and early implementation of restoration, and expectations for the project's restored habitat conditions upon meeting identified goals and performance standards.

7) Vegetation planted and the restoration area created pursuant to the approved Riparian and Wetland Mitigation and Restoration Plan shall not, at any time, be damaged, destroyed, or removed by the applicant.

B. Monitoring

The applicant shall retain a qualified resource specialist, with appropriate qualifications acceptable to the Executive Director, to monitor the project for compliance with the specified guidelines and performance standards outlined in the approved Riparian and Wetland Mitigation and Restoration Plan required pursuant to Section A of this special condition. The applicant shall submit, on an annual basis for a period of five years, beginning one year from the date of issuance of Coastal Development Permit 4-01-075, a written report prepared by the resource specialist, for the review and approval of the Executive Director, evaluating the extent of the success or failure of the restoration efforts. The monitoring reports shall also include photographs taken from pre-designated sites (annotated to a copy of the site plans) indicating the progress of recovery at each of the sites. The monitoring reports shall include any further recommendations and requirements for additional revegetation/restoration activities

necessary for the project to meet the specified criteria and performance standards of the Riparian and Wetland Mitigation and Restoration Plan. If on going monitoring efforts indicate that additional replacement plantings are required, the applicant shall submit, for the review and approval of the Executive Director, a replacement planting program, prepared by a qualified resource specialist, which specifies replacement plant locations, size, planting specifications, and an additional monitoring program to ensure that the replacement planting program is successful for an additional period of five years from the date of replacement planting.

At the end of the initial five year period, a final detailed report shall be submitted for the review and approval of the Executive Director. If this report indicates that the restoration plan has in part, or in whole, been unsuccessful, based on the approved performance standards, the applicant shall submit a revised or supplemental restoration plan to compensate for those portions of the original plan which were not successful. The revised or supplemental restoration plan shall be processed as an amendment to Coastal Development Permit 4-01-075, or as a new coastal development permit. Additional monitoring reports shall be submitted for any new plantings required to achieve the performance standards set forth herein, such that all new plantings are monitored for a minimum of five years from the date of such plantings.

The applicant shall fully comply with all provisions of the approved Riparian and Wetland Mitigation and Restoration Plan.

9. Public Access and Habitat Restoration Information Program

The applicant shall establish and maintain a public access and habitat restoration program designed to 1) divert the public from particularly sensitive habitat areas and restoration areas and 2) inform the public of habitat restoration efforts occurring within the project area. The plan shall include informative signage detailing the restoration efforts and benefits of habitat restoration for the project and may, where appropriate and feasible, include measures to divert the public from sensitive habitat areas (minor fencing, survey flags etc.).

Prior to issuance of Coastal Development Permit 4-01-075, the applicant shall submit project plans, in combination with the required Riparian and Wetland Mitigation and Restoration Plan, for review and approval of the Executive Director, indicating the size, design, location and text of informative signage to placed in the project area and any proposed method for diverting the public away from or around restoration areas. Placement of signage shall not commence until the applicant receives approval of the signage plans from the Executive Director.

IV. FINDINGS AND DECLARATIONS

The Commission hereby finds and declares:

A. Project Description, Environmental Setting and Background

Project Description

The applicant is proposing to remove a failed Arizona-type creek crossing/culvert and to construct a new creek crossing with a series of culverts to restore stream flow and facilitate passage of fish and other aquatic species in Malibu Creek at Crags Road within Malibu Creek State Park (Exhibit 1). The proposed crossing will be constructed in the same location as the existing crossing, and will be 20 ft. wide and 170 ft. long (surficially), and will include a series of ten, 6x6, 20 ft. long reinforced steel box culverts specifically designed to accommodate additional stream flow and fish passage (Exhibits 2-4). The proposed crossing will also consist of buried inclined, concrete aprons covered by a 4 ft. layer of 455 cu. yds. of rock rip-rap on the up and down stream side of crossing. Construction of the proposed creek crossing will require excavation of approximately 2,050 cu. yds. of native streambed material. Approximately 1,442 cu. yds. of the excavated streambed material is expected to be replaced and 608 cu. yds. will be exported from the site. The surficial portion of the proposed creek crossing will encompass approximately the same surface area as the existing structure, however, the proposed crossing will include a substantial foundation that will increase the overall footprint of the structure from 3,172 to 7,875 sq. ft. As such, the proposed structure will permanently displace adjacent habitat area presently unoccupied by the existing structure. The applicant is proposing to mitigate sensitive habitat lost as a result of the proposed project and to restore all areas adjacent to the crossing site disturbed during construction. Additionally, the applicant is proposing to restore an approximate 500 foot length of degraded stream corridor just upstream of the project site including eradication of invasive vegetation, restoration of sensitive riparian habitat and stabilization of the adjacent creek bank.

The proposed project will require construction activity in the form of grading/excavation in the streambed, temporary damming and diversion of stream flow during construction, and filling of the streambed in designated riparian and wetland zones (Exhibit 5). Construction staging areas will be established in upland areas adjacent to the creek. Restoration efforts both at the crossing site and at the restoration site located upstream will involve removal of non-native invasive vegetation and revegetation with native plant species appropriate to riparian habitat of the Santa Monica Mountains. In addition, restoration of the riparian corridor upstream of the crossing site will include implementing non-structural BMPs to minimize run-off, erosion and sedimentation occurring from an alternative dirt access road (the "High Road") located immediately upslope of this portion of the creek. The applicant has obtained conditional approval from the Regional Water Quality Control Board, Department of Fish and Game, with decisions from the Army Corps and Fish & Wildlife pending.

Environmental Setting

The project site is located at Crags Road where it crosses Malibu Creek in Malibu Creek State Park (Exhibit 1). Crags Road is a gated, dirt road that is used by authorized personnel and emergency vehicles to access this portion of the park from the main park entrance road. Crags Road serves as a pedestrian access point by park visitors from the main road, however, members of the public only have motorized access along Crags Road when authorized and/or guided by Park staff. The proposed project is located where Crags Road crosses an approximate 500-600 ft. wide flood plain coupled with Malibu Creek just before the road reaches a visitor center and staff housing facility located a short distance from the creek. The project site and near vicinity contain designated environmentally sensitive habitat area (ESHA) in the form of riparian, wetland and non-vegetated streambed habitat (Exhibit 5). Grassland and individual oak trees also exist near the project site in upland areas, although no oak trees occur in the expected zone of influence of the proposed project.

The habitat area at the project site has been disturbed for several years due to the original construction of the existing creek crossing in the late 1950's. The existing crossing was not designed to convey a substantial amount of stream and sediment flow through the culvert system and has resulted in a significant amount of sediment accumulation and pooling upstream of the site. Additionally, due to the existing crossing's lack of a sufficient foundation the structure has resulted in deep scouring of the streambed directly underneath and downstream of the crossing, eventually causing a sectional failure, further restricting stream flow and exacerbating sediment accumulation and shallow pooling upstream of the crossing (Exhibit 8).

The pooling effect of the existing stream channel crossing, and the barrier effect of the existing crossing to many aquatic species, has resulted in an alteration in plant and animal species composition and diversity normally expected to occur within the subject riparian corridor. In particular, State Parks ecologists have indicated that the presence of large bullfrogs, sunfish and carp, as well as the occurrence of a small area consisting of wetland vegetation, are relatively unnatural components of the ecosystem. State Parks staff has indicated that the exotic, invasive species occurring at the site would likely not occur in this stretch of Malibu Creek if the artificial pooling conditions had not been caused by the existing crossing. Thus, existing site conditions have substantially altered natural stream morphology, vegetation patterns and fish and wildlife composition and diversity expected to exist at the site. On two site visits to the subject area, however, Commission staff, including staff ecologist Jon Allen, Ph.D., noted that significant native riparian habitat remains in the proposed project location and adjoining areas as well.

The applicant has submitted a biological assessment of the project area, prepared by Chris Peregrin, Associate Resource Ecologist for State Parks, indicating that no sensitive fish and wildlife species were surveyed as present at the site on the date(s) of field assessment. The applicant has also submitted information that indicates that the

area proposed for replacement of the existing crossing does, however, provide habitat for several potentially occurring sensitive species including least Bell's vireo, southwestern willow flycatcher, western pond lizard, coast horned lizard, coastal whiptail, silvery legless lizard; coast patchnose, San Bernardino ringneck or two-striped garter snakes; southwestern pond turtle, arroyo toad, California red-legged frog, arroyo chub and steelhead.

Of particular interest to the applicant and relative to the proposed project is the potential for steelhead trout to occur at the project site. Presently, steelhead do not occur at the site due to the presence of Rindge Dam, located downstream and constituting a barrier to migration of the anadromous fish species up to this location and the further reaches of Malibu Creek. However, recognizing that Rindge Dam is slated to be decommissioned and torn down, it is possible that the Malibu Creek watershed will again be available as steelhead habitat ranging from Malibu Lagoon through the upper reaches of Malibu Creek up to the project site. The Malibu Creek Steelhead Assessment, prepared by ENTRIX, Inc., May 1989, states that the reaches of Malibu Creek above Rindge Dam provide a combination of high quality spawning and rearing habitat ideal for steelhead. The existing crossing is identified by ENTRIX, Inc. as the next significant barrier to steelhead passage from Rindge dam up the Malibu Creek Watershed. Realizing the need to replace the existing crossing for operational purposes, in conjunction with the potential for steelhead habitat to be re-established within this reach of Malibu Creek in the near future, the applicant has taken the opportunity to design the proposed new crossing such that it will facilitate passage of steelhead and other aquatic life, as well as result in an overall improvement of natural stream morphology.

In addition to restoring disturbed sensitive habitat area at the crossing site, the applicant is proposing to mitigate for the permanent loss of sensitive habitat expected to occur from construction and is proposing an approximate 500 foot stretch of riparian habitat restoration area (along both banks), located upstream of the project site (Exhibits 7,9,10)). Restoration efforts will encompass an approximately 10,000 sq. ft. area as measured 10 feet inland of both stream banks of a 500 foot stretch of disturbed riparian habitat. The applicant has indicated that the upstream restoration site has suffered significant degradation that may have resulted from past, long-term use of the area as a movie ranch. The applicant has also indicated that the sediment accumulation caused by the existing crossing downstream at the project site is likely impacting this section of the stream channel. Additionally, an alternative dirt access road (High Road) parallels this portion of the creek through an oak woodland area just upslope of the stream channel, for which drainage structures have been installed to convey run-off under the road, causing erosion and rutting at some portions of the creek bank. The restoration site contains some strands of native plant species, but much of the area is stifled with exotic peppergrass (*Lepidium latifolium*), giant cane (*Arundo donax*) and spiny clotbur (*Xanthium spinosum*). The applicant is proposing to remove exotic plant species and re-establish native riparian vegetation along the proposed restoration area of the stream corridor, and to implement non-structural BMP measures (examples include, but are not limited to, vegetated swales and green filters) to address the issue of erosion and

sedimentation impacts associated with run-off from the High Road. Commission staff ecologist Jon Allen, Ph.D., has reviewed the proposed restoration plans and has concluded that the habitat area at the project site will significantly benefit from the proposed project.

Background

The intent of the proposed project is to remove and replace an existing crossing with a new creek crossing which includes a culvert foundation system that will better withstand high flood events, substantially restore natural stream flow, and improve the sensitive habitat areas established along this section of Malibu Creek. The proposed project is also designed with the intent to increase migration efficiency for fish and other aquatic life.

The existing creek crossing was originally constructed in the late 1950's and covers a surface area of approximately 3,172 sq. ft., and consists of five, 2 ft. diameter corrugated metal culverts that can conduct an approximate 25 ft. wide stream flow through the structure within the creek bed (Exhibit 8). The existing crossing is over topped during high flood events and, over the years, has been undercut by stream flow eventually causing deep scouring around the structure undermining its foundation and facilitating a sectional collapse of the crossing's concrete shell (Exhibit 8).

A creek crossing is required at the project site to maintain necessary vehicular access for Park staff and emergency response personnel within this reach of Malibu Creek State Park. As described in detail below, due to the configuration and condition of the only two readily accessible access routes into this portion of the park, the capacity limitation of the bridged section of the creek along the High Road, and the location of environmentally sensitive habitat areas in the project area, the Commission finds that no feasible less environmentally damaging alternative exists to the proposed project that would serve to ensure stability and maintain necessary vehicular access, and protect and enhance water quality and sensitive marine resources.

The project site is located at Crags Road where it crosses Malibu Creek within a 500-600 ft. floodplain in Malibu Creek State Park. In this location Crags Road is a dirt road accessed by authorized park and emergency vehicles and public pedestrian access only. Public vehicular use of the road is restricted from the park entrance road by a locked gate. Members of the public may drive into the park on the main entrance road, park in a number of available public parking lots, then access this portion of the park along Crags Road by foot. Presently, all vehicular access along Crags Road across Malibu Creek at the crossing site has ceased due to the existing crossing's failure in early 1998.

