

CALIFORNIA COASTAL COMMISSION

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 Commission Action:

STAFF REPORT: CONSENT CALENDAR

APPLICATION NO.: 3-98-035

APPLICANT: City of Santa Cruz Public Works Department
 AGENT: John Gilchrist & Associates

PROJECT LOCATION: Laurel/Broadway Bridge over San Lorenzo River
 City of Santa Cruz, Santa Cruz County

PROJECT DESCRIPTION: Seismic Retrofit of Laurel Street Bridge; retrofit bridge abutments, footings and piers, include remediation of soils at footings.

Zoning District: Floodplain
 LUP Designation: Natural Area

APPROVALS RECEIVED; Santa Cruz City - No local permits required except building permit, Appendix B; U. S. Army Corps of Engineers Nationwide Permit 25 April 15, 1998.

CEQA - Negative Declaration 2/4/98.

APPROVALS PENDING: California Department of Fish and Game 1601 Streambed Alteration Agreement; Regional Water Quality Control Board 401 Certification/Waiver.

SUBSTANTIVE FILE DOCUMENTS: Biotic Assessment for the Laurel Street Bridge Seismic Retrofit Project, Ecosystems West, January 16, 1997; Geotechnical Investigation Laurel Street Bridge Retrofit Project, Haro, Kasunich and Associates, Inc., January 1998; Cultural Resource Evaluation of the Laurel Street Bridge Retrofit Project, Archaeological Resource Management, September 17, 1996; City of Santa Cruz Section 404 Permit Application for San Lorenzo River Flood Control Maintenance -

Salmonid resources, Trihey and Associates, Inc., February 28, 1997; California Red-Legged Frog Site Assessment, San Lorenzo River Flood Control Channel, Bryan Mori Biological Consulting Services, April 11, 1997; City of Santa Cruz Local Coastal Program, recertified March 1995.

SUMMARY OF STAFF RECOMMENDATION: Staff recommends that the Commission, after public hearing, **approve** the proposal with conditions addressing final plans and other approvals and future monitoring and maintenance. The purpose of the project is to enhance seismic safety which conforms with Coastal Act policy objectives.

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STAFF RECOMMENDATION:

The staff recommends that the Commission adopt the following resolution:

I. Approval with Conditions.

The Commission hereby **grants** a permit, subject to the conditions below, for the proposed development on the grounds that the development will be in conformity with the provisions of Chapter 3 of the California Coastal Act of 1976, will not prejudice the ability of the local government having jurisdiction over the area to implement its certified Local Coastal Program (and, where applicable is consistent with the certified City of Santa Cruz Local Coastal Program), is located between the sea and the first public road nearest the shoreline and over open coastal waters and is in conformance with the public access and public recreation policies of Chapter 3 of the Coastal Act, and will not

have any significant adverse impacts on the environment within the meaning of the California Environmental Quality Act.

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 this permit is reported to the Commission. 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. Compliance. All development must occur in strict compliance with the proposal as set forth in the application for the permit, subject to any special conditions set forth below. Any deviation from the approved plans must be reviewed and approved by the staff and may require Commission approval.
4. Interpretation. Any questions of intent or interpretation of any conditions will be resolved by the Executive Director or the Commission.
5. Inspections. The Commission staff shall be allowed to inspect the site and the project during its development, subject to 24 hour advance notice.
6. 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.
7. 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.

II. Special Conditions.

1. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the permittee shall submit to the Executive Director for review and approval:

A. Final Plans: Final plans for the Laurel Street seismic retrofit including all aspects of the resource protection facilities and construction operation areas including identification of staging area, sedimentation ponds, and drainage/erosion control plans. Resource protection zones shall be identified and fenced. To the degree feasible

staging and storage areas shall be located outside the river channel. Pedestrian and bicycle detour routes shall be indicated. The final plans shall incorporate the recommendations of the Haro, Kasunich and Associates Geotechnical Investigation for Laurel Street Bridge Retrofit Project, April 1998, the mitigation measures identified in the Negative Declaration (Exhibit A), and the U.S. Army Corps of Engineers Special Conditions (Exhibit B).

Any additional implementation measures or modifications that the Executive Director determines are significant shall require an amendment to this permit or a separate coastal development permit.

B. The name and qualifications of a construction monitor who shall be responsible to assure that the site is continuously maintained in a condition that maximizes protection of marine and land resources.

C. Evidence that the Department of Fish and Game has approved the type of drilling fluid.

D. Regional Water Quality Control Board Approval: Written evidence from the Regional Water Quality Control Board that the proposed project has a water quality certification or waiver thereof under Section 401 of the Clean Water Act.

2. 1601 Stream Alteration Agreement. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the permittee shall submit to the Executive Director for review and approval a California Department of Fish and Game Final 1601 Stream Alteration Agreement. Conditions of the Agreement shall be reviewed and approved by the Executive Director and shall be implemented by the permittee. Any mitigation measures or modifications that the Executive Director determines are inconsistent with this permit shall require an amendment to this permit or a separate coastal development permit.

3. Compliance with Archaeology Report: PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit to the Executive Director for review and approval a plan providing for archaeological monitoring of all construction activities below 12 feet of the existing surface in the abutment/levee areas. In the event that archaeological resources are discovered all work which could damage or destroy these resources shall be suspended. A qualified archaeologist shall inspect the project site to determine the nature and significance of the archaeological materials and develop appropriate mitigation measures using standards of the State Historic Preservation Office. This plan shall then be approved by the State Historic Preservation Office and the Executive Director and fully implemented by the City of Santa Cruz.

IV. FINDINGS AND DECLARATIONS.

1. Project Location and Description; Commission Jurisdiction

The Laurel Street Bridge crosses over the San Lorenzo River about 3/4 miles upstream from the river mouth at Monterey Bay. The tidal influence reaches 800 feet upstream of the bridge and the structure spanning the river is within the Commission's original jurisdiction. The bridge structure is approximately 335 feet long and carries four lanes, with two travel lanes, a sidewalk and bicycle lane in each direction. The bridge is a three span concrete structure, approximately 82 feet wide over most of its length, flaring slightly at the east end to accommodate traffic on San Lorenzo Boulevard. The ends and part of the center section of the bridge are cast-in-place box girders; the middle 110 feet of the center span is precast concrete I girders and a cast-in-place concrete deck. The bridge was constructed in 1967. See Exhibits 1 and 2 attached.

The river channel at the bridge is part of a US Army Corps of Engineers (COE) flood control project extending from Highway 1 to the mouth. Constructed in the late 1950's this channel consists of a rock armored levee embankment with a linear, low gradient channel bed that has accumulated 10 to 15 feet of sediment since construction. A 12-foot wide maintenance road is located on top of the levee. This road which doubles as a bicycle and pedestrian path, dips under the bridge near the bridge supports. The top of the levee is approximately 10 to 12 feet higher than the adjacent streambed and urbanized downtown Santa Cruz.

