CALIFORNIA COASTAL COMMISSION

South Coast Area Office
200 Oceangate, Suite 1000
Long Beach, CA 90802-4302
(562) 590-5071

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Commission Action:

STAFF REPORT: REGULAR CALENDAR

APPLICATION NUMBER: 5-98-211

APPLICANT: City of Newport Beach

AGENT: Public Works Department

PROJECT LOCATION: Grand Canal between Balboa Island and Little Balboa Island
City of Newport Beach, County of Orange

PROJECT DESCRIPTION: Dredge portions of the 1,700 foot long and 100 foot wide Grand Canal, place dredged (2,700 cubic yards) and imported sand (2,300 cubic yards) against bulkheads on both sides of the Grand Canal, restore 0.40-0.73 acres of impacted eel grass, rebuild existing rock buttresses, re-use existing rip-rap which has migrated from existing buttresses, and install two new rock buttresses.

LOCAL APPROVALS RECEIVED: Approval in concept from the City of Newport Beach

SUBSTANTIVE FILE DOCUMENTS: City of Newport Beach Certified Land Use Plan, City of Newport Beach Plans, Specifications and Contract Documents for Grand Canal Dredging, Eelgrass Transplant and Rock Buttresses, Grand Canal Eelgrass Surveys, Impact Assessment and Mitigation Plan by Coastal Resources Management dated May 1998, Regional Water Quality Control Board approval No. 98-00462-SDM dated August 21, 1998, Southern California Eelgrass Mitigation Policy (adopted July 31, 1991 by the National Marine Fisheries Service, U.S. Fish and Wildlife Service, and the California Department of Fish and Game), Army Corps of Engineers Provisional Permit Dated August 24, 1998

SUMMARY OF STAFF RECOMMENDATION:

Staff recommends that the Commission approve the proposed development with special conditions regarding removal of construction debris, conformance with Regional Water Quality Control Board approval No. 98-00462-SDM, submittal of applicable permits, submittal of a mitigation monitoring

report, provision for a CDP amendment, and a special condition regarding mitigation of dredging impacts.

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 the grounds that the development will be in conformity with the provisions of Chapter 3 of the California Coastal Act of 1976, is located between the sea and the first public road nearest the shoreline and is in conformance with the public access and public recreation policies of Chapter 3 of the Coastal Act, and w not have any significant adverse effects 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 a 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 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 condition 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.

III. Special Conditions.

1. Conformance with RWQCB Resolution 96-9

The applicant shall comply with the conditions of the California Regional Water Quality Control Board approval No. 98-00462-SDM, including page 2 of attachment "A" and the general conditions on page 4 of Resolution 96-9.

2. Provision of Applicable Permits

Prior to the commencement of dredging operations the applicant shall submit, for the review and approval of the Executive Director, a final mitigation and monitoring plan or changes to the Coastal Resources Management (CRM) report dated May 1998 (if required by resource agencies) and any approvals, notices and/or any permits required from the National Marine Fisheries Service, California Department of Fish and Game, and Army Corps of Engineers. If the mitigation plan is altered by any of the resource agencies noted above, then the applicant shall notify the Executive Director in writing to determine if a coastal development permit or permit amendment is required.

3. Provision of Monitoring Report

At the end of five years (from the transplantation) the applicant shall provide the Executive Director a final monitoring report within three months of the project termination. The report shall include the following information:

a. the results of previous monitoring periods,

b. conformance of the project with success criteria for coverage, density and health, as specified in the Eelgrass Mitigation Policy adopted July 31, 1991,

c. results of any additional transplantations, if required,

d. statement that the project has or has not met the mitigation plan goals (100% success),

4. Mitigation of Construction Impacts

The applicant shall adhere to the city guidelines for dredging in Newport Harbor and shall:

a. Utilize silt curtains to minimize siltation during dredging,

b. Take measures to ensure that barges do not ground and impact eelgrass sites,

c. Conduct a post-construction survey to determine if any additional adverse impacts occurred as a result of dredging and provide mitigation for those impacts,

d. Have a biologist monitor the dredging to minimize impacts to eelgrass beds.

5. Construction Responsibilities and Debris Removal

The applicant shall not store any construction materials or waste where it is subject to wave erosion and dispersion. The permittee shall remove from the beach/sand areas any and all debris which results from the dredging project.

6. Provision for CDP Amendment

The plan is considered successful if the plan meets 100% success at the end of five years. In the event that the plan is less than 100% successful the applicant shall apply for a coastal development permit amendment from the Coastal Commission.