Crags Road previously supported vehicular access of Park staff and emergency personnel from the entrance road, across Malibu Creek, to several popular destination sites in the park including a visitor center, Rock Pool, Century Lake and Dam, the former M*A*S*H film set location, and several climbing areas. A year-round residence

housing Park staff is also accessed via Crags Road in this location. Just beyond the visitor center and staff residence Crags Road crosses Malibu Creek again via a bridge constructed several years ago by the Las Virgenes Municipal Water District. The bridge has a limited weight capacity (8000 lbs.), therefore large maintenance and emergency vehicles exceeding 8,000 lbs. that may need to access park areas beyond the bridge (Century Dam and Lake, filming locations, etc.) can not use Crags Road at this location past the visitor center and staff housing facility. When access via Crags Road is restricted into park areas beyond the visitor center by the limited weight capacity of the bridge, or when the crossing at the project site is flooded and impassable, vehicular access is diverted to the alternative access road (High Road), which also accesses park areas beyond the bridge (Exhibit 6).

Just before Crags Road approaches and crosses Malibu Creek at the project site, the road splits into another section of dirt road referred to as the High Road. The High Road does not cross the creek at the project site, but veers off to continue along the creek bank for approximately one mile where it eventually merges into Crags Road beyond the visitor center and just past the bridged section of the creek (Exhibit 6). Due to failure of the existing crossing in 1998, the High Road presently constitutes the only passable vehicular access point from the main park entrance road into this portion of the park. The visitor center and staff residence are currently accessed via the High Road as it merges with Crags Road just past the visitor center and bridge, which then circles back across the bridge to the visitor center and staff housing (Exhibit 6).

The High Road has provided adequate access to the visitor center and staff housing facility up to this point, however, Park personnel have expressed concerns with designating the High Road as the only readily accessible route. Parks staff state that large maintenance and emergency vehicles can not reach the visitor center and staff residence via the High Road due to weight limitations of the creek bridge, and during times of substantial rainfall when the High Road may become extremely muddy and impassable. The applicant has also indicated, and Commission staff concurs, that continued use of the High Road as a primary, or sole access road is undesirable due the potential of damage to natural resources occurring along this road as a result of increased and routine use. The High Road parallels the creek for approximately 1 mile and is directly upslope and adjacent to the creek bank. Vehicular use of this alternative dirt road has caused erosion and run-off impacts along the creek bank and resultant discharge of sediment into the stream corridor. Additionally, the alternative access roadbed (High Road) is located directly within an oak woodland and adjacent to a open field vegetated with native bunch grass.

On the other hand, designating the proposed Crags Road stream crossing as the only access route to this portion of the park presents similar problems. Should the proposed creek crossing be constructed and the High Road abandoned, it is possible that the stream crossing would be impassable during high flood events. Under these circumstances Park personnel and emergency vehicles would not be able to access the visitor center and staff housing facility. While it is possible that the High Road could be impacted during severe flooding conditions as well, under typical flow conditions that

bar passage via the creek crossing, it is expected that the High Road would nevertheless remain passable for some four-wheel drive vehicles responding to emergency. Therefore, although neither passageway provides certain, all-weather passage, according to Parks staff the combination of the two accessways reinforces the likelihood that one or the other can be used when extreme weather conditions, in combination with a fire or life safety emergency arises.

Additionally, as described previously, large emergency and maintenance vehicles can not access those portions of the park via Crags Road past the bridge due the limited weight capacity of the bridge. The weight limitation imposed on vehicular access via Crags Road and the bridge route prevents access by larger maintenance and emergency vehicles which may be deployed for projects associated with maintaining Century Dam, prescribed burns, or fighting wildfire hazards. One additional dirt road within Malibu Creek State Park accesses the project area from the opposite direction off of Corral Canyon Road or Mulholland Highway. This access road originates some distance from the project site and therefore is not readily accessible. As such, use of this Road would result in significant delays for responding emergency vehicles. Park staff has indicated that this road is in poor condition, particularly during the rainy season, and has been used in the past only when the existing crossing has been flooded and when the High Road is muddied and impassable during severe rainfall events. Thus, the Corral Canyon/Mulholland route is not a feasible alternative to either the High Road or the creek crossing routes into the subject section of Malibu Creek State Park.

Section 30236 of the Coastal Act requires that substantial alterations of streams incorporate the best mitigation measures feasible, and that such development be permitted only for necessary water supply projects, flood control when there is no other feasible means for protecting public safety and existing development, and for projects where the primary purpose is improvement of fish and wildlife habitat. The Commission finds that substantial stream alteration will not occur as a result of the proposed project due to the pre-existing nature of hard surface and altered stream morphology which exists from the present crossing, and the fact that the project will restore the stream to a more natural condition. The existing crossing has been undercut by stream flow causing deep scouring around the structure undermining its foundation and facilitating a sectional collapse (Exhibit 8). Due to the inadequate design of the existing crossing to withstand high flows, its relatively limited capacity to conduct average stream flow and its consecutive failure, the existing crossing presents a considerable obstruction to stream flow and has significantly altered the natural characteristics of stream channel. The surficial portion of the proposed crossing will be 20 ft. wide at the culvert section and 170 ft. long, and will overlay the footprint of the existing crossing. The proposed crossing will include a substantial subsurface component consisting of a protective apron that will be approximately 32 ft. to 45 ft. in width where the crossing transitions from the road bed to the stream culverts. The intent of the new foundation is to improve hydraulic conveyance of the site for the benefit of fish and wildlife habitat.. As such, the proposed project will eliminate obstructions to surface water flow thereby restoring a more natural stream condition. In addition, the proposed crossing will include buried

inclined concrete aprons covered by a 4 ft. layer of 455 cu. yds. of rock rip-rap to reduce scouring and erosion on the up and downstream side of the crossing. The proposed new crossing with its substantial foundation and increased ability to conduct stream flow is expected to better withstand flood events, minimize erosion and abnormal pooling, and restore hydraulic conveyance, habitat values and fish passage of the stream corridor. The proposed project will remove obstructions which presently restrict stream flow and degrade habitat, therefore, the proposed project is not a substantial stream alteration addressed by Section 30236 of the Coastal Act.

The proposed project is not exempt from coastal permitting requirements as a repair and maintenance project or disaster replacement as provided for under Section 30610 of the Coastal Act. The proposed crossing is a larger structure consisting of an extensive foundation, which will occupy approximately 2.5 times more subsurface area than the existing crossing. In addition, the proposed replacement and upgrade of the creek crossing will require the use of heavy operating equipment for grading/excavation, removal of natural vegetation and placement of structures and fill in a sensitive habitat area with potentially occurring sensitive fish and wildlife species. Therefore, repair of the crossing without increasing its size would constitute development with the potential to result in significant adverse impacts to coastal resources that requires a coastal development permit.

As mentioned, the proposed project is for replacement of an existing failed creek crossing with a new crossing in the same location. Though the overall footprint of the proposed structure will be larger than that of the structure that presently exists at the project site, the surficial component of the proposed crossing will represent roughly the same mass and height as the existing structure. As such, the proposed project will not result in a substantial increase of the visible component of a structure at the project site and will, therefore, not result in a significant adverse impact to visual resources of the project area. In addition, construction activities for the proposed project will require that public access and recreational use at the project site be temporarily diverted around the site to ensure safe access and recreational use of this portion of the park during construction. However, an alternative access route (referred to by State Parks staff, and hereinafter in these findings as the "High Road") is readily accessible in the near vicinity of the project area, thus, the proposed project will not significantly impact public access and recreational use of the parkland.

B. Hazards

The proposed development is located in the Santa Monica Mountains area, an area that is generally considered to be subject to an unusually high amount of natural hazards. Geologic hazards common to the Santa Monica Mountains area include landslides, erosion, and flooding. In addition, fire is an inherent threat to the indigenous chaparral community of the coastal mountains. Wild fires often denude hillsides in the

Santa Monica Mountains of all existing vegetation, thereby contributing to an increased potential for erosion and landslides on property.

Section **30253** of the Coastal Act states in pertinent part that new development shall:

> ***(1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.***
>
> ***(2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.***

Section 30253 of the Coastal Act mandates that new development be sited and designed to provide geologic stability and structural integrity, neither create or contribute to erosion and instability, and to minimize risks to life and property in areas of high geologic, flood, and fire hazard. The purpose of the proposed project is to remove a failed Arizona-type creek crossing and to construct a new creek crossing with a culvert foundation that will restore and maintain motorized access for personnel and emergency vehicles across this portion of Malibu Creek, and which will better withstand high flood events, minimize erosion and scour, and also accommodate a more substantial, natural stream flow. The proposed project will require construction activity in the form of grading/excavation in the streambed, temporary damming and diversion of stream flow during construction, and filling of the streambed. Construction staging areas will be established in upland areas adjacent to the creek. The proposed project also includes implementation of non-structural BMP measures to address the issue of erosion and sedimentation impacts along the creek bank associated with run-off conveyed from and under the High Road, which is located upslope and adjacent to the proposed restoration site.

As described in the previous section, due to the configuration and seasonal condition of the only two readily accessible access roads into this section of the park, and the capacity limit of the bridge making large vehicle access to the visitor center and year-round staff housing facility via the High Road impossible, the Commission finds that no feasible less environmentally damaging alternative exists to the proposed project that would ensure stability of the development and adjacent area, and that would also serve to restore and maintain a necessary vehicular access route (See additional Project Alternative discussion under Section D. Fill of Wetlands). The proposed creek crossing is the primary, and only access road that can support large maintenance and emergency vehicles that may be deployed during prescribed burns attempting to reduce fire hazard in the area, or which may be needed to treat a fire at the visitor center and staff housing facility. Therefore, the Commission finds that the proposed project will minimize risks to life and property, consistent with Section 30253(1) of the Coastal Act.

The proposed creek crossing is designed to substantially improve hydraulic and sediment conveyance through the structure within the stream channel, able to convey a

5-year flood event through a culvert foundation. The project site is located in an expansive flood plain, however, the proposed crossing will be located only within the immediate stream channel that normally conducts average stream flows through the flood plain. The proposed crossing is designed to convey a 5-year flood event through a series of ten, 6'x6' boxed culverts, and will also include a substantial enlargement and deepening of the foundation than that of the failed crossing. As such, the crossing is expected to reduce sediment accumulation upstream, minimize the potential for deep scouring and erosion of the streambed, and to remain structurally sound under forces of over topping and high flows anticipated within the watershed. The applicant has submitted a Geotechnical/Hydrological Evaluation of Draft Construction Drawings, Malibu Creek Crossing, Malibu Creek State Park, prepared by Group Delta Consultants, Inc., dated 6/18/01 which states in part:

> *The existing low-flow structure consists of five 24 inch diameter corrugated metal pipes intended to convey low flows, with higher flows submerging and spilling over the structure. The relatively small hydraulic conveyance would create a backwater behind what was, in essence, a submerged weir, with significant accumulation of sediment upstream of the low-flow crossing. The recent failure of the structure has necessitated its repair with the currently proposed upgrades, a significant hydraulic benefit to more effectively convey the more frequent flood flows and sediment through the new structure.*

The Commission finds that removal of the failed crossing and replacement with the proposed structure will reduce erosion, scouring and instability of the site and is therefore consistent with Section 30253(2) of the Coastal Act.

In past permit actions the Commission has regularly found that construction activities within and adjacent to stream channels potentially result in excessive run-off and erosion from disturbed and excavated soils, excess sedimentation into the stream, destabilization of the stream channel and creek bank, thereby altering the natural morphology of the site and potentially resulting geologic instability. Therefore, to ensure that the proposed construction activities do not result in excessive run-off and erosion potentially causing destabilization of the site the Commission finds that the applicant shall implement erosion control measures for the duration of the project to stabilize all disturbed areas, including but not limited to, sandbag barriers, silt fencing, geofabric covers, temporary basins and swales, and shall stabilize all temporary stockpiled material as detailed in **Special Conditions 2 and 3**. To address the issue of continued destabilization along the creek bank adjacent to the restoration site, and sedimentation into the stream channel associated with erosion resulting from run-off conveyed from and under the High Road, **Special Condition 3** specifies that the applicant's proposal to restore the creek bank and minimize erosion and sedimentation utilizing selected non-structural BMPs designed to control the volume, velocity and sediment load of run-off water over the creek bank and into the stream channel, shall be fully implemented.

The Commission also finds that disturbed soils and excavated sites, when subject to substantial rainfall, may result in excess erosion of soils. Such erosion may destabilize

the site of the proposed project. Therefore, **Special Condition 1** requires the applicant to submit a Project Timing and Implementation Schedule that describes the timing, duration, methods and staging areas for all construction activities. The Schedule shall also specify that construction activity shall be prohibited during the rainy season (November 1-March 31) unless otherwise permitted by the Executive Director for good cause. No construction activity shall be conducted during a rainfall event and the applicant shall maintain a five-day clear weather forecast prior to commencement of any construction activity at the site. In the event that rainfall is predicted and/or does occur, protective measures to prevent erosion and sedimentation shall be implemented and maintained and construction activities shall not resume until 72 hours following a rainfall event, pursuant to the requirements of the condition.

Furthermore, **Special Condition 8** specifies that the applicant shall revegetate and restore all disturbed areas utilizing native plant species endemic to the surrounding environment. Invasive and non-native plant species are generally characterized as having a shallow root structure in comparison with their high surface/foliage weight. The Commission notes that non-native and invasive plant species with high surface/foliage weight and shallow root structures do not serve to stabilize slopes and that such vegetation results in potential adverse effects to the stability of the project site. Native species, alternatively, tend to have a deeper root structure than non-native and invasive species, and once established aid in preventing erosion. Therefore, the Commission finds that in order to ensure site stability, all slopes and disturbed and graded areas of the site shall be revegetated and restored with native plant species, consistent with the terms of Special Condition 8.