The proposed project involves the earthquake retrofit of the existing bridge to bring the structure up to current seismic safety standards and includes the following elements (see Exhibits 2 and 3 attached):

Construction in River Channel:

- the installation of gabion blankets on the channel banks to stabilize banks, improve flow characteristics and prevent scour from high flows. Minor excavation (80 cy) will be required but the final grade will closely approximate the existing channel shape.
- after the river flow drops, temporary access roads will be constructed on each side of the river for construction equipment access and operation.
- existing footings will be reinforced by increasing their size below grade and the size of the existing pier wall below the channel bed. Excavations will be required to expose the existing pier cap below grade. If river flows are high, sheet piling (cofferdam construction) and pumping of water may be required.
- soil remediation to prevent liquefaction - The soil will be compacted by compaction grouting. A grid of small diameter pipes are sunk to a depth of approximately 60

feet. Concrete is pumped through small diameter pipes and is forced into the soil where it densifies and compresses the surrounding soils. The finished compaction grouting will stabilize an area forming approximately 120 feet by 80 feet extending to a depth of 60 feet but terminating at an elevation of approximately 10 feet below the channel bed to prevent grout from reaching the river.

Construction outside channel:

- Work to be performed outside the river channel will consist of installation of pile shafts at the abutments and placement of hinge restrainers. To allow for continued bridge use, work will be performed in two stages, working on one-half of the bridge at a time.

Construction is planned to occur over an 8-month period, during late spring, summer and fall of 1998. If necessary, work will be completed in the spring of 1999.

Jurisdiction: The City of Santa Cruz has a certified Local Coastal Program and, therefore, coastal development permit authority except in the Commission's original jurisdiction. As stated above, the Laurel Street Bridge crosses over the San Lorenzo River about 3/4 miles upstream from the river mouth at Monterey Bay. The tidal influence reaches 800 feet upstream of the Laurel Street Bridge and the structure spanning the river is within the Commission's original jurisdiction. Portions of the bridge are within the City's coastal development permit jurisdiction. The City of Santa Cruz has requested the Commission to process the coastal development permit for any portion of the project that might be within their jurisdiction. To streamline and facilitate processing, the Executive Director has agreed. The Coastal Act is the standard of review for development within the Commission's original jurisdiction; LCP policies are advisory and provide guidance for the Commission. The certified Local Coastal Program is the standard of review for development in the City's coastal development permit jurisdiction. The coastal development permit has been conditioned to require compliance with the mitigation measures of the City's Negative Declaration (see Exhibit A attached) and the following findings discuss the relevant policies of the certified Local Coastal Program.

2. Seismic Safety/Geology

Section 30253 of the Coastal Act states:

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, geologic 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.

The Santa Cruz City certified Land Use Plan Goal S 2 states:

Minimize hazards to people and property resulting from seismic activity.

Safety Policy 2.4 provides for earthquake retrofitting of existing structures in connection with repair or alternation work.

The purpose of the retrofit project is to assure the structural integrity of the Laurel Street bridge which is located in an area of high geologic hazard and thereby to minimize risks to life and property. The geotechnical report (Geotechnical Investigation Laurel Street Bridge Retrofit Project, Haro, Kasunich and Associates, Inc., January 1998) substantiates the potential for lateral spreading, levee bank instability, settlement and liquefaction during a seismic event and recommends compaction grouting and reinforcement or reconstruction of the bridge. The new bridge alternative would impact a greater area of wetland and extend the period of disruption since it would require two years for construction. In addition, the new bridge alternative would be much more expensive. Another alternative considered was a cast-and-drill shaft system structure. Both the structure and work area would create a larger area of disturbance because of the shape of the Laurel Street bridge. The City proposes reinforcement and compaction grouting to prevent bridge failure.

The Geotechnical Investigation identifies several site specific requirements for the compaction grouting process including use of a qualified specialty contractor, quality of grout, daily reporting, precautions to prevent damage to the area and environment and post treatment tests. The Department of Fish and Game is reviewing the grouting requirements and will incorporate environmental safeguards into the 1601 Stream Alteration Agreement.

The coastal development permit is conditioned to require submittal to the Executive Director of the final plans and conformance with the recommendations of the geotechnical engineer to assure the structural stability of the retrofit project.

Therefore, as conditioned, the proposed development is consistent with Section 30235 of the Coastal Act which provides for minimizing risks to life and property in geologic hazard areas and with assuring the integrity of structures and is consistent with the related Local Coastal Program policies discussed above.

3. Marine and Land Resources/Environmentally Sensitive Habitat

Types of Use Allowed in the Marine Environment

Section 30233 of the Coastal Act is the key policy which identifies types of uses allowed in the marine environment. The policy states in part:

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

(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...

(7) Restoration purposes...

(b) Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for such purposes to appropriate beaches or into suitable long shore current systems.

(c) In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary... Any alteration of coastal wetlands identified by the Department of Fish and Game...shall be limited to very minor incidental public facilities, restorative measure,...

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

The proposed project will require excavating soil around the pier foundations and placing concrete fill material in the coastal waters of San Lorenzo River. The concrete which will enlarge and reinforce the existing support structures will slightly increase the

bridge footprint. The compaction grouting to prevent liquifaction will primarily be located beneath the river bank but will extend under the river channel where it will be terminated 10 feet below the river bottom to prevent concrete release into the river water and disruption of bottom habitat. Other fill in the form of coffer dams and a sedimentation pond will be temporary to allow for construction staging and activities. The proposed construction operation is similar to those undertaken for the Soquel Street Bridge and Water Street Bridge upstream on the San Lorenzo River.

The proposed concrete fill is an element of maintaining and structurally upgrading an existing bridge. The proposed project serves a public purpose in improving safety through a seismic upgrade which is incidental to the existing transportation system and which will not increase traffic capacity. The proposed development fits under the category of "incidental public service purposes" as a permissible use under Section 30233(a)(5) of the Coastal Act. In addition, the sedimentation pond in particular serves a restoration purpose, as it will help to minimize impacts on water quality in the estuary and, therefore, is supportive of the ongoing restoration efforts for the steelhead/salmon run, and is, therefore, consistent with Section 30233(a)(7). Therefore, the project is consistent with Section 30233 as it relates to types of use allowed in open coastal waters.

Protection of Habitat Resources

Section 30233 also requires that filling of open coastal waters can be undertaken only where there is no feasible less environmentally damaging alternative and where feasible mitigation measures have been provided to minimize adverse environmental effects.

The City of Santa Cruz considered alternatives to reinforcement and compaction grouting (i.e., the currently-proposed method). The new bridge alternative would impact a greater area of wetland and extend the period of construction to two years resulting in increased disruption in scale and time. In addition, the new bridge alternative would be prohibitively expensive. Another alternative considered was a cast-and-drill shaft system structure. Both the structure and work area would create a larger area of disturbance because of the shape of the Laurel Street bridge. Accordingly, the City determined, and Commission concurs, that the reinforcement and compaction grouting alternative is the least environmentally damaging feasible alternative.