IV. Findings and Declarations:

A. Project Description

The applicant is proposing to dredge portions of the 1,700 foot long and 100 foot wide Grand Canal, place dredged (2,700 cubic yards) and imported sand (2,300 cubic yards) against bulkheads on both sides of the Grand Canal, restore 0.40-0.73 acres of impacted eel grass, rebuild four existing rock buttresses, re-use existing rip-rap which has migrated from existing buttresses, and install one new rock buttresses.

The 1,700 foot long and 100 foot wide Grand Canal separates Balboa Island from "Little Island" (see Exhibit 2) in Lower Newport Bay, City of Newport Beach, Orange County. The northern entrance to the Grand Canal connects with Balboa Island Channel and the southern entrance connects with the main channel of Newport Harbor (see Exhibit 3). The Grand Canal is built out on both sides with residential development, including concrete bulkheads and docks. Habitats in the Canal include shallow subtidal soft bottom, eelgrass meadows, and mudflats.

The City is proposing the dredging project to restore navigability in the Grand Canal because vessels cannot pass the north or south end of the Canal during low tides due to a build up of sediment.

B. Dredging of Open Coastal Waters

Section 30233 of the Coastal Act strongly limits the fill of wetlands. The diking, filling or dredging of open coastal waters, wetlands, estuaries, and lakes is permitted only where there is no feasible less environmentally damaging alternative, where feasible mitigation measures have been provided to minimize adverse environmental effects, and if limited to one of the delineated allowable uses in Section 30233(a)(1-8).

The specific uses allowed under Section 30233(a)(1-8) are:

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

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

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

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

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

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

(7) Restoration purposes.

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

(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. (emphasis added)

(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, including, but not limited to, the 19 coastal wetlands identified in its report entitled, "Acquisition Priorities for the Coastal Wetlands of California", shall be limited to very minor incidental public facilities, restorative measures, nature study, commercial fishing facilities in Bodega Bay, and development in already developed parts of south San Diego Bay, if otherwise in accordance with this division. (emphasis added)

For the purposes of this section, "commercial fishing facilities in Bodega Bay" means that not less than 80 percent of all boating facilities proposed to be developed or

improved, where such improvement would create additional berths in Bodega Bay, shall be designed and used for commercial fishing activities.

(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.

1. Allowable Use

The proposed development has four segments: 1) hydraulic dredging of portions of the Grand Canal (2,700 cubic yards), 2) placing dredged and imported sand (2,300 cubic yards) against bulkheads on both sides of the Canal, 3) transplant impacted eelgrass on a 2.1:1 ratio (0.40-0.73 ac.), and 4) rebuild four existing and build one new rock buttress.

Dredging is proposed in the southern end of the channel from stations 0+50 to 5+00. Fill would be placed against upper channel slopes from stations 6+00 to 10+00. Dredging at the northern end of the channel would occur at stations 15+00 and 15+50 (see Exhibits 4a and 4b). The City is dredging only in areas where it has determined that shoaling has reached critical shallow depths, in order to minimize impacts to eelgrass. Because the City selected a reduced dredging alternative, it has to import sand (2,300 c.y.) to supplement the dredged materials used to rebuild the Grand Canal slopes.

The dredging is necessary to restore the Canal's navigability. Currently, vessels cannot pass through the north and south end of the Canal during extreme low tides due to the accumulation of sand at these locations.

Filling of coastal waters occurs in two portions of the proposed development. First, the dredged sand and imported sand (2,700 cubic yards dredged, 2,300 cubic yards imported) will be placed against Canal slopes where the sand embankments supporting seawalls have been eroded. Second, 850 tons of ¼ ton boulders will be placed on the four existing buttresses and one new rock buttress to protect existing seawall corners protecting a public walkway.

Section 30233 of the Coastal Act provides for eight allowable uses for which the dredging or filling of coastal waters is acceptable. The allowable uses for the proposed development include dredging for navigation purposes to restore previously dredged Canal depths and placement of rock as an incidental public use to protect public street corner bulkheads. Sand dredged from the Canal and some imported sand will be placed on the Canal slopes to restore the beaches per 30233(b) and restore the Canal side slopes.

a. Dredging for Navigation Purposes

Section 30610(c) of the Coastal Act states that no coastal development permit is required for:

> Maintenance dredging of existing navigation channels or moving dredged material from those channels to a disposal area outside the coastal zone, pursuant to a permit from the United States Army Corps of Engineers.