In addition, construction of the proposed creek crossing will require excavation of approximately 2,050 cu. yds. of native streambed material. Approximately 1,442 cu. yds. of the excavated streambed material is expected to be replaced resulting in an excess 608 cu. yds. of material. Excavated materials that are placed in stockpiles are subject to increased run-off and erosion resulting in potential adverse effects to the stream corridor from sedimentation and increased turbidity. Therefore, to ensure that graded/excavated material will not be permanently stockpiled on site and that erosion and sedimentation on site are minimized during construction activities, **Special Condition 2** requires any stockpiled material to be located as far from the stream areas on site as feasible, no less than 30 feet in distance from the top edge of the stream banks. Special Condition 2 also requires all debris resulting from construction activities to be removed from the project site within 24 hours of completion of construction. Permanent stockpiling of material on site shall not be allowed. Therefore, **Special Condition 4** requires the applicant to provide evidence to the Executive Director of the location of the permanent disposal site for all excess excavated material and construction debris prior to removal of the material from the project site. Should the disposal site be located in the coastal zone, a coastal development permit or an amendment to this coastal development permit shall be required.

The proposed project will require that stream flow be temporarily dammed and diverted around the project site during construction of the new creek crossing. The applicant has

not yet identified a definitive plan for temporarily diverting the stream around the project site. Therefore, the Commission finds that prior to issuance of the costal permit, the applicant shall submit, for review and approval of the Executive Director, a Surface Water Diversion Plan, which details the types and locations for all temporary structures necessary to safely and effectively divert the stream around the project site as required by **Special Condition 7**. Special Condition 7 also requires that the diversion plan be executed in a manner that prevents pollution, excess erosion and sedimentation of the stream channel and adjacent areas.

The proposed development is located in a 500-600 ft. wide floodplain in the Malibu Creek Watershed and has been subject to potential hazards from flooding and debris flows. The project site and areas adjacent to and near the project site may be subject to seasonal flood events during the winter storm season that may potentially affect the stability of the proposed structure and adjacent area. The Commission notes that the intent of the proposed project, in part, is to maintain readily accessible emergency access to an existing staff housing facility and to several popular recreation sites. Though the proposed crossing is not an all weather crossing, it is one of only two readily accessible access routes into this park area, neither of which qualify as an all weather access route. Thus the structure's sound design and maintenance is essential to ensure adequate emergency access into this portion of the park, and to therefore minimize the potential risks to staff residents and park visitors. Due to the inherent risk of flooding, erosion, and debris flow possibly affecting the structural integrity of the proposed creek crossing, and the essential role the proposed crossing plays in supporting adequate emergency access to the site, the Commission finds that the applicant shall maintain the structural integrity of the proposed creek crossing structure at all times, and shall recover any section of the structure that may become dislodged due to severe flooding, debris flow, erosion, or any other causes, as detailed in **Special Condition 5**. Additionally, Special Condition 5 requires the applicant to submit project plans to the Executive Director prior to commencing with any necessary repair or recovery operation to determine if it shall be necessary to obtain a new coastal development permit from the Commission.

Although the proposed development is designed to accommodate a 5-year flood event and is expected to remain structurally sound under forces of over topping and high flows anticipated to occur within the watershed, there remains some inherent risk in construction a structure within a floodplain where it may be subject to extreme flooding and debris flows. The Coastal Act recognizes that certain types of development, such as the proposed project, may involve the taking of some risk. Coastal Act policies require the Commission to establish the appropriate degree of risk acceptable for the proposed development and to determine who should assume the risk. When development in areas of identified hazards is proposed, the Commission considers the hazard associated with the project site and the potential cost to the public, as well as the right to use one's property. As such, the Commission finds that due to the unforeseen possibility of flooding and erosion, the applicant shall assume these risks as a condition of approval. Therefore, **Special Condition 6** requires the applicant to waive any claim of liability against the Commission and its employees for damage to life or

property that may occur as a result of the permitted development. The applicant's assumption of risk will illustrate that the applicant is aware of and appreciates the nature of the hazards which exist on the site, and which may adversely affect the stability or safety of the proposed development.

For the reasons set forth above, the Commission finds that, as conditioned, the proposed project is consistent with the Section 30253 of the Coastal Act.

C. Water Quality

Section **30231** of the Coastal Act states:

> ***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, minimizing alteration of natural streams.***

Sections 30230 mandates that the biological productivity and the quality of coastal waters and streams be maintained and, where feasible, restored. The Commission finds that the quality of coastal waters and streams may be maintained and restored through means such as minimizing adverse effects of waste water discharge and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flows, maintaining natural buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

As described, the proposed project is for the removal a failed Arizona-type creek crossing and construction of a new creek crossing with a culvert foundation that will better withstand high flood events, minimize erosion and sedimentation and accommodate a more substantial, natural stream flow. The proposed project will require construction activity in the form of grading/excavation in the streambed, temporary damming and diversion of stream flow during construction, and filling of the streambed. Construction staging areas will be established in upland areas adjacent to the creek. The proposed project also includes mitigation for habitat permanently displaced by the proposed structure and includes restoration of a significantly degraded riparian area located approximately 500 ft. upstream of the project site. The proposed mitigation and restoration will include restoring both creek banks adjacent to the crossing site and of an approximately 500 ft. stretch of stream corridor upstream, and implementation of non-structural BMP measures to address the issue of erosion and sedimentation impacts along the creek bank associated with run-off conveyed from the High Road, which is located upslope and adjacent to the proposed restoration site.

The stream located at the project site is designated as an environmentally sensitive habitat area (ESHA) and as a blueline stream by the United States Geologic Service. Malibu Creek is a perennial waterway with stream flow occurring throughout the year. Coastal streams, such as the creek located on the subject site provide important habitat for aquatic life and riparian plant and animal species. Section 30231 of the Coastal Act provides that the quality of coastal waters and streams shall be maintained and restored whenever feasible. The proposed project is intended to restore water quality along this portion of Malibu Creek and, in turn, restore and improve the stream corridor to a more natural state for the benefit of sensitive habitat and aquatic organisms. Water quality and habitat areas associated with the stream at the project site have experienced continued disturbance for several years due to the original construction of the existing creek crossing. The existing crossing, containing only five, 2 ft. diameter culverts, was not designed to convey a substantial amount of stream and sediment flow through the culvert system and has resulted in a significant amount of sediment accumulation and pooling upstream of the site since the structure's original construction in the 1950's. Additionally, due to the existing structure's minimal hydraulic conveyance, lack of a sufficient foundation and inability to withstand high flood events, the structure has caused deep scouring of the streambed directly underneath and downstream of the crossing, eventually causing a sectional failure. Failure of the crossing has further restricted stream flow thus exacerbating sediment accumulation and shallow pooling upstream of the crossing. The pooling effect of the stream channel, and the fact that the existing crossing constitutes a barrier to many aquatic species, has resulted in a significant alteration in plant and animal species composition and diversity normally expected to occur within a riparian corridor such as that which exists at the site. Additionally, the existing crossing has been identified as a barrier to fish passage by ENTRIX Inc. in the 1989 report titled Malibu Creek Steelhead Habitat Assessment.

The proposed project will result in a substantial improvement to water quality of Malibu Creek as the upgraded design will increase hydraulic and sediment conveyance within the stream channel. Construction of the proposed creek crossing with a new culvert foundation will result in a structure able to convey a 66 ft. wide stream flow, as compared to the existing crossing's ability to conduct only a 25 ft. wide stream flow. Moreover, the new series of 10 culverts will be buried 2.5 ft. below grade to allow for a more natural pattern of sediment conveyance within the streambed. This overall increase in stream flow conveyance will reduce interference with surface water flow and result in restoring much of the creek's natural meandering configuration while facilitating sediment flow through the structure, thereby correcting and further minimizing the pattern of sediment accumulation and shallow pooling upstream of the crossing site. Additionally, the proposed structure will include a substantial enlargement and deepening of the foundation than that of the failed crossing and is therefore expected to minimize the potential for deep scouring and erosion of the streambed causing sedimentation to downstream areas in the watershed.

The proposed project also includes restoration and mitigation for habitat disturbed during construction at the site and for that habitat which will be permanently displaced by the proposed structure. The applicant has identified a significantly degraded riparian

area approximately 500 ft. upstream of the project site for a proposed mitigation and restoration site. The proposed project will include restoring both creek banks directly adjacent to the crossing site, and of an approximate 500 ft. stretch of stream corridor. The proposed project also consists of implementation of non-structural BMP measures along the creek bank of the restoration site to address the issue of erosion and sedimentation impacts associated with run-off conveyed from the High Road, which is located upslope and adjacent to the restoration site. The applicant's proposal to restore both the disturbed areas at the crossing site and the degraded riparian corridor at the proposed restoration site will serve to establish and maintain natural vegetation buffers which will further improve the water quality and creek habitat of the coastal stream. Chris Peregrin, Associate Resource Ecologist for State Parks, discusses the importance of the restoration component of the proposed project to ensure significant improvement and maintenance of good water quality and optimum populations of marine organisms at the project site:

> *Vegetative restoration of the creek bank and associated upland areas will benefit native amphibians, aquatic invertebrates and fishes of Malibu Creek by reducing sediment input to the creek and by providing structure and cover and habitat diversity. The restoration reach has several points of erosion that input sediment to Malibu Creek with each run-off event. In California's coastal stream systems, high sediment loads are often associated with poor water quality and as a result, decreased aquatic invertebrate, amphibian and fish populations. Large amounts of sediment will also negatively effect the stream environment by settling to the stream floor (substrate) and reducing habitat quality for aquatic invertebrates as well as covering potential spawning substrates for fishes. Restoring vegetation throughout this reach will decrease sediment run-off and help to improve water and substrate quality.*
>
> *Malibu Creek supports exotic fish species such as mosquitofish, common carp and a variety of sunfishes (bluegill, green sunfish and largemouth bass). These exotic fish species compete with and/or prey upon native fishes. Largemouth bass taken from Malibu Creek during fish surveys have been found to have stomachs full of arroyo chub. Because riparian vegetation, such as mulefat and willow exted their branches over the stream edge and often into the water column, they provide structure which may be used by native fishes for refuge from predation. Fallen branches, logs and the roots from larger willows and sycamore trees will offer cover for use by native fishes as well. This riparian vegetation will also provide 'holding cover' for native fishes during high flow events. In particular, the arroyo chub is specialized to use in-stream cover, such as riparian vegetation to avoid being washed down stream during flood events.*
>
> *Other benefits of riparian vegetation involve increased habitat diversity, which is often associated with increased bio-diversity. Diverse aquatic habitats with pools, riffles, runs and a well-developed riparian zone, often support diverse aquatic invertebrate populations. A diverse assemblage of aquatic*

invertebrates serves as an important food base for the native fish community. The importance of a diverse food source is especially critical due to the presence of exotic fish species that compete for resources. Riparian vegetation will also provide in-stream shade from the sun, which is associated with cooler water temperatures and reduced metabolic stress for fish. This may be critical for fish survival during low water years and drought.

In past permit actions, the Commission has found that new development within stream channels and riparian areas, such as the proposed project, results in potential adverse effects to water quality and marine resources from increased run-off, erosion, sedimentation, and loss of riparian vegetation. As discussed above, the Coastal Act requires that water quality and marine resources be maintained, and where feasible, restored. The value and quality of marine resources at the subject site are directly related to the water quality of the coastal stream that sustains the habitat.

Although the proposed new creek crossing will be located in approximately the same location as the existing creek crossing to be removed, and is designed to improve the overall stream environment as discussed previously, the Commission notes that construction activities associated with the proposed development will result in potential adverse effects to water quality and marine resources from run-off, erosion and sedimentation from disturbed soils, and temporary loss of vegetative coverage. The Commission finds that disturbed soils and excavated sites, when subject to substantial rainfall, may result in excess erosion of soils and increased sedimentation into the stream corridor resulting in adverse impacts to water quality. Therefore, **Special Condition 1** requires the applicant to submit a Project Timing and Implementation Schedule that describes the timing, duration, methods and staging areas for all construction activities. Special Condition 1 specifies that construction activity shall be prohibited during the rainy season (November 1-March 31) unless otherwise permitted by the Executive Director for good cause. No construction activity shall be conducted during a rainfall event and the applicant shall maintain a five-day clear weather forecast prior to commencement of any construction activity at the site. In the event that rainfall is predicted and/or does occur, protective measures to prevent erosion and sedimentation shall be implemented and maintained and construction activities shall not resume until 72 hours following a rainfall event.