Other applicable Marine Resource policies of the Coastal Act are:

Section 30230 of the Coastal Act which states:

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.

Section 30230 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, and minimizing alteration of natural streams.

Section 30232 of the Coastal Act states:

Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.

In addition, rivers and riparian corridors are environmentally sensitive habitat protected by Coastal Act Section 30240 which states:

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

(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 those areas, and shall be compatible with the continuance of those habitat and recreation areas.

The Santa Cruz City Land Use Plan has numerous policies that address the protection of marine and land resources. Some of the key elements are paraphrased below:

- establish and maintain a continuous riparian vegetation corridor along San Lorenzo River (policy SLREP 1.1)
- manage streamflow, river bed and lagoon to enhance anadromous fisheries (policy SLREP 1.3)
- manage steelhead fishery to its full potential (policy SLREP 1.4.2)

- improve river and lagoon water quality and minimize degradation from pollutants such as grease, oils (SLREP 1.6)
- protect water quality of ocean and surface waters from sedimentation and pollution (EQ 2)
- protect and enhance vegetation and wildlife habitats (EQ 4)

Habitat Resources: The San Lorenzo River provides habitat for numerous marine species including the steelhead (*Oncorhynchus mykiss*) and coho salmon (*Oncorhynchus kisutch*) both federally listed species protected under the Endangered Species Act. In addition the river's riparian vegetation provides habitat for various bird, amphibian and small mammal species.

Fisheries: In 1959 the U.S. Army Corps of Engineers (COE) constructed a flood control channel on the lower 2.2 miles of the San Lorenzo River. The native riparian vegetation was removed from the lower 1.7 miles. Sedimentation reduced flood capacity and the channel was periodically dredged through the early 1980's but discontinued because of adverse aquatic and riparian effects. A meandering low flow channel with adjacent riparian vegetation formed. The water flows down the river through the channel during lower runoff periods but extends from bank to bank during high winter flows. During summer months, a natural berm forms across the river mouth and a lagoon forms at the mouth of the river extending upstream beyond the project site to Water Street bridge on occasion. The summer lagoon provides rearing habitat for juvenile steelhead, as well as forage and cover for birds and other wildlife. Adult steel head migrate upstream to spawning areas in the upper watershed during late winter months, while steelhead smolts migrate downstream to Monterey Bay during April and May. Smaller numbers of coho salmon migrate upstream in November and December, depending on river flows. Juvenile out-migration usually takes place 18 months later during April and May. Numbers of native coho salmon and steelhead have declined in recent years. Coho and steelhead are listed as endangered and threatened, respectively, under the federal Endangered Species Act. Coho salmon (south of San Francisco) are also listed as endangered under the California Endangered Species Act.

National Marine Fisheries service in comments to the U.S. Army Corps of Engineers Pre-Construction Notification identified construction standards to mitigate adverse impacts on marine resources and specifically reduce effects to steelhead (*Oncorhynchus mykiss*) and coho salmon (*Oncorhynchus kisutch*). The COE required 17 special conditions to the nationwide permit including limiting work in the active channel to the non migration period between June and October; use of an open low flow channel to allow unrestricted passage of juvenile salmonids; dewatering through a settling basin; revegetation of all disturbed areas; limiting areas of riparian vegetation removal; management of location, refueling and maintenance of equipment and vehicles; use of non toxic materials, and sediment control. The full text of the COE special conditions is attached as Exhibit B. With these conditions the COE found that

no significant impacts would occur on the marine resources. The COE conditions have been included as conditions of the coastal development permit.

The applicant has applied for a 1601 Stream Alteration Agreement from the California Department of Fish and Game. The application is being processed. The applicant has also applied for water quality certification or a waiver thereof from the Regional Water Quality Control Board. The coastal development permit has been conditioned to require submittal of the Department of Fish and Game 1601 Agreement and the Regional Water Quality Control Board approval for review and approval of the Executive Director prior to issuance of the coastal development permit. In addition the Negative Declaration approved by the City of Santa Cruz had three mitigation measures. These mitigation measures are attached as Exhibit A and are included as conditions of this permit.

The compaction grouting operation and materials have the potential for significant impacts which have been primarily addressed by the COE conditions. However, the Geotechnical report proposes the use of foam as a drilling fluid. The Department of Fish and Game (Deborah Johnston, personal communication, April 23, 1998) has pointed out that many foams are toxic. To assure use of non toxic foam, the permit has been conditioned to require that the type of drilling fluid be approved by the Department of Fish and Game.

Land Habitat: Vegetation on the front and back levee banks consists primarily of ruderal non-native grassland and landscaping with some willow-blackberry riparian and herbaceous wetland species along the lower levee banks and upper edge of the river channel. The plant composition of wetland species in the channel changes seasonally due to the winter flow regime and saltwater influx to the summer lagoon. Ecosystems West, January 1997, prepared a biotic assessment of the project site. Five habitat types were characterized on the site including non-native landscaping; ruderal non native grassland; willow-blackberry riparian; freshwater emergent marsh; and herbaceous wetland. According to the assessment overall the vegetation depicts a highly disturbed and dynamic system with a prominence of non native species and no special status plant species. Project construction and bank stabilization will primarily effect ruderal non native grassland, freshwater marsh and willow blackberry habitat. The assessment concludes that since no significant channel work is anticipated, vegetation impacts will likely be minimal and habitat will naturally reoccupy the disturbed areas. If post construction monitoring indicates, supplemental revegetation should be considered. Because of the sparseness of the riparian and woodland cover wildlife species diversity was not high and small mammals and songbirds were not observed in abundance. Waterbirds were observed but not expected to breed in the area. The assessment concludes that impacts will be short term and not significant.

A California Red-Legged Frog Site Assessment was prepared by Bryan Mori Biological Consulting Services (April 11, 1997) for the San Lorenzo River Flood Control Channel.

The California red-legged frog is a federally threatened species (USFWS 1996) and a state species of special concern (CDFG 1994). The Assessment did not specifically address the project site but evaluated the river corridor from its mouth to the Water Street Bridge upstream from the Laurel Street Bridge. The conclusion was that there are no confirmed observations of the red legged frog in the the San Lorenzo River watershed, suggesting that the species is either extirpated from the highly urbanized sections of Santa Cruz, or that extant populations are very small. The U. S. Fish and Wildlife Service reviewed the project through the U.S. Army Corps of Engineers environmental review procedure and did not comment on the red legged frog.