The Commission finds that potential adverse effects of the proposed development on water quality at the site may be minimized through implementation of runoff and erosion control measures for the duration of the project, including but not limited to, sandbag barriers, silt fencing, geofabric covers, temporary basins and swales, and by stabilizing all temporary stockpiled material as detailed in **Special Conditions 2 and 3**. In addition, to minimize continued erosion and sedimentation along the creek bank adjacent to the mitigation site into the stream channel, **Special Condition 3** specifies that the applicant shall implement the proposal to restore the creek bank and minimize runoff, erosion and sedimentation from the High Road utilizing selected non-structural BMPs designed to control the volume, velocity and sediment load of run-off water over the creek bank and into the stream channel. Selected BMPs shall be maintained in a

functional condition at all times. As a result of full implementation of Special Condition 3, the proposed project will serve to improve water quality of the stream channel at the mitigation site by ensuring that no direct runoff from the adjacent road bed will outlet into the stream corridor prior to being treated and filtered through a system of energy dissipating, vegetated and/or gravel filter strips, sediment basins, swales, or other media filter devices.

Construction of the proposed creek crossing will require excavation of approximately 2,050 cu. yds. of native streambed material. Approximately 1,442 cu. yds. of the excavated streambed material is expected to be replaced resulting in an excess 608 cu. yds. of material. The Commission finds that excavated materials that are placed in stockpiles are subject to increased run-off and erosion resulting in potential adverse effects to the stream corridor from sedimentation and increased turbidity. Therefore, to ensure that graded/excavated material will not be permanently stockpiled on site and that erosion and sedimentation on site are minimized during construction activities, **Special Condition 2** requires any stockpiled material to be located as far from the stream areas on site as feasible, no less than 30 feet in distance from the top edge of the stream banks. Special Condition 2 also requires all debris resulting from construction activities to be removed from the project site within 24 hours of completion of construction. Permanent stockpiling of material on site shall not be allowed. Therefore, **Special Condition 4** requires the applicant to provide evidence to the Executive Director of the location of the permanent disposal site for all excess excavated material and construction debris prior to removal of the material from the project site. Should the disposal site be located in the coastal zone, a coastal development permit or an amendment to this coastal development permit shall be required.

Furthermore, **Special Condition 8** specifies that the applicant shall revegetate and restore all disturbed areas utilizing native plant species endemic to the surrounding riparian environment. The Commission finds that restoring native and riparian vegetation at disturbed areas and along the stream corridor at the proposed mitigation site will aid in preventing sediment runoff into the stream channel and thereby enhance and maintain water quality. Additionally, as required by Special Condition 8, the Commission finds that water quality and marine resources of the stream will be further improved by re-establishing natural vegetation buffer areas along the creek banks, which will facilitate an improvement in available habitat area necessary to maintain optimal populations of aquatic life within Malibu Creek.

The proposed project will also require that stream flow be temporarily dammed and diverted around the project site during construction of the new creek crossing. The applicant has not yet identified a definitive plan for temporarily diverting the stream around the project site. Therefore, the Commission finds that prior to issuance of the coastal permit, the applicant shall submit, for review and approval of the Executive Director, a Surface Water Diversion Plan, which details the types and locations for all temporary structures necessary to safely and effectively divert the stream around the project site as required by **Special Condition 7**. Special Condition 7 also requires that

the diversion plan be executed in a manner to prevent pollution, excess erosion and sedimentation of the stream channel and adjacent areas.

For the reasons discussed above, the Commission finds that the proposed project, as conditioned, is consistent with Section 30231 of the Coastal Act.

D. Sensitive Resources and Fill of Wetlands

Section **30240** states:

> ***(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas.***
>
> ***(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas.***

Riparian Habitat

Section 30240 of the Coastal Act states that environmentally sensitive habitat areas must be protected against disruption of habitat values, and that only uses dependent on such resources shall be permitted in an environmentally sensitive habitat area. The project is entirely located in an area mapped and designated as an inland environmentally sensitive habitat area. In addition to the wetland habitat addressed in the subsection below, the project site contains sensitive riparian and streambed habitat.

As explained above, the proposed project will significantly reduce the disruption of habitat values at the site by restoring the area to a more natural condition, reducing pooling, erosion and scouring, and by re-establishing a stream channel that will facilitate passage of fish and other aquatic species. The proposed project will serve to restore and enhance habitat values and will therefore be a direct function of the resources on site. Thus, the proposed restoration project is dependent on the resources at the project site and is an allowable use under Section 30240 of the Coastal Act.

Sensitive Species

Section **30230** of the Coastal Act states that:

> ***Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and***

that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Sections 30230 of the Coastal Act requires that marine resources be maintained, enhanced and restored and that special protection be given to areas and species of special biological importance or economic significance. Section 30230 of the Coastal Act further requires that uses of the marine environment sustain the biological productivity and the quality of coastal waters and streams and maintain healthy populations of all species and marine organisms.

The project site and near vicinity contain designated environmentally sensitive habitat area (ESHA) in the form of riparian, wetland and streambed habitat. Grassland and individual oak trees also exist near the project site in upland areas, although no oak trees occur in the expected zone of influence of the proposed project. Coastal streams and drainages, such as the blueline stream located at the subject site, and other primary waterways, provide important habitat for sensitive plant and animal species. In past permit actions the Commission has found that new development within coastal streams and natural drainages results in adverse impacts to sensitive habitat and marine resources from obstruction of natural stream flow, increased erosion and siltation, disturbance of fish and wildlife, and loss of riparian plant and animal habitat.

The habitat area at the project site has been disturbed for several years due to the original construction of the existing creek crossing. The existing crossing was not designed to convey a substantial amount of stream and sediment flow and has resulted in a significant amount of disturbance to the natural resources at the site. The pooling effect of the stream channel, and the fact that the existing crossing constitutes a barrier to many aquatic species, has resulted in an alteration in plant and animal species composition and diversity normally expected to occur within a riparian corridor such as that which exists at the site. Thus, the existing structure has substantially altered the natural stream morphology, vegetation patterns and fish and wildlife composition and diversity expected to exist at the site.

The proposed project involves removal of the failed creek crossing and construction of a new larger crossing in the same location which is designed to convey increased stream and sediment flow, and is specifically designed to facilitate migration of fish and other aquatic species. The proposed project will result in restoring a more natural movement of sediment and stream flow through the stream corridor thus enhancing water quality and sensitive habitat values of the site. As such, the project will significantly improve the overall biological characteristics of the site by way of a project designed to improve water quality and assist in the passage of fish and other aquatic species through a portion of the creek currently impenetrable for many species. Additionally, the proposed project will also restore a primary access road for routine park purposes, thereby decreasing the amount of motorized access on the High Road and minimizing the resource impacts associated with continued routine use of that road.

In addition, the applicant is proposing to mitigate adverse effects to riparian and wetland habitat resulting from the proposed project, by restoring all disturbed areas at the project site and by implementing a restoration program over a significantly disturbed portion of the creek corridor located approximately 500 ft. upstream of the project site. The proposed mitigation will include restoring both creek banks at the project site and an approximately 500 ft. stretch of stream corridor at the mitigation site, and implementation of non-structural BMP measures to address the issue of erosion and sedimentation impacts along the creek bank at the proposed restoration site. The applicant's proposal to restore both the disturbed areas at the project site and the degraded riparian corridor upstream will serve to establish and maintain natural vegetation buffers which will improve water quality and creek habitat of the coastal stream, and which will provide new riparian habitat for the benefit of fish and wildlife. The revegetation and restoration component of the proposed project will ensure significant improvement and maintenance of the habitat area for healthy populations of marine organisms by reducing sediment input into the creek, and by providing structure and cover and habitat diversity within the stream channel.

The Commission finds that disturbed and lost sensitive habitat area resulting from the proposed project must be adequately mitigated and restored for the proposed project to be consistent with the sensitive resource protection policies of the Coastal Act. Therefore, **Special Condition 8** requires the applicant to submit a detailed Riparian and Wetland Habitat Restoration and Monitoring Plan, prepared by a qualified resource specialist, for all areas of the project site disturbed by construction activities and/or permanently displaced due to the construction of the creek crossing improvements. All habitat areas disturbed by the proposed project activities shall be revegetated and restored to the maximum extent feasible with appropriate native plant species endemic to the riparian, wetland and upland habitat areas on site. The applicant shall submit, for review and approval of the Executive Director, a Preliminary Ecological Assessment of the riparian, wetland and upland areas to be affected by the proposed project activities, which clearly identifies all native vegetation to be disturbed by the proposed operations. The Riparian and Wetland Habitat Restoration and Monitoring Plan shall provide for the restoration of all riparian habitat destroyed or damaged by construction activities or permanently displaced by the proposed development at a 3:1 or greater ratio. The mitigation areas shall be delineated on a site plan and shall be located on or immediately adjacent to the project site and/or the proposed restoration site, approved by the Executive Director, located approximately 500 ft. upstream of the project site. To ensure that restoration efforts are successful, Special Condition 8 further requires the applicant to submit annual reports indicating the success or failure of the restoration effort for a period of five years. If the restoration effort is in part, or in whole, unsuccessful, the applicant shall be required to submit a revised or supplemental restoration program. **Special Condition 1** has been required to ensure that the Riparian and Wetland Habitat Restoration and Monitoring Plan will be implemented in a timely manner.

Furthermore, Special Condition 8 specifies that vegetation established in the restoration areas created pursuant to the Riparian and Wetland Mitigation and Restoration Plan

shall at no time be damaged or destroyed by the applicant. In addition, the project is located in Malibu Creek State Park, an area which is readily accessible by the public and provides numerous recreational opportunities. The Commission finds that limiting access within sensitive and fragile restoration areas will aid in successful restoration efforts and is necessary to ensure that restoration is effective and that adequate mitigation for the loss of sensitive habitat is implemented. Therefore, **Special Condition 9** requires the applicant to establish and maintain a Public Access and Habitat Restoration Program designed to divert the public from particularly sensitive habitat areas and restoration areas and to inform the public of habitat restoration efforts occurring within the project area. Prior to issuance of the coastal permit, the applicant shall submit project plans, in combination with the required Riparian and Wetland Mitigation and Restoration Plan, for review and approval of the Executive Director, indicating the location and text of informative signage to be placed in the project area and any proposed method for diverting the public away from or around restoration areas.

The value and quality of the sensitive resources at the subject site are directly related to the water quality of the coastal stream that sustains the habitat. As such, the Commission finds that potential adverse effects of the proposed development on sensitive resources at the site may be minimized by maintaining good water quality by means of ensuring that erosion is minimized, and that run-off is controlled and filtered before it reaches the natural drainage. Therefore, the Commission imposes **Special Conditions 2 and 3** which require the applicant to implement erosion control measures for the duration of the project to stabilize all disturbed areas, and all temporary stockpiled material that may be subject to increased erosion. Permanent stockpiling of material on site shall not be allowed. Therefore, **Special Condition 4** requires the applicant to provide evidence to the Executive Director of the location of the permanent disposal site for all excess excavated material and construction debris prior to removal of the material from the project site. **Special Conditions 3** and **8** specify that the applicant shall implement the proposal to restore the creek bank and minimize erosion and sedimentation utilizing selected non-structural BMPs designed to control the volume, velocity and sediment load of run-off water over the creek bank and into the stream channel. The Commission finds that controlling and treating run-off prior to out-letting into the stream channel will reduce potential adverse impacts on water quality and will therefore prevent impacts that would significantly degrade sensitive habitat and species. Furthermore, **Special Condition 8** specifies that the applicant shall revegetate and restore all disturbed areas utilizing native plant species endemic to the surrounding environment. Special Conditions 8 also requires all invasive and non-native plant species to be removed from the stream channel and riparian vegetation corridor, and that the area be immediately revegetated with appropriate native plant species to ensure the establishment of native habitat and reduce the potential for runoff and erosion impacting water quality and habitat values. (See Section C. Water Quality for a more detailed discussion of coastal water quality).

The applicant has submitted a biological assessment of the project area, prepared by Chris Peregrin, Associate Resource Ecologist for State Parks, indicating that no

sensitive fish and wildlife species were surveyed at the site. However, the applicant has submitted information that indicates the habitat area may provide habitat for several potentially occurring sensitive species including least Bell's vireo, southwestern willow flycatcher, western pond lizard, coast horned lizard, coastal whiptail, silvery legless lizard; coast patchnose, San Bernardino ringneck or two-striped garter snakes; southwestern pond turtle, arroyo toad, California red-legged frog, arroyo chub and steelhead. Of particular interest to the applicant, and relative to the proposed project, is the potential for steelhead trout to occur at the project site. Presently, steelhead do not occur at the site due to the presence of Rindge Dam downstream acting as a barrier to migration of the anadromous fish species up to this location and the further reaches of Malibu Creek. However, recognizing that Rindge Dam is slated to be decommissioned and torn down it is highly possible that the Malibu Creek watershed will again be available as steelhead habitat ranging from Malibu Lagoon through the upper reaches of Malibu Creek up to the project site. The existing crossing at the project site has been identified as the next significant barrier to steelhead passage up the Malibu Creek Watershed, stream habitat that may provide a combination of high quality spawning and rearing habitat ideal for steelhead. Realizing the need to replace the existing crossing for operational purposes in conjunction with the potential for steelhead habitat to be re-established within this reach of Malibu Creek in the near future, the applicant has taken the opportunity to design the proposed new crossing such that it will facilitate passage of steelhead and other aquatic life, as well as result in an overall improvement of natural stream morphology and sediment conveyance.

Due to the fact that several sensitive fish and wildlife species are identified as potentially occurring at or near the project site, the Commission finds that the proposed project and construction activities may potentially impact sensitive species. Therefore, **Special Condition 1** requires the applicant to provide evidence to the Executive Director that a qualified resource specialist, with appropriate qualifications acceptable to the Executive Director, will be retained to implement all sensitive resource protective measures necessary to avoid an disturbance of sensitive species during construction. Prior to commencement of the proposed project the resource specialist shall conduct an initial survey of the project area, to be submitted for the review and approval of the Executive Director, to confirm the presence/absence of any listed rare, threatened or endangered species. If the initial survey of the project area identifies the presence of any sensitive species within 500 ft. of the project area, the applicant shall immediately notify the Executive Director to determine an appropriate strategy to avoid potential impacts to sensitive species prior to commencement of construction.

Should sensitive species be sighted within 500 ft. of the project area during project operations, the resource specialist shall require the applicant to cease all work and immediately notify the Executive Director to determine an appropriate strategy to avoid potential impacts to sensitive species prior to resuming project operations. Special Condition 1 further requires the applicant to cease all work in the event that any sensitive species are present at the project site, or any unforeseen sensitive habitat/species issues arise, so that a resource avoidance program shall be implemented with sufficient measures, including but not limited to, salvage and

relocation, establishing buffer areas, and installing exclusionary fencing to prevent migration of sensitive species into the work area. Special Condition 1 also requires that no vegetation removal within the project area shall be authorized during the primary breeding, nesting, and fledgling season for bird species (March 1-June 15), unless otherwise permitted by the Executive Director for good cause. Should the applicant propose to commence vegetation removal in the project area within the time period of March 1-June 15, a qualified resource specialist shall conduct a survey for nesting birds each day prior to commencement of construction activity. In the event that any rare, threatened or endangered bird species is present at the project site no construction activity shall occur within the project area from March 1- September 1. Additionally, should the presence of such sensitive species require review by the United States Fish and Wildlife Service and/or the California Department of Fish and Game, no development activities shall be allowed or resume until such authorizations are received, subject to approval of the Executive Director. Should there be no identifiable means of avoiding adverse impacts on sensitive species, no construction activities shall be conducted in the area where the sensitive species occur.

The proposed creek crossing is designed to increase migration efficiency for fish and other aquatic species throughout the stream channel. However, the Commission finds that should the crossing and culvert section fail at any time, the failed structure may obstruct stream flow, impact adjacent habitat and present a barrier to the passage of aquatic life. Therefore, **Special Condition 5** requires the structural integrity of the concrete crossing to be maintained and the stream culverts clear of debris at all times so as to maintain appropriate water depth, temperature, and velocity to facility passage for aquatic species. In addition, the Commission finds that the proposed project may potentially create an improved habitat condition for steelhead trout upon removal of Rindge Dam from the downstream corridor, which may potentially provide pertinent information for review of similar projects that may be proposed to improve fish habitat in the future. Therefore, **Special Condition 1** requires the applicant to submit to the Executive Director for review, a complete fisheries analysis of the proposed structure's performance efficiency and ability to facilitate passage of steelhead through the structure within one year of removal of Rindge Dam, and for five consecutive years following dam removal, and that the analysis include a detailed description of the structure's benefits and/or disadvantages for re-establishing steelhead migration.

Finally, the proposed project will require that stream flow be temporarily diverted around the project site, and that alteration of the natural stream flow may potentially impact aquatic life in the stream channel. Therefore, **Special Condition 7** requires the applicant to submit a Surface Water Diversion Plan, for the review and approval of the Executive Director, which shall include project plans with a detailed description of the timing, method, and duration in which stream flow is to be diverted and restored to its natural course, and locations for all temporary structures necessary to safely and effectively divert stream flow around the project site. The applicant shall ensure that stream flow, from the upper reaches of the creek to areas downstream of the project site, is maintained at all times in a condition of sufficient quality and quantity to support

aquatic life above and below the diversion and discharge locations. Natural stream flow shall be restored immediately upon completion of the proposed project.

For the reasons set forth above, the Commission finds that the proposed project, as conditioned, is consistent with Sections 30231 and 30240of the Coastal Act.

Wetland Habitat

The proposed project is located within a stream corridor that contains a small wetland area within a more extensive riparian habitat area (Exhibit 5). Wetlands are defined in Section **30121** of the Coastal Act as follows:

> ***'Wetland' means lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens.***

The Commission regulations provide a more explicit definition of wetlands. Section 13577(b) of Title 14 of the California Code of Regulations defines wetlands as follows:

> ***Wetlands are lands where the water table is at, near or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent or drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentrations of salt or other substances in the substrate. Such wetlands can be recognized by the presence of surface water or saturated substrate at some time during each year and their location within, or adjacent to, vegetated wetlands or deep water habitats.***

The above definition requires the presence of one of three common wetland attributes of hydrology, hydrophytic vegetation, or hydric soils. It should be noted that this definition is more inclusive than those of other agencies, such as Army Corps of Engineers, which requires a site to exhibit all three of those attributes to be considered a wetland.

As described previously, the proposed creek crossing is designed to withstand high flood events and minimize erosion with an increased ability to conduct sediment and stream flow, and is intended to enhance the riparian and aquatic habitat of the project area. Though the proposed project is intended to benefit coastal resources, because the proposed structure must be larger than that which presently exists to achieve the restoration benefits intended (i.e. larger foundation and culvert system to minimize erosion and facilitate improved stream conveyance and passage of aquatic life), the new structure will encompass a larger surface area than that presently affected by the existing creek crossing. Therefore, the proposed project will result in some new displacement of habitat.

Much of the increased footprint of the proposed larger crossing will encompass surface area presently disturbed by the existing structure. However, the applicant has submitted project plans that illustrate sensitive habitat areas occurring in the project area, prepared by Chris Peregrin, Associate Resource Ecologist, State Parks. The plans delineate the project area and the entire habitat area which will be impacted by the proposed project (including all probable limits of work and staging areas, Exhibit 5). The proposed project will impact 26,571 sq. ft. of surface area (approximately 0.61 acres) which includes approximately 95 total linear feet of streambed (includes both banks of the stream channel). Of the 0.61 acres of surface area affected by the proposed project, 566 sq. ft. is wetland habitat. The proposed structure will occupy and therefore permanently displace a small percentage of the affected habitat square footage described, resulting in approximately 113 sq. ft. of wetland habitat permanently lost as a result of constructing the new creek crossing. The other 443 sq. ft. of wetland affected by the proposed project will only be affected by construction activities and will be revegetated

In addition, Section **30233** of the Coastal Act specifically addresses allowable uses for placement of fill in Wetlands. Section 30233 (a) states, in relevant part, that:

> ***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 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 then 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.

The proposed restoration project is for the removal a failed Arizona-type creek crossing and construction of a new creek crossing with a culvert foundation that will restore a more substantial, natural stream flow and better withstand high flood events. The proposed project will require construction activity in the form of grading/excavation in the streambed, temporary damming and diversion of stream flow during construction, and filling of the streambed. Construction staging areas will be established in upland areas adjacent to the creek. The proposed project also includes restoration of disturbed habitat and mitigation for habitat permanently displaced by the proposed structure. The applicant has identified a significantly degraded riparian area approximately 500 ft. upstream of the project site for the proposed mitigation and restoration efforts. The proposed mitigation will include restoring both creek banks adjacent to the crossing site and of an approximate 500 ft. stretch of stream corridor. The proposed restoration area upstream of the crossing site will include implementation of non-structural BMP measures to address the issue of erosion and sedimentation impacts along the creek bank associated with run-off conveyed from the High Road, which is located upslope and adjacent to the proposed restoration site.

A described, the proposed project involves filling the streambed to accommodate the increased size of the proposed creek crossing. As such, the project will result in permanent displacement of creek habitat. As mentioned, the current state of stream morphology and habitat are in a disturbed and degraded condition due to long-term and continual impacts of the existing creek crossing. The pooling effect of the stream channel, and the fact that the existing crossing constitutes a barrier to many aquatic species, has resulted in an alteration in plant and animal species composition and diversity normally expected to occur within a riparian corridor such as that which exists at the site. Additionally, the occurrence of wetland habitat in a high-energy alluvial environment such as the stream channel at the site, is a relatively unnatural component of the ecosystem. Thus, the existing structure has substantially altered the natural stream morphology, vegetation patterns and fish and wildlife composition and diversity expected to exist at the site. The above Coastal Act policies set forth a number of limitations on which projects may be allowed in wetland areas. For analysis purposes, the limitations can be categorized into three tests:

1. The purpose of the project is limited to one of eight allowable uses
2. The project has no feasible less environmentally damaging alternative; and

3. Adequate mitigation measures to minimize the adverse impacts of the proposed project on habitat values have been provided.

1. Allowable Use for Fill

The first general limitation set forth by the above mentioned policies is that only proposed fill for specific limited uses is allowable. The proposed fill allows repair of the creek crossing in a manner that restores the natural habitat of the area and allows for fish passage. Therefore, the fill is for habitat restoration and is allowable under Section 30233 (a)(7) of the Coastal Act.

2. No Feasible Less Environmentally Damaging Alternative

Section 30233 allows fill in a wetland only where there is no feasible less environmentally damaging alternative to the proposed project. Alternatives to the project as proposed must be considered prior to finding that a project satisfies this provision of Section 30233. Potential project alternatives, which were considered and analyzed in the submittal documents prepared for the proposed project and further addressed between staff and applicant include a) No Project Alternative, b) Alternative No. 1, repair existing crossing, c) Alternative No. 2 full span bridge, d) Alternative No. 3, column bridge, e) Alternative No. 4, removal of existing crossing-no new construction, and f) Alternative No. 5, the proposed project. For the reasons discussed below, the Commission finds that there is no identified feasible less environmentally damaging alternative to the proposed project.

a) No Project Alternative

The No Project Alternative would allow the existing, failed creek crossing/culvert to remain in its present location and in a partially washed out condition. In its present failed condition, the existing creek crossing severely restricts natural stream flow thus altering the natural hydrology of the stream corridor, resulting in sediment accumulation and shallow pooling upstream significantly degrading water and habitat quality of the stream corridor. The existing creek crossing is also identified by Entrix Inc. (1989) as a barrier to steelhead trout, as well as other aquatic organisms, adversely affecting the distribution, diversity and composition of marine organisms. The existing crossing results in continued erosion and scouring of the streambed, resulting in instability of the structure and adjacent area and further impacting water quality. In addition, the existing failed crossing is presently inaccessible for vehicular access thereby requiring that all motorized access into this portion of the park be diverted to use of the alternative access road (High Road). The High Road traverses sensitive oak woodland habitat and is located directly adjacent to and upslope of Malibu Creek. Ongoing motorized use of the alternative access road for routine access has resulted in considerable run-off and erosion problems from the compacted road bed and conveyed runoff significantly impacting surficial stability of the stream bank, the habitat value of the oak woodland and water quality. Sustained use of the alternative access road as the main access route would only intensify the resource impacts which have resulted from increased use

of the road in response to failure of the creek crossing at the project site. Additionally, if left in its structurally unstable condition, the existing failed crossing will continue to experience scouring and erosion and will exacerbate the poor hydrologic conditions of the creek. Finally, due to weight limitations of the bridge, maintenance and emergency vehicles exceeding 8,000 lbs. can not reach the visitor center and staff residence via the High Road. Therefore, the failed creek crossing must be repaired or replaced to ensure adequate maintenance and emergency access to the visitor center and staff residence, to minimize risks to life and property in an area inherently subject to fire hazard.

For these reasons the Commission finds that the No Project Alternative would allow for the continuance of chronic resource impacts at the project site and is not feasible due to the necessity of providing for adequate emergency access to the site. Therefore the Commission finds that the No Project Alternative is not a feasible alternative and is not the least environmentally damaging alternative to the proposed project.

b) Alternative No. 1: Repair Existing Crossing

This alternative would repair the existing failed creek crossing and culverts in their present location. Because a repair operation would not result in an enlargement of the existing structure this project alternative would minimize potential impacts to the wetland and riparian area adjacent to the crossing by reducing the area of permanent habitat displacement and disturbance. However, the existing creek crossing, even if repaired, has a very limited hydraulic conveyance capacity and can only accommodate a mild stream flow. Repairing the existing crossing and culverts would continue the pattern of sediment accumulation upstream, erosion and scouring of the streambed, and likely intensify altered hydrology and stream habitat disturbance, resulting in significant adverse effects on sensitive resources. Repairing the existing crossing and culverts would restore an important access route across Malibu Creek and facilitate some improvement of stream flow through the structure, however, the existing crossing is determined to be a substantial obstacle to migration of aquatic species, particularly steelhead. Additionally, as is evident by the structures recent failure and sectional collapse, it is likely that the existing crossing will continue to suffer from excessive erosion and scouring due to its age and inability to accommodate more substantial stream flow.

Therefore, the Commission finds that project Alternative No. 1, though feasible, is not the least environmentally damaging alternative.

c) Alternative No. 2: Full Span Bridge

Construction of a bridge over the creek at the project site would require a significantly large structure to span the immediate stream corridor and wide 500-600 ft. floodplain. Though Commission staff has identified a full span bridge as the least damaging alternative for a creek crossing due to the absence of restrictive structures within the stream, the applicant has provided evidence that a full span bridge is not a feasible

alternative to the proposed project. The project engineer for State Parks, in conference with other engineers on their staff and with Caltrans, has indicated that due to the sizeable width of the floodplain at the site, a bridge alternative would require a bridge length of approximately 600 ft. The applicant has further indicated that a 600 ft. bridge constructed to fully span the floodplain would have to be designed with a very deep cross section or with a type of above bridge support (i.e. suspension system). The applicant has indicated that such a massive bridge design would not be considered for the project site and would be prohibitively expensive.