A potential for significant adverse impacts to marine and land resources exists in the appropriate location, installation, monitoring and maintenance of the fish channel, sedimentation pond, staging and equipment storage and clean out areas. No site plan has been submitted that identifies the location and physical components of these temporary but essential components of the proposed development. The permit has been conditioned to require the applicant to submit to the Executive Director for review and approval plans that identify the location of all aspects of the resource protection facilities and construction operation areas. Resource protection zones shall be identified and fenced. To the degree feasible staging and storage areas shall be located outside the river channel. In addition, the applicant is required to identify a construction monitor to assure that the site is continuously maintained to maximize protection of marine resources.

This coastal development permit has been conditioned to include the U.S. Army Corps of Engineers special conditions, the Santa Cruz City Negative Declaration Mitigation Measures, and conformance with the Department of Fish and Game 1601 Stream Alteration Agreement. The conditions also require Regional Water Quality Control Board water quality certification (or waiver). Any additional implementation measures or modifications that the Executive Director determines are significant shall require an amendment to this permit or a separate coastal development permit. In addition, permit conditions require Department of Fish and Game approval of the type of drilling fluid, submittal of a site plan for resource protection facilities and construction staging and operation areas and the identification of a construction monitor to assure that the site is continuously maintained to maximize protection of marine and land resources.

As discussed above, the Laurel Street Bridge reinforcement and compaction grouting retrofit was chosen as the least environmentally damaging alternative plan since it impacted a lesser area and could be completed in a shorter period of time than other alternatives. In conjunction with the conditions discussed above the proposed development will have provided feasible mitigation measures to minimize adverse environmental effects as required under Section 30233(a) of the Coastal Act.

Therefore, as conditioned, to require the above actions and commitments, the proposed development will not have any significant adverse impacts on the marine and land

resources of the area and is consistent with Coastal Act Section 30230-3 which protects the quality and productivity of the marine environment and with Section 30240 which protects environmentally sensitive habitats from significant disruption of habitat values.

4. Archaeological and Paleontological Resources

Section 30244 of the Coastal Act provides:

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

A Cultural Resource Evaluation of the Laurel Street Bridge Retrofit Project was undertaken by Archaeological Resource Management (September 17, 1996). On the basis of archival research and a surface reconnaissance it was concluded that the proposed project may impact prehistoric cultural resources below the existing imported landfill. Due to the close vicinity of two prehistoric sites (CA-SCR-123 and CA-SCR-187), the evaluation recommended that all construction activities below 12 feet of the existing surface in the abutment/levee areas should be monitored by a qualified archaeologist. The coastal development permit has been conditioned to require archaeological monitoring and reasonable mitigation if resources are uncovered.

Therefore, as conditioned, the proposed development is consistent with Section 30244 of the Coastal Act.

5. Public Access

The project spans the San Lorenzo River at an upstream point where tidal influence is common and is, therefore, located between the first public road and the sea. Sections 30210-30214 of the Coastal Act state that maximum access and recreation opportunities be provided, consistent with, among other things, public safety, the protection of coastal resources, and the need to prevent overcrowding.

Section 30210 of the Coastal Act states:

In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

The Laurel Street bridge is an important east-west arterial link carrying relatively heavy traffic to and from the city center and for regional access to the beach. It also serves as

an east-west link in the bicycle circulation system of the City. In addition, levee pathways for bicycles and pedestrians pass beneath the structure at each abutment. These pathways follow the river to the beach areas. Project construction will cause temporary disruption of automobile traffic on Laurel, Broadway and San Lorenzo in the immediate project vicinity. Construction will be staged to shut down half of the bridge at a time maintaining two traffic lanes. During construction the levee pathway under the bridge on both sides will be unavailable for use. Pedestrians and bicyclists will be rerouted to the Front and San Lorenzo Street intersections. The available roadway width (28 feet for two travel lanes) will require bicyclists to temporarily share the road with motorists. Signs will be posted to inform users of the shared road. Pedestrians will be restricted to the sidewalk on the open side of the bridge.

The proposed retrofit project is essential to provide for public safety. Though it will cause a temporary disruption of access routes, the applicant has mitigated the impacts to the degree possible. Most importantly, the finished project will restore the full range of access by pedestrians, bicycles, and motor vehicles; will not interfere with any possible future small boat use of the river or its estuary; and through seismic retrofit, will minimize the risk of catastrophic loss of access resulting from future earthquakes. Therefore, the long-term benefits greatly outweigh any short-term access impairments, and the proposed development is consistent with the Access and Recreation policies of the Coastal Act.

6. California Environmental Quality Act (CEQA)

The applicant adopted a Negative Declaration for the project in March 1998. In addition to the mitigation provisions of the Negative Declaration, the U.S. Army Corps of Engineers has applied 17 special conditions to the project. The Department of Fish and Game 1601 Stream Alteration Agreement has not yet been finalized and the coastal development permit has been conditioned to require its submittal. As conditioned there are no additional feasible mitigation measures which would significantly lessen any adverse environmental impacts of the proposed project.

Excerpted from Negative Declaration City of Santa Cruz 2/4/98

Mitigation Measures

1. Implement measures during construction as currently planned that prevent erosion and siltation of the San Lorenzo River channel. These should include at a minimum, use of sheetpiling or berms to create cofferdams around in-channel work areas, pumping accumulated water through siltation basins before discharge to the river, and bypassing streamflow around work areas using culverts or berms. Gabion retaining walls should be constructed before the rainy season or appropriate erosion control measures implemented.
2. Permit construction activities within the river channel only from June through October to minimize adverse effects on salmonid migration. Implement measures to avoid turbidity as outlined in Mitigation #1. Maintain a low-flow channel around the work area with sufficient depth to allow passage of juvenile steelhead.
3. Revegetate disturbed river banks with native wetland species, native herbaceous plants and shrubs in accordance with the recommendations in the City's San Lorenzo River Design Plan and San Lorenzo River Enhancement Plan.

Monitoring: Measures shall be included in contractor plans and specifications. City staff shall inspect site at regular intervals during construction to insure compliance.

3-98-035

CALIFORNIA COASTAL COMMISSION

EXHIBIT A

quality certification or a waiver of certification from the Central Coast Regional Water Quality Control Board (RWQCB), and a concurrence from the California Coastal Commission or S.F. Bay Conservation and Development Commission with your certification that your project will comply with California's Coastal Zone Management Act. If the State fails to act on a valid request for concurrence with your certification within six (6) months after receipt, the Corps will presume a concurrence has been obtained. If the RWQCB fails to act on a valid request for certification within two (2) months after receipt, the Corps will presume a waiver of water quality certification has been obtained. You shall submit a copy of the certification or waiver to the Corps prior to the commencement of work.