Therefore, the Commission finds that Alternative No. 2 is not a feasible project alternative.

d) Alternative No. 3: Column Bridge

Construction of a column bridge as an alternative to the proposed project would require the same bridge length as that of a full span bridge (600 ft.), but would be supported on columns placed on benches outside the main flow channel. A column design bridge could potentially minimize the over all mass of a bridge alternative for the site, as compared to a full span bridge. Additionally, construction of a column bridge at the project site would provide environmental benefits similar to full span bridge alternative due to the fact that no structures would be constructed in the immediate stream corridor, though during flood events column supports would be temporarily inundated and would therefore would interrupt stream flow some instances. However, the applicant has indicated that a column supported bridge alternative would also be cost prohibitive (with an estimated bridge cost of approximately $2.1 million) and is therefore not a feasible alternative to the proposed project.

Therefore, the Commission finds that Alternative No. 3 is not a feasible project alternative.

e) Removal of Existing Crossing-No New Construction

Removal of the existing creek crossing with no new construction would be the least environmentally damaging alternative for the resources at the site as the entire stream corridor would be unobstructed allowing for free meandering of the stream, sediment and hydraulic conveyance, and unrestricted migration of aquatic life. However, removal of the existing crossing absent construction of a new crossing would require that all motorized access into this portion of the park be diverted to use of the High Road. The High Road is an unpaved, packed earth track that was not designed for significant daily vehicular use. As described previously, the High Road traverses sensitive oak woodland habitat and is located directly adjacent to and upslope of Malibu Creek. Ongoing motorized use of the High Road for routine access has resulted in considerable run-off and erosion problems from the compacted roadbed and conveyed runoff, impacts which Parks staff indicate have accelerated significantly since the 1998 creek crossing failure. Use of the High Road has destabilized the adjoining stream bank (which forms the road shoulder in many locations along the route), impaired the habitat

value of the oak woodland (increased intensity of traffic disturbance, compaction of soils, etc.) and impaired the quality of the adjacent stream waters. Sustained use of the High Road as the main access route would only intensify these resource impacts over the long term. Additionally, due to weight limitations of the bridge, maintenance and emergency vehicles exceeding 8,000 lbs. can not reach the visitor center and staff residence via the High Road. Therefore, a creek crossing without such a weight restriction is necessary to ensure adequate maintenance and emergency access to the visitor center and staff residence, to minimize risks to life and property in an area inherently subject to fire hazard.

For these reasons the Commission finds that the Alternative No. 4 would result in the continuance of chronic resource impacts at the project site and fails to provide adequate emergency vehicle access to the site. Therefore the Commission finds that the Alternative No. 4 is not a feasible alternative and is not the least environmentally damaging alternative to the proposed project.

f) Proposed Alternative

The proposed project involves removal of the failed creek crossing and construction of a new larger crossing in the same location which is designed to convey increased stream and sediment flow, and is specifically designed to facilitate migration of fish and other aquatic species. The proposed project alternative will ensure stability of the proposed structure and will restore and maintain necessary access to the site. The proposed project will also restore a primary access road for routine park purposes, therefore decreasing the amount of motorized access on the High Road and minimizing the resource impacts associated with continued routine use of that road. The proposed project will result in restoring a more natural movement of sediment and stream flow through the stream corridor thus enhancing water quality and sensitive habitat values of the site. As such, the proposed project will significantly improve the overall physical and biological characteristics of the site by way of a project designed to assist in the passage of fish and other aquatic species through a portion of the creek currently impenetrable for many species. Finally, the applicant's proposal to restore habitat areas disturbed during construction of the proposed project, and the proposal to further mitigate the impacts of the proposed project through additional creek restoration and bank stabilization upstream of the subject site, will result in an overall benefit to stream morphology, water quality sensitive habitat and species.

The proposed creek crossing would be the primary, and only access road capable of adequately supporting large (over 8,000 lbs.) maintenance and emergency vehicles destined for the visitor center and staff housing facility. Such vehicles are typically deployed during prescribed burns (for standby use to prevent fire escape from a designated burn area), or to fight fire threatening the developed structures and park residents. In addition, large emergency vehicles are sometimes sent to such sites in response to medical emergencies. The proposed project is the only feasible project alternative which will serve to maintain adequate emergency access to the visitor center and staff housing, thereby minimizing risks to life in an area subject to fire hazard.

As such, the Commission finds that the proposed project will serve to restore and maintain water quality and sensitive marine resources and is necessary for adequate emergency access to the visitor center and staff housing to minimize risks to life and property occurring at the project area. Additionally, the proposed project, as conditioned, will serve to minimize erosion and scouring of the streambed at the site and will ensure stability and structural integrity of the development. Therefore, the Commission finds that the proposed project, as set forth within these findings, is the least environmentally damaging feasible project alternative.

3. Adequate Mitigation

The third limitation imposed on projects proposing fill in a wetland set forth by section 30233 requires that adequate mitigation measures to minimize adverse impacts of the proposed project on habitat values shall be provided. It is critical that proposed development projects in a wetland include a mitigation plan, which when enacted will result in no net loss of wetland area or function.

As noted above, the entire project involves placement of fill in approximately 113 sq. ft. of wetland habitat, thereby eliminating the habitat value of this wetland. The applicant has incorporated mitigation measures in their proposal which include restoration of habitat areas disturbed during construction of the proposed project and restoration of 10,000 sq. ft. of additional creek habitat upstream of the subject site. The proposed restoration efforts will include removal of non-native, invasive vegetation from restoration sites and revegetation with native plant species and implementation of non-structural BMPs for stream bank stabilization.

The applicant's proposal to restore both the disturbed areas at the project site and the degraded riparian corridor will serve to establish and maintain natural vegetation buffers which will improve water quality and creek habitat of the coastal stream, and which will provide new riparian habitat for the benefit of fish and wildlife. The proposed revegetation and restoration will ensure significant improvement and maintenance of habitat values by reducing sediment input into the creek, and by providing structure and cover and habitat diversity within the stream channel. Restoration of the riparian corridor with native vegetation will re-establish an overall benefit to stream morphology, water quality and sensitive habitat and species

The Commission finds that lost wetland habitat resulting from the proposed project must be adequately mitigated and restored for the proposed project to be consistent with the wetland protection policies of the Coastal Act. Therefore, **Special Condition 8** requires the applicant to submit a detailed Riparian and Wetland Habitat Restoration and Monitoring Plan, prepared by a qualified resource specialist, for all areas of the project site disturbed by construction activities and/or permanently displaced due to the construction of the creek crossing improvements. All wetland vegetation disturbed by the proposed project activities shall be revegetated and restored to the maximum extent feasible with appropriate native plant species endemic to the wetland habitat area on

site. In past permit actions, the Commission has found that in order to assure success of wetland mitigation and to mitigate for the loss of wetland during the period of time it takes for wetland habitat to be established, it is appropriate to require a 3:1 mitigation ratio to create in kind wetland habitat. As such, Special Condition 8 requires restoration of all wetland habitat destroyed or damaged by construction activities or permanently displaced by the proposed development at a 3:1 or greater ratio.

The Commission finds that, as conditioned, the project will provide adequate mitigation measures to minimize adverse impacts on habitat values and no net loss of wetland area or function will occur as a result of construction of the proposed creek crossing, as required by the third test of 30233. Therefore, the Commission finds that the proposed project is consistent with Section 30233 of the Coastal Act.

E. Local Coastal Program

Section **30604** of the Coastal Act states:

> ***A) Prior to certification of the local coastal program, a coastal development permit shall be issued if the issuing agency, or the Commission on appeal, finds that the proposed development is in conformity with the provisions of Chapter 3 (commencing with Section 30200) of this division and that the permitted development will not prejudice the ability of the local government to prepare a local program that is in conformity with the provisions of Chapter 3 (commencing with Section 30200).***

Section 30604(a) of the Coastal Act provides that the Commission shall issue a Coastal Permit only if the project will not prejudice the ability of the local government having jurisdiction to prepare a Local Coastal Program which conforms with Chapter 3 policies of the Coastal Act. The preceding sections provide findings that the proposed project will be in conformity with the provisions of Chapter 3 if certain conditions are incorporated into the project and accepted by the applicant. As conditioned, the proposed project will not create adverse impacts and is found to be consistent with the applicable policies contained in Chapter 3. Therefore, the Commission finds that approval of the proposed development, as conditioned, will not prejudice the City of Malibu's ability to prepare a Local Coastal Program for the Malibu and Santa Monica Mountains area, which is also consistent with the policies of Chapter 3 of the Coastal Act as required by Section 30604(a).

F. California Environmental Quality Act

Section 13096(a) of the Commission's administrative regulations requires Commission approval of a Coastal Development Permit application to be supported by a finding showing the application, as conditioned by any conditions of approval, to be consistent

with any applicable requirements of the California Environmentally Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment.

The Commission finds that, the proposed project, as conditioned will not have significant adverse effects on the environment, within the meaning of the California Environmental Quality Act of 1970. Therefore, the proposed project, as conditioned, has been adequately mitigated and is determined to be consistent with CEQA and the policies of the Coastal Act.

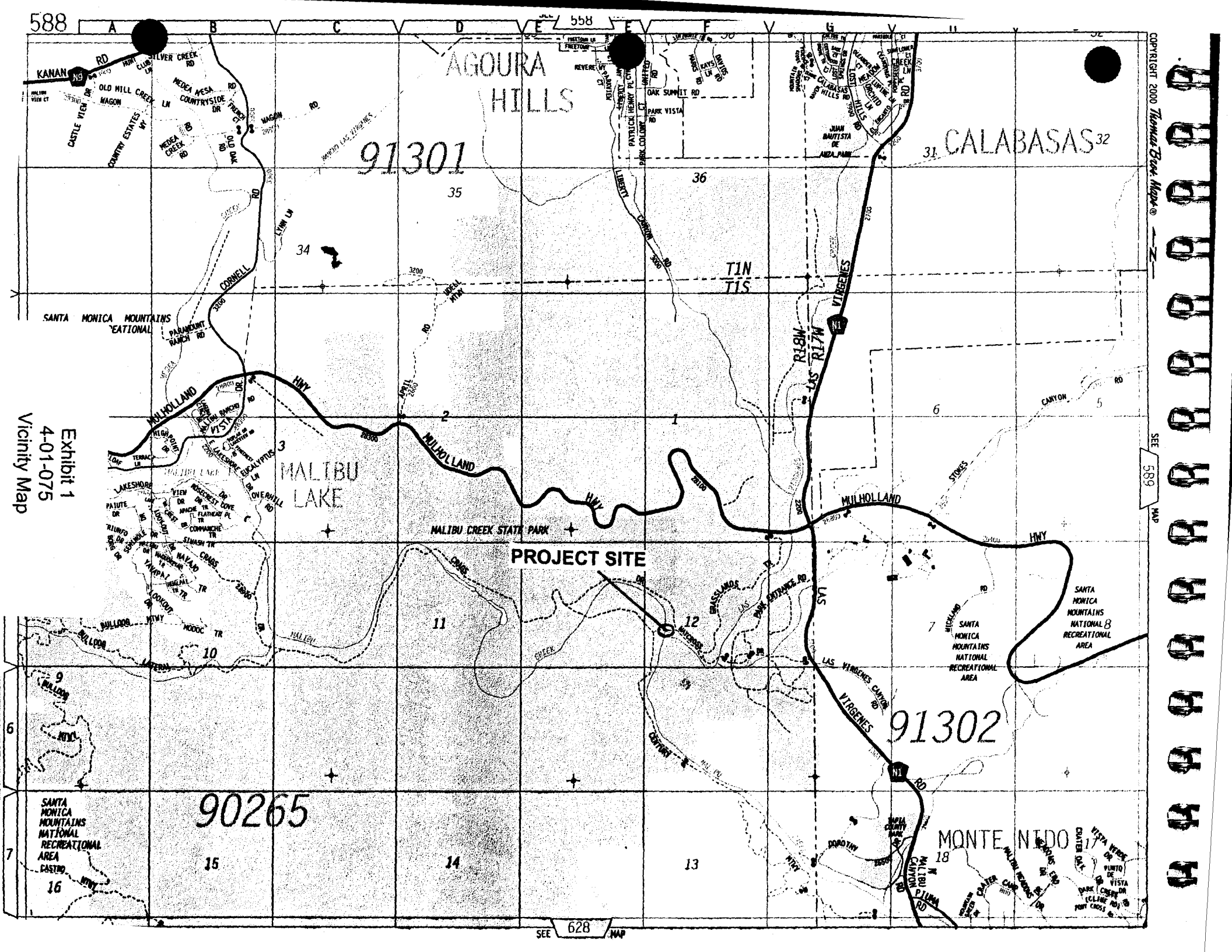
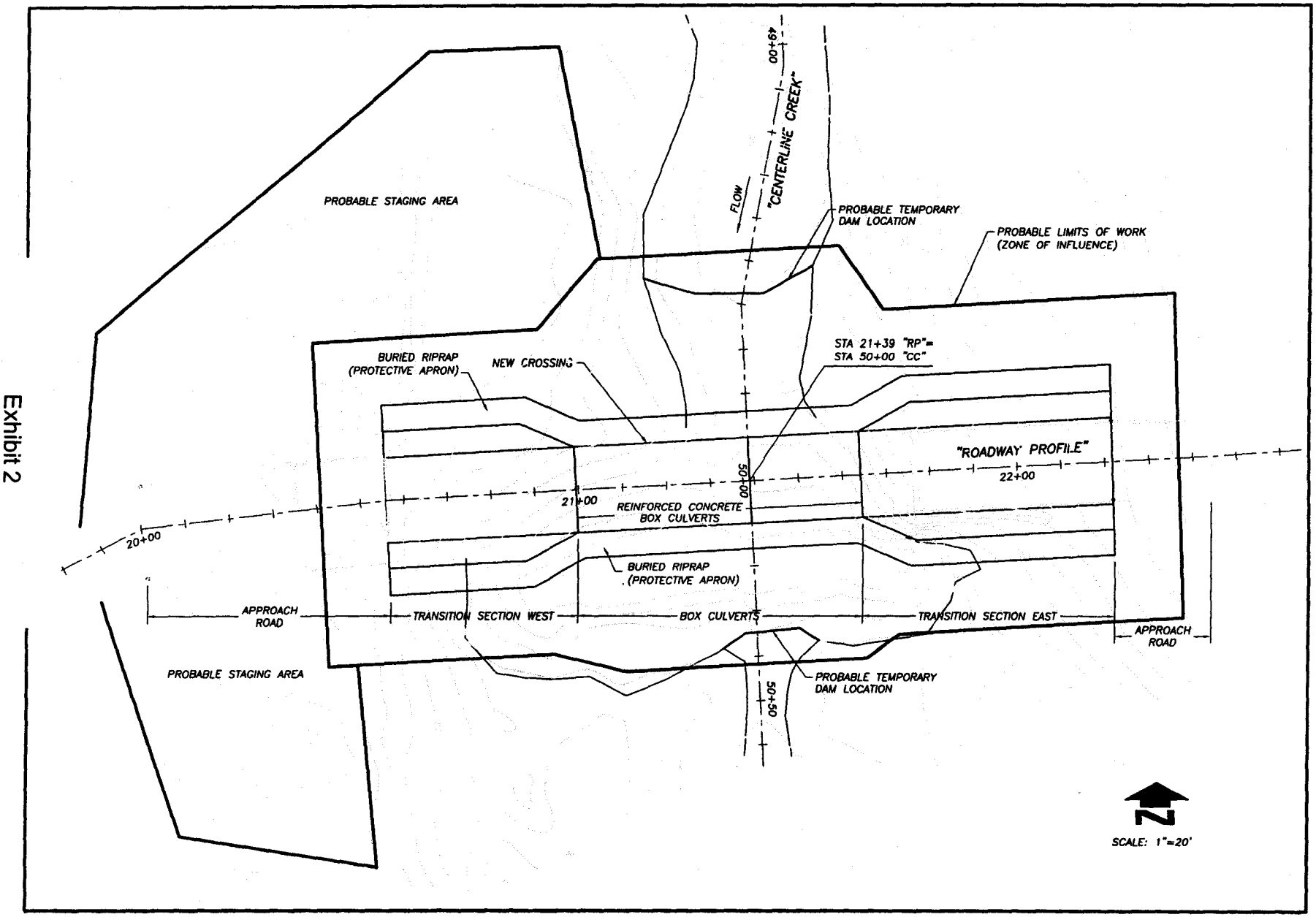


Exhibit 1
4-01-075
Vicinity Map

Exhibit 2
4-01-075
Site Plan



RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF PARKS AND RECREATION
SOUTHERN SERVICE CENTER

APPROVED: _____ DATE: _____

SHEET TITLE: LAYOUT

PROJECT SITE: MALIBU CREEK STATE PARK
REPAIR ARIZONA CROSSING

REVISIONS
A XX/XX/XX

DESIGNED S. LAHITTE
DRAWN S. LAHITTE
CHECKED G. LEWIS

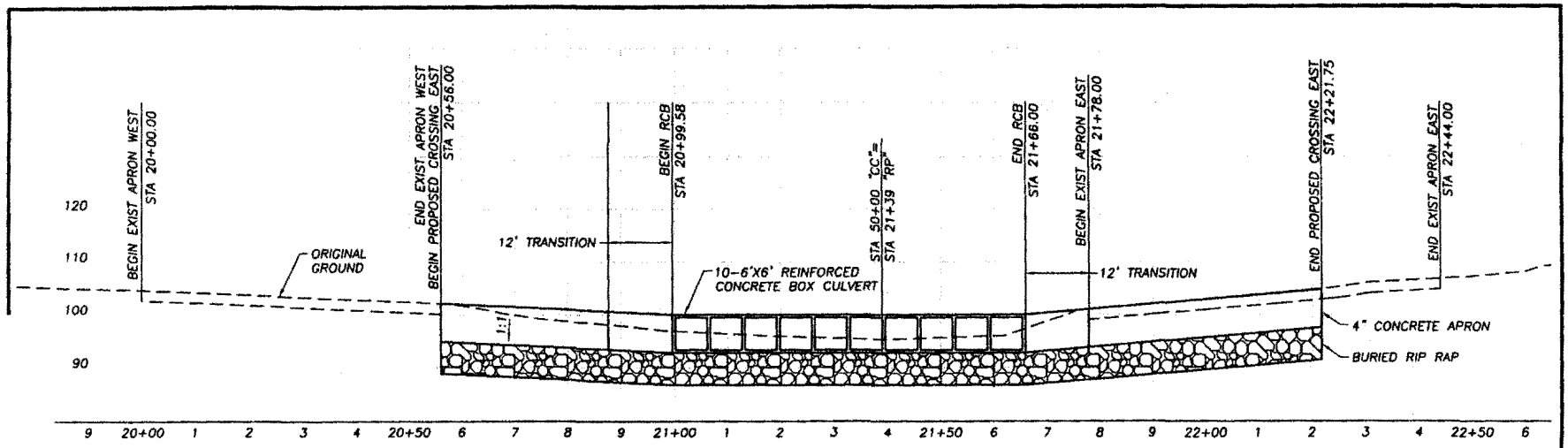
DATE XX/XX/XX
SCALE AS SHOWN

PROJECT NO. 915-537-30

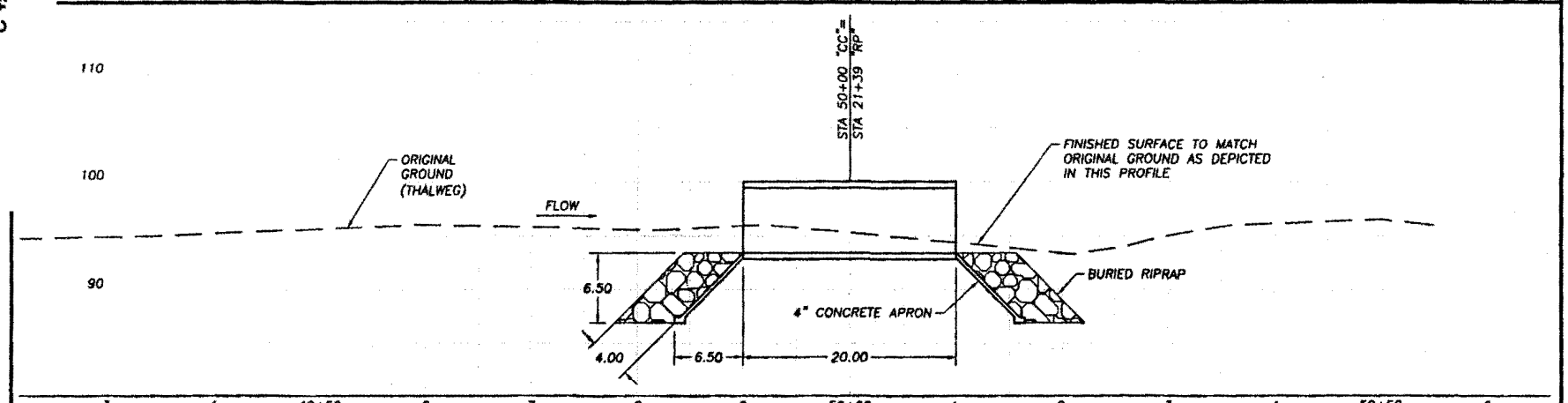
2
SHEET OF

Z:\PROJECTS\AUTOCAD\

Exhibit 3
4-01-075
Sections



"ROADWAY PROFILE"
SCALE: 1"=20' HORIZ.
1"=20' VERT.



"CENTERLINE CREEK"
SCALE: 1"=10' HORIZ.
1"=10' VERT.

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF PARKS AND RECREATION
SOUTHERN SERVICE CENTER
APPROVED: _____ DATE: _____

SHEET TITLE: PROFILE

PROJECT SITE: MALIBU CREEK STATE PARK
REPAIR ARIZONA CROSSING

REVISIONS
1 XX/XX/XX

DESIGNED S. LAHITTE
DRAWN S. LAHITTE
CHECKED G. LEWIS
DATE XX/XX/XX
SCALE AS SHOWN
PROJECT NO. 915-537-30

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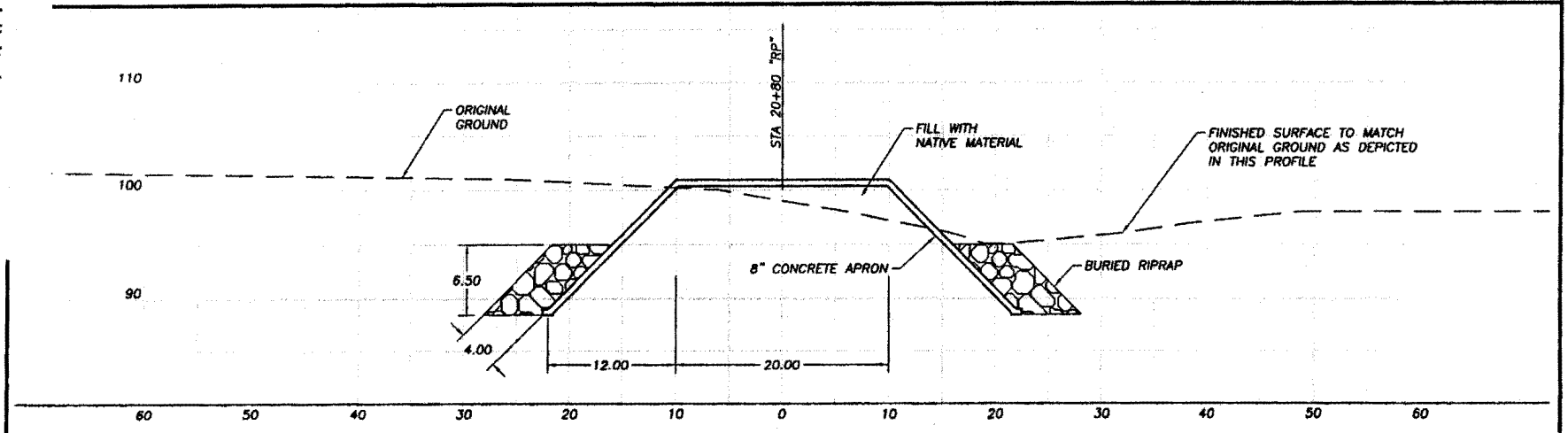
Exhibit 4
4-01-075
Section



20+80 "ROADWAY PROFILE"

SCALE: 1"=10' HORIZ.
1"=10' VERT.