To ensure compliance with the nationwide permit, the following special conditions shall be implemented in order to reduce adverse effects to steelhead (*Oncorhynchus mykiss*) and coho salmon (*Oncorhynchus kisutch*):

1. Work in the active channel will occur only during the non-migration period between the months of June and October.
2. Temporary erosion control measures will be implemented for the excavation and placement of gabion blanket streambank stabilization.
3. Dewatering or diversion of the live stream around construction areas shall be accomplished by an open low-flow channel maintained in a manner that allows unrestricted passage of juvenile salmonids with the San Lorenzo River.
4. If cofferdam installations are required, water pumped from the cofferdam structures will be routed through a settling basin before discharge into the active channel.
5. At the completion of the project, the temporary access roads will be removed and the area revegetated.
6. Heavy equipment activities will not occur within the low-flow channel.
7. Refueling of heavy equipment and vehicles will only occur within a designated, paved, bermed area where potential spills can be readily contained.
8. Equipment and vehicles operated within the flood control channel shall be checked and maintained to prevent leaks of fuels, lubricants or other fluids to the river.
9. Litter and construction debris shall be removed from the flood control channel and disposed of at an appropriate site.
10. Riparian vegetation removal will be limited primarily to areas not adjacent to the low-flow channel.

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SPECIAL CONDITIONS

CALIFORNIA COASTAL COMMISSION
EXHIBIT B, p 1 of 2

11. A five- to ten-foot buffer zone of riparian vegetation will be established and maintained along the low-flow channel.
12. The temporary access roads on each side of the San Lorenzo River should have adequate provisions (sediment fences, drainage settling basins, etc.) to prevent the entry of sediment into the live stream caused by road construction and use.
13. Work related to the construction or reinforcement of abutments for the bridge will be conducted outside of the active channel and should be kept separate from the live stream by means of sheet piling, sandbags, etc., as needed to prevent entry of sediment into the live stream.
14. Compaction grouting of soil around each of the two pier footings will be performed in such a manner as to prevent the inadvertent entry of grout material into the active channel.
15. Upon removal, the temporary access roads should be regraded as nearly as possible to the original contours.
16. All pilings, bulkhead, and sheetpile materials shall be non-toxic. Any combination of wood, plastic, concrete, or steel is acceptable, provided that there are no toxic coatings, chemical antifouling products, or other treatments that may leach into the surrounding environment.
17. The attached riparian revegetation guidelines shall be implemented.

You may refer all questions to Mark D'Avignon of our Regulatory Branch at 415-977-8446. All correspondence should be addressed to the District Engineer, Attention: Regulatory Branch, referencing file number 23410S.

Sincerely,

ORIGINAL SIGNED
BY
CHIEF, SOUTH SECTION
FOR

Calvin C. Fong
Chief, Regulatory Branch

Enclosures

U.S.A.C.O.E.
SPECIAL CONDITIONS

3-98-035
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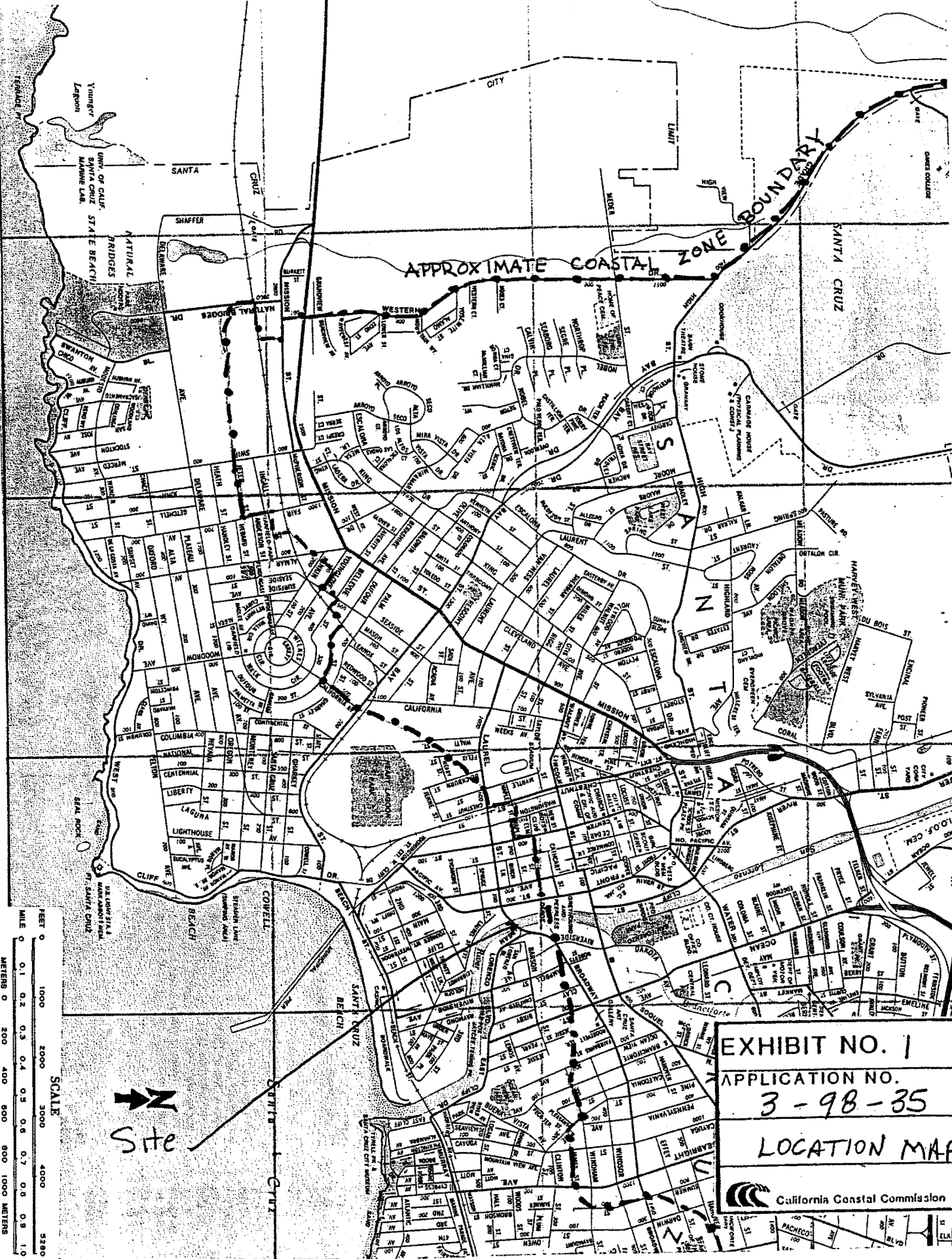
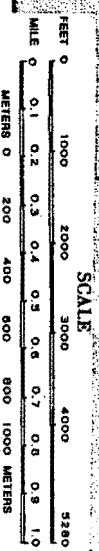


EXHIBIT NO. 1
 APPLICATION NO.
 3-98-35
 LOCATION MAP

California Coastal Commission



Site

SANTA CRUZ CITY - WEST

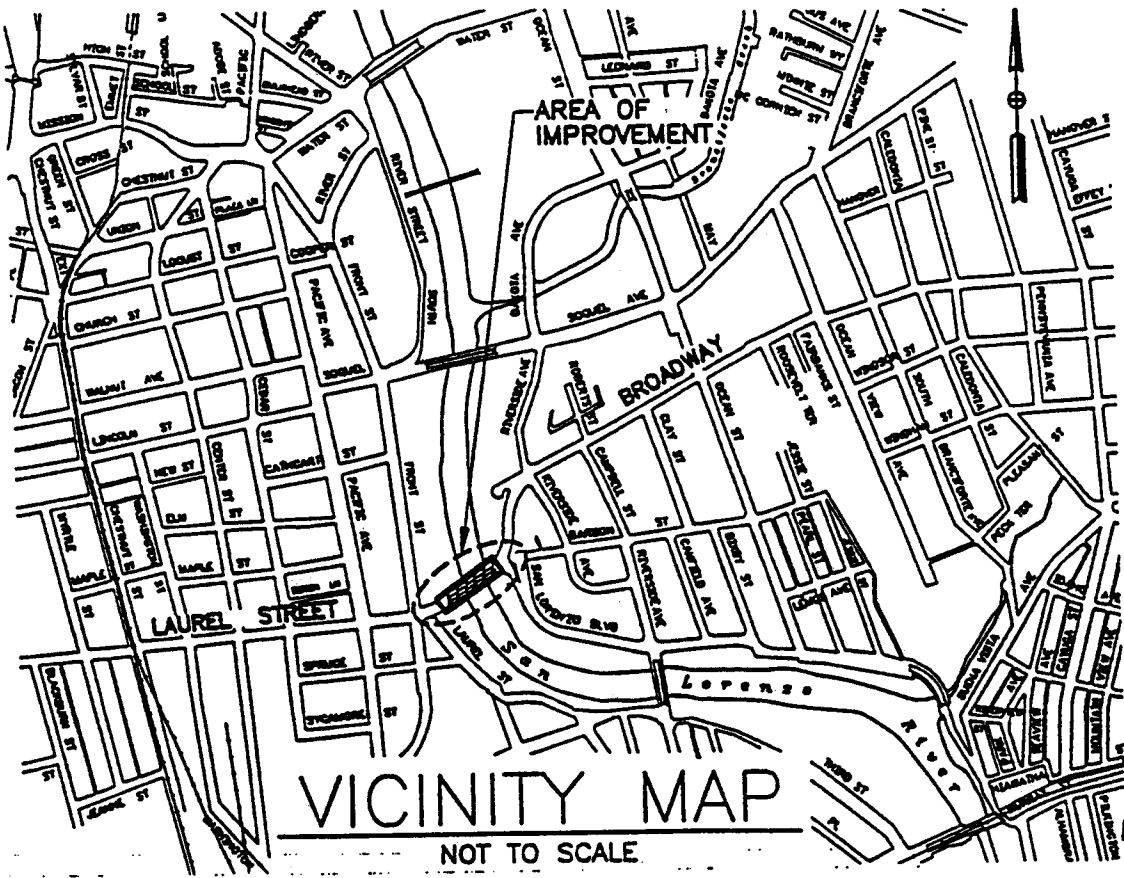


FIGURE 1