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF PARKS AND RECREATION
SOUTHERN SERVICE CENTER
APPROVED: _____ DATE: _____

SHEET TITLE: TYPICAL SECTION

PROJECT SITE: MALIBU CREEK STATE PARK
REPAIR ARIZONA CROSSING

REVISIONS
1 XX/XX/XX

DESIGNED S. LAHITTE
DRAWN S. LAHITTE
CHECKED G. LEWIS

DATE XX/XX/XX
SCALE AS SHOWN

PROJECT NO.
915-337-30

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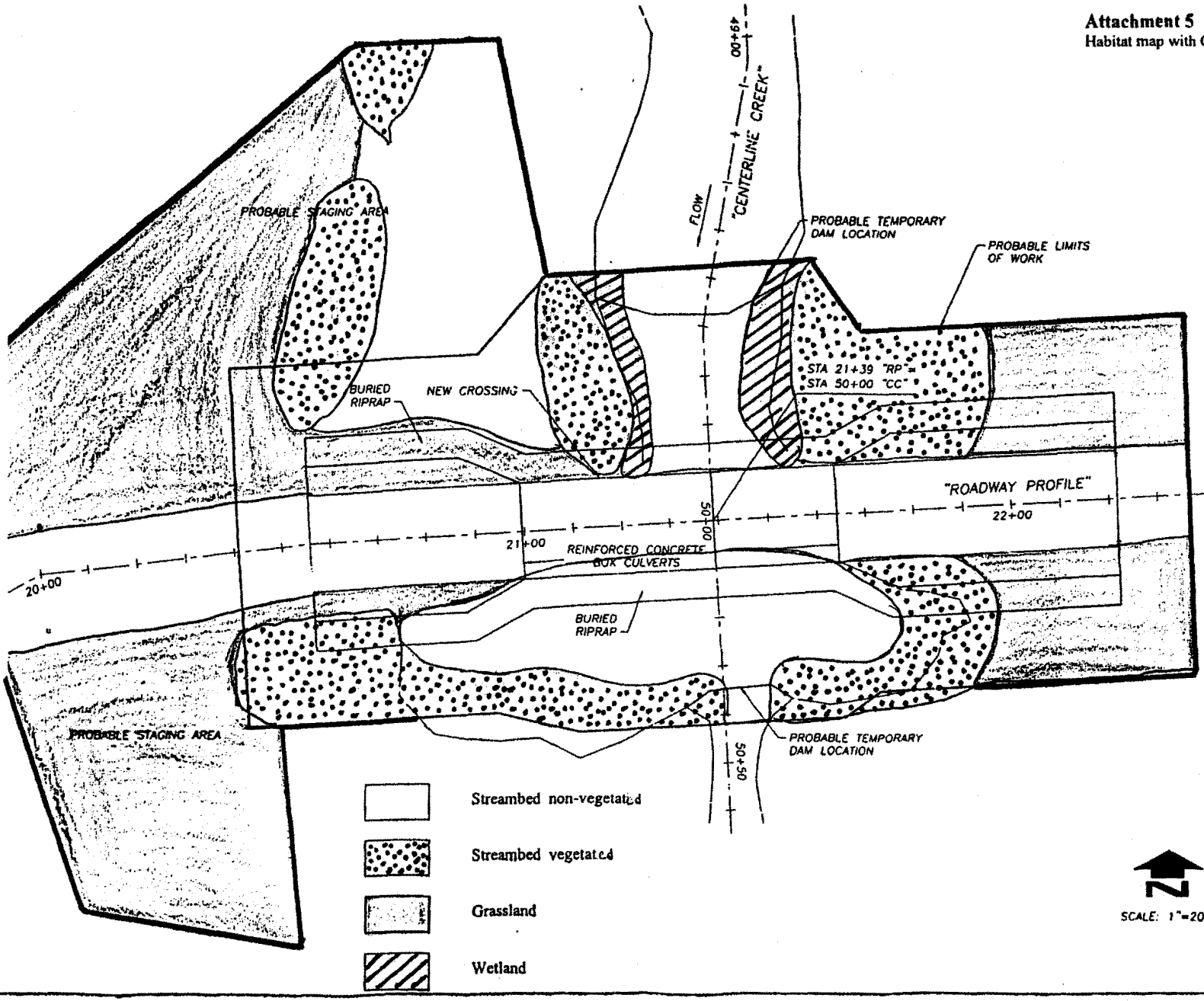
Attachment 5
Habitat map with CRWQCB designations



RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF PARKS AND RECREATION
SOUTHERN SERVICE CENTER
APPROVED: DATE:

SHEET TITLE: LAYOUT

PROJECT SITE: MALIBU CREEK STATE PARK
REPAIR ARIZONA CROSSING

REVISIONS
XX/XX/XX

DESIGNED S. LAHITTE
DRAWN S. LAHITTE
CHECKED C. LEWIS
DATE XX/XX/XX
SCALE AS SHOWN
PROJECT NO. 915-537-30

SHEET 2 OF

Exhibit 5
4-01-75
Habitat Map

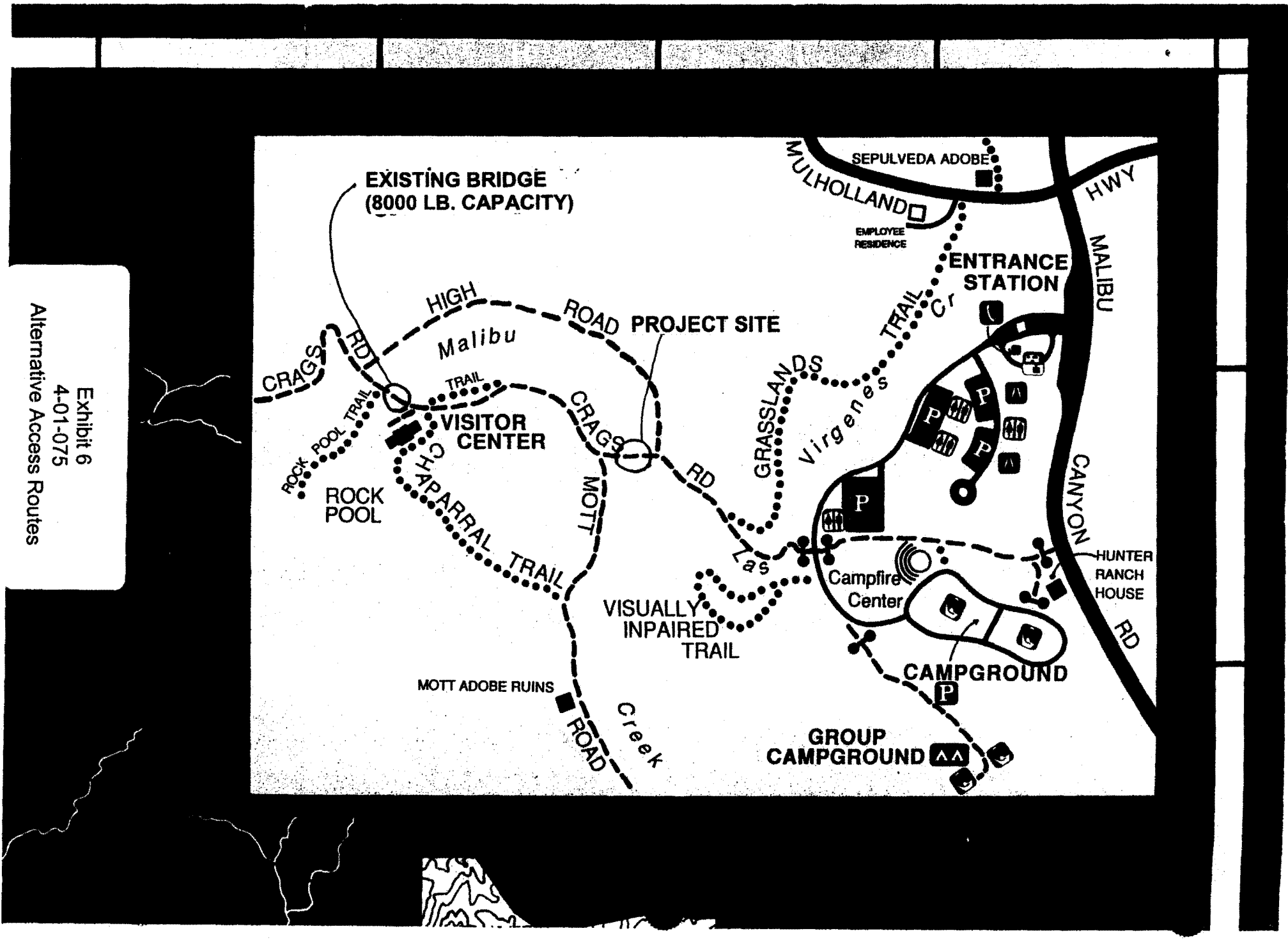
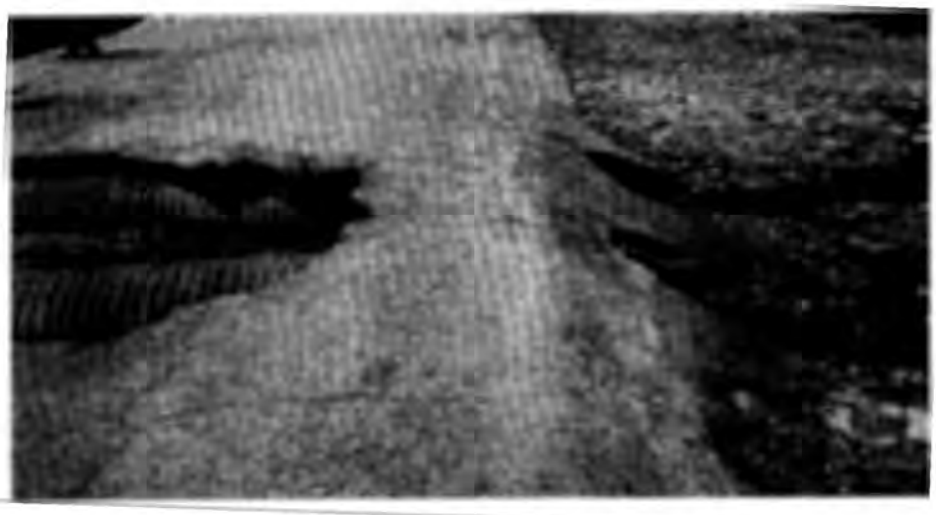


Exhibit 6
4-01-075
Alternative Access Routes

Exhibit 7
4-01-075
Restoration Site Location



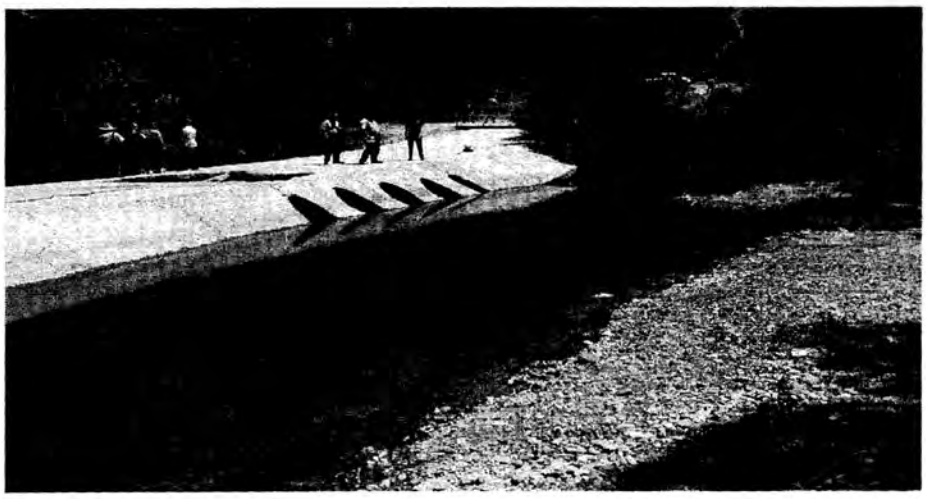


Exhibit 8
4-01-075
Existing Crossing

Exhibit 9
4-01-075
Restoration Site
(Looking toward High Road)

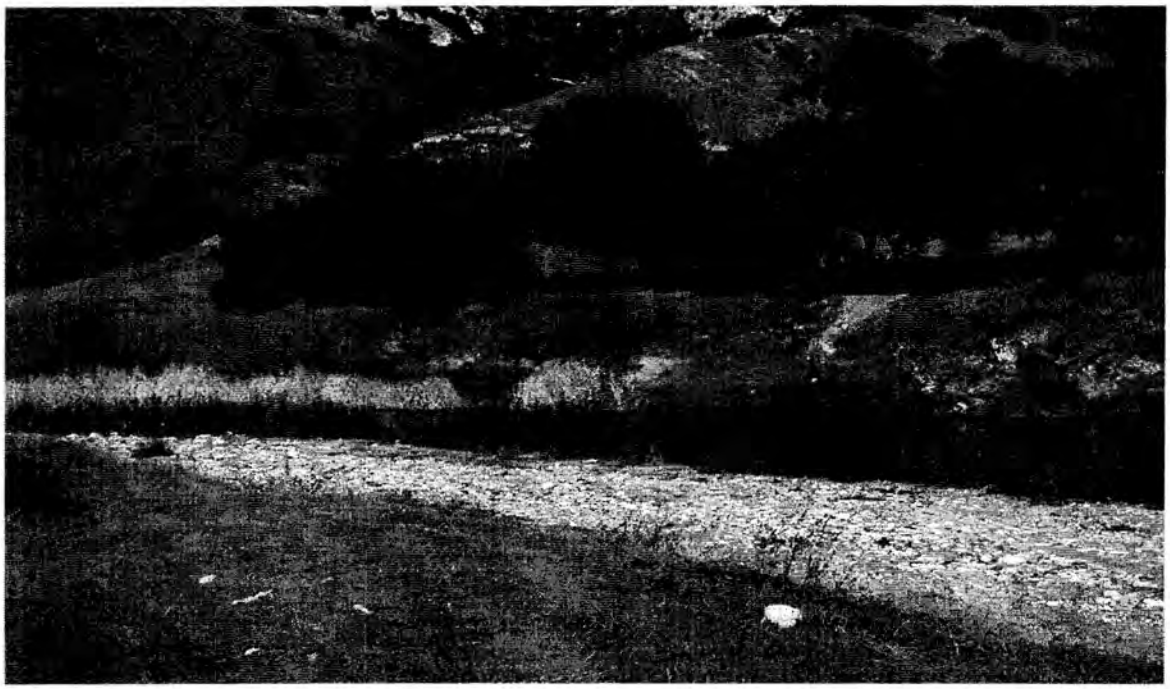


Exhibit 10
4-01-075
Restoration Site
(Opposite Bank from High Road)