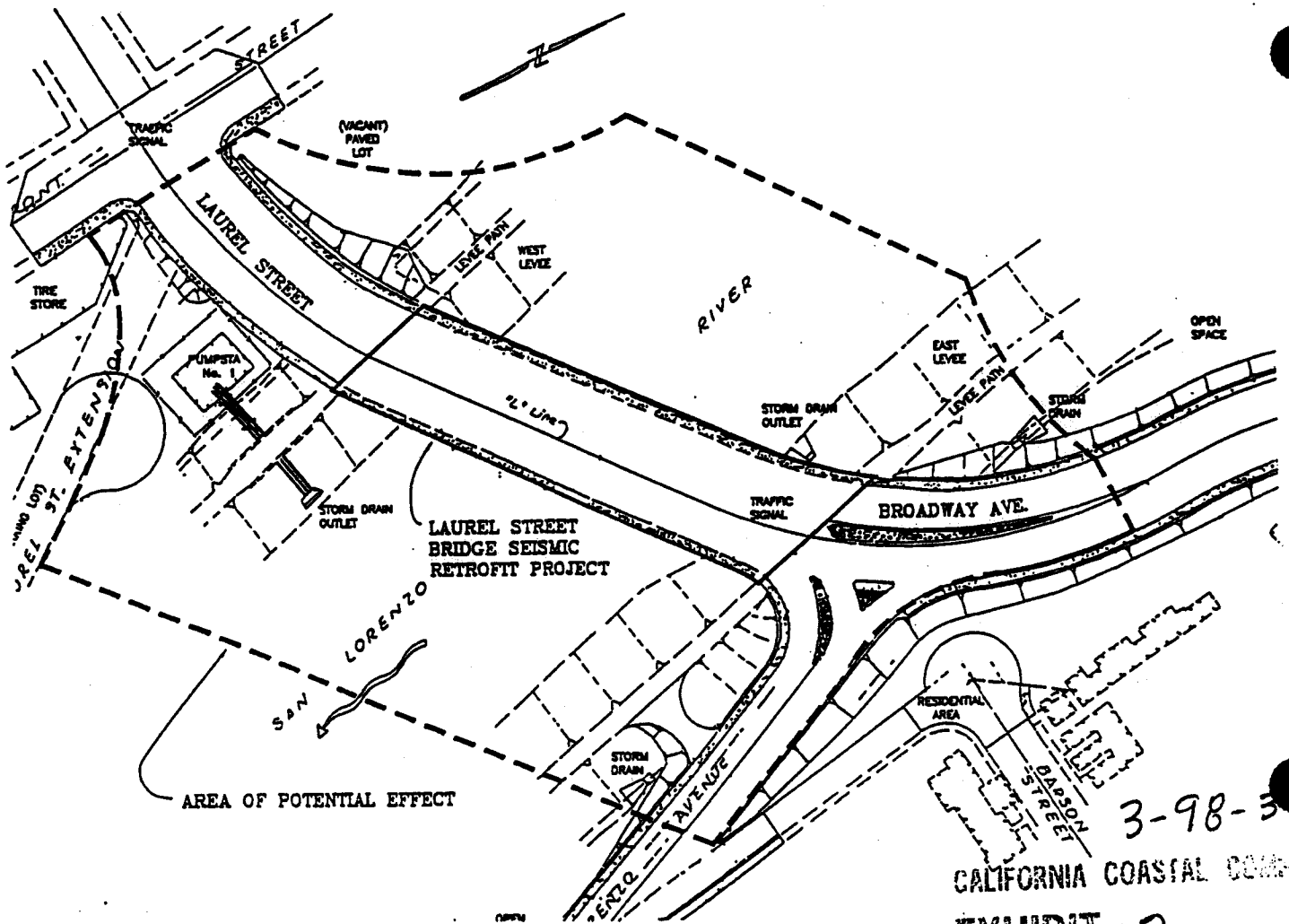
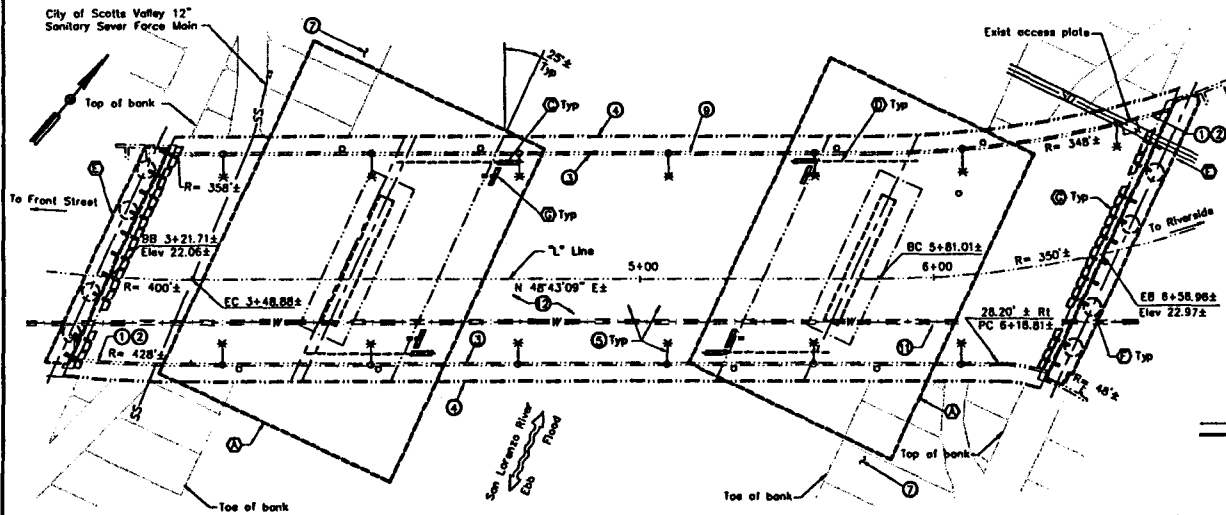
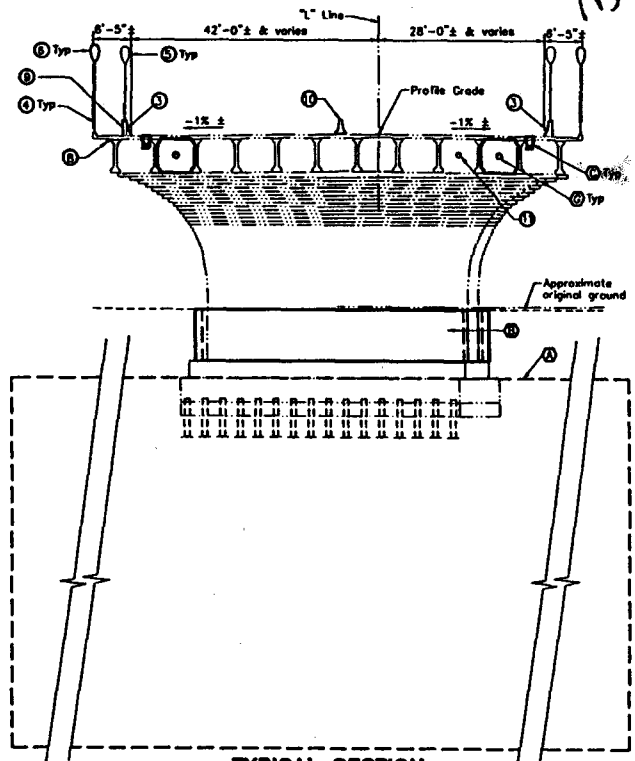
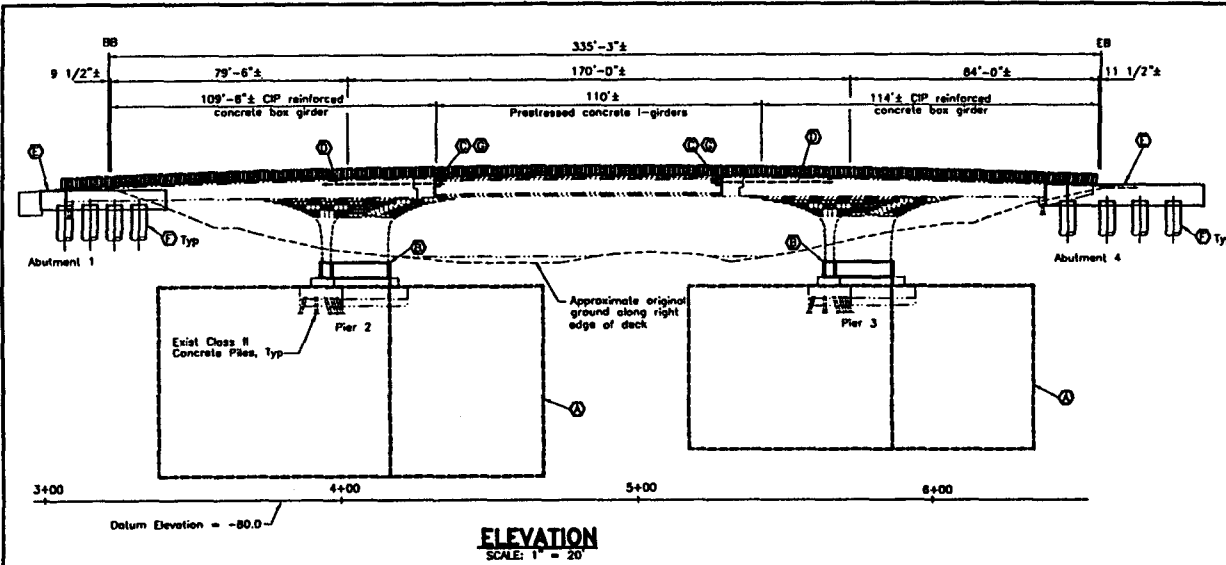


FIGURE 2 - AREA OF POTENTIAL IMPACT

3-98-30
CALIFORNIA COASTAL COMMISSION
EXHIBIT 2



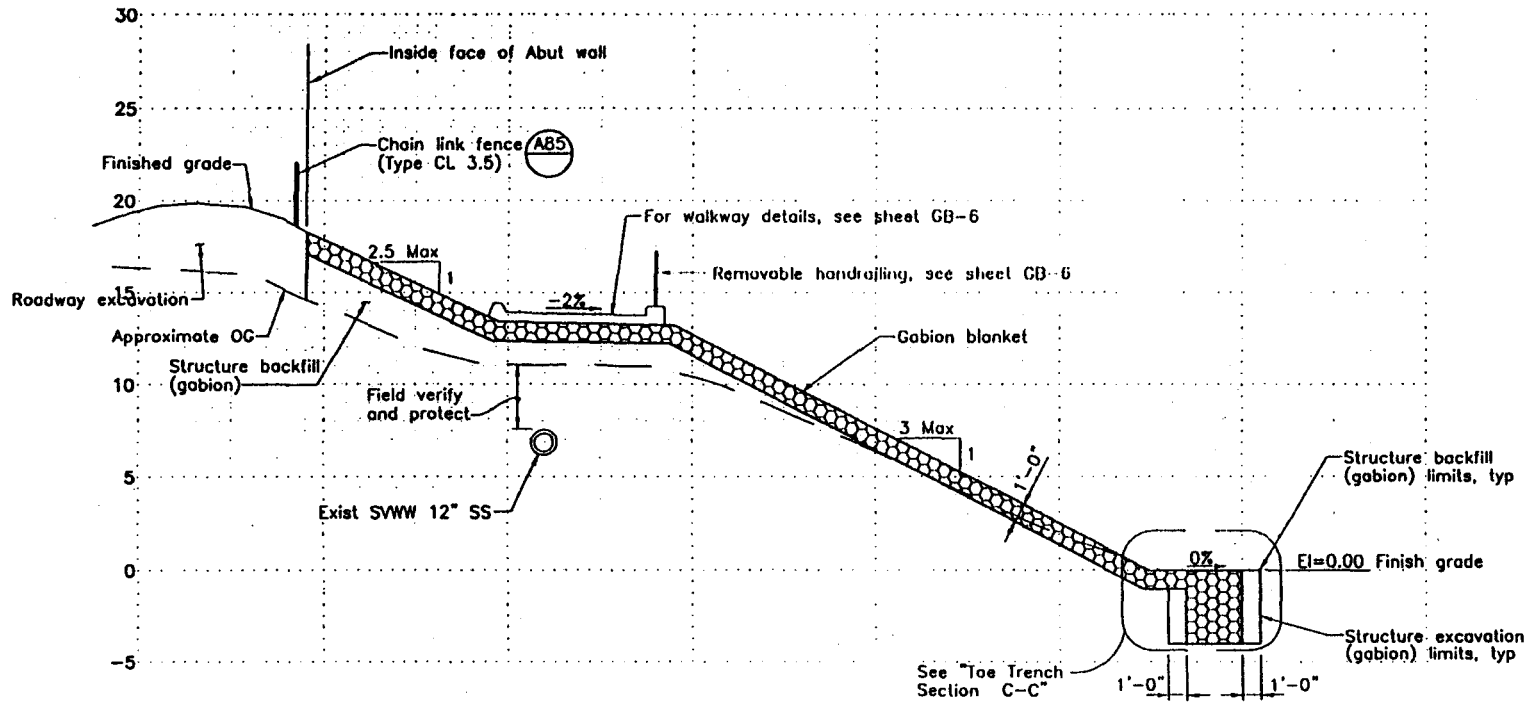
- LEGEND**
- Ⓐ Compaction Grouting
 - Ⓑ Pier confinement
 - Ⓒ Rod restrainer balster
 - Ⓓ Rod restrainer unit
 - Ⓔ Abutment diaphragm
 - Ⓕ CIDH piling
 - Ⓖ Pipe restrainer & balster
- SYMBOLS:**
- Existing structure
 - New construction
 - ⊕ Electrodr
 - Manhole, existing
- NOTES:**
- ① Paint bridge number
 - ② Paint "Laurel/Broadway Bridge"
 - ③ Concrete Barrier, (Type 27R modified) and Reconstruct Concrete Barrier
 - ④ Remove existing handdrill and place Pipe Handdrill, see sheets B-13 & B-14
 - ⑤ Salvage electrodr
 - ⑥ Electrodr, see sheets E-1, B-15 & B-16
 - ⑦ For gabion and walkway construction, see Road Plans
 - ⑧ Lighting conduit, see sheet E-4
 - ⑨ Traffic Signal Interconnect
 - ⑩ Temporary Railing (Type K), see sheets SC-1, SC-2 & SC-3
 - ⑪ 10" City of Santa Cruz Water Main
 - ⑫ Replace joint seats

NOTE:
 The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

For General Notes, see "General Plan No. 2" sheet **B-1**

DESIGN M. Christensen DETAILS R. Elliott QUANTITIES	BOYLE Engineering Corporation	PROJECT NO. 38C0102 FOR FILE DATE SHEET NO. 34 OF 58	Mark A. Embrani Project Manager CU EA	CITY OF SANTA CRUZ PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION LAUREL/BROADWAY BRIDGE GENERAL PLAN NO. 1 IMPROVEMENT PLAN	As Shown SHEET NO. 34 OF 58
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 CALIFORNIA COASTAL COMMISSION
 EXHIBIT 3 p. 2 of 2

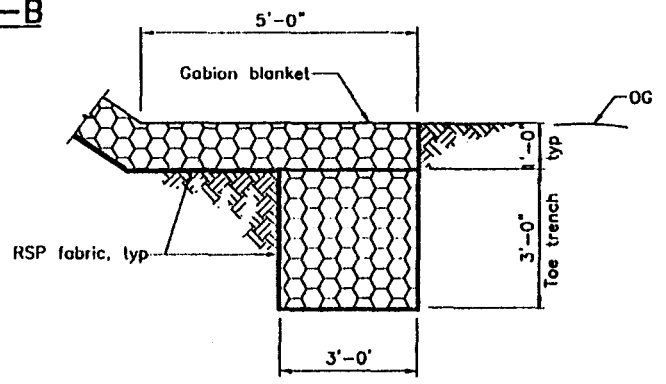


TYPICAL GABION BLANKET SECTION B-B

Scale: 1" = 10"

NOTES:

1. Construct cutoff wall over the SVWW 12" SS with 12" min clearance
2. Shear keys not shown
3. Gabion Blanket section shown is at Abut 1, Gabion Blanket section at Abut 4 is similar



TOE TRENCH SECTION C-C

Not to scale

PURPOSE: TO MEET EARTHQUAKE STANDARDS DATUM: CITY ADJACENT PROPERTY OWNERS: 1. 2.	<h2 style="margin: 0;">GABION SECTION</h2> <h3 style="margin: 0;">CITY OF SANTA CRUZ PUBLIC WORKS DEPARTMENT</h3>	<h3 style="margin: 0;">LAUREL/BROADWAY BRIDGE</h3> IN: CITY OF SANTA CRUZ AT: SAN LORENZO RIVER COUNTY OF: SANTA CRUZ APPLICATION BY: CITY OF SANTA CRUZ SHEET 9 OF 9 DATE: 2/16/98
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5-1
 CDP-033306 02/16/98 3:45 PM