Section 13252 of the California Code of Regulations states that any method of routine dredging that involves the dredging of 100,000 cubic yards or more within a 12 month period or where dredged spoils are to be placed within an environmentally sensitive habitat area requires a coastal development permit. Section 13252(a)(2)(C) concerns the disposition of suitable dredged materials for beach nourishment.

The proposed dredging requires a permit because the presence of eelgrass in the Canal makes the Canal an environmentally sensitive habitat area. Thus under 13252 a coastal development permit is required, even though the dredged quantity is 2,700, much less than the 100,000 cubic yards of dredging allowed in a 12 month period.

Section 30233(a)(2) of the Coastal Act states that "Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps" is an allowable use. The dredging in the proposed project is for the purpose of restoring previously dredged navigation channel depth and therefore the Commission finds that the proposed development is an allowable use under Section 30233(a)(2).

b. Incidental Public Use

Filling of coastal waters occurs in two portions of the proposed development. First, the dredged sand and imported sand (2,700 cubic yards dredged, 2,300 cubic yards imported) will be placed against Canal slopes where the sand embankments supporting seawalls have been eroded. Exhibits 5 is a cross-section of the existing channel slope configuration and the proposed channel slope configuration.

Second, 850 tons of ¼ ton boulders will be placed on the four existing buttresses and one new rock buttress to protect existing street corners. The existing rock buttresses are located at the corners of South Bay Front at East Bay Front, South Bay Front at Grand Canal (both sides), East Bay Front at Grand Canal, and a new buttress at North Bay Front at Grand Canal. Exhibit 3 shows the proposed sites and Exhibits 7a-c are cross-sections of the existing and proposed buttresses. One of the existing rock buttresses, South Bay Front at East Bay Front, is not on the Grand Canal.

Three of the existing rock buttresses are located at the corners where the Grand Canal meets the Balboa Island Channel or the Main Channel. A new rock buttress is proposed at the corner of North Bay Front and the Grand Canal. The certified land use plan shows that there is a public walkway/bikeway/accessway around the perimeter of Balboa Island and the Little Island. This walkway is supported by concrete seawalls. The rock buttresses are designed to

support the existing seawalls and walkway. Therefore, the placement of rock to support the public seawalls is an incidental public use under Section 30233(a)(5) of the Coastal Act.

The applicant is also proposing to place the dredged sediment and an additional 2,300 cubic yards of sediment on the channel slopes to restore the beaches. The Commission has approved previous permits (5-86-130, 5-89-259, and 5-83-220) to allow bayfront homeowners to dredge sand which accumulates and interferes with boat docks and place it against the bulkheads. The City of Newport Beach has a maintenance dredging permit (5-89-259) for just this purpose. Therefore, the Commission finds that the placement of dredged sediment and placement of new sediment is necessary for navigation and to protect existing beaches in conformance with Section 30233(a)(2) and 30233(b).

2. Feasible Environmental Alternatives

Section 30233 of the Coastal Act requires that filling and dredging of wetlands, open coastal waters and estuaries be permitted only where there is no feasible less environmentally damaging alternative. The applicants submitted an alternatives analysis with the CDP application. The alternatives considered were a no project alternative, a maximum dredging alternative and a reduced project alternative.

a. No Project Alternative

Under the no project alternative the Grand Canal would continue to accumulate sediment until all navigation in the Canal is completely blocked. In addition, erosion would continue at the corners of the Grand Canal where rock buttresses currently protect the existing seawall. There would be no short term adverse impacts to water quality under the no project alternative. However, water quality would be adversely impacted because the tidal prism would be reduced leading to a decrease in tidal flushing and poorer water exchange and a potential increase in algae and eutrophic conditions.

Therefore, the no project alternative is not a viable alternative because navigation would continue to be impeded and water quality would also decline.

b. Maximum Dredging Alternative

Under the maximum dredging alternative the applicant would deepen the Grand Canal continuously between stations 0+00 to 15+75 to depths of -5 ft. MLLW in the center of the canal and a portion of the dredged material would be used to increase the canal slopes to within 10 feet of the bulkheads. The remainder of the dredged material would have to be exported.

In this scenario nearly all of the eelgrass would be removed from the canal (1.37 ac.). In addition to the adverse impacts to established eelgrass beds, this alternative would have increased short term adverse impacts to all biota in the Grand Canal from turbidity plumes and the shadowing effect from barges.

Therefore, this is not an acceptable alternative because of the adverse impacts to existing biological resources, eelgrass in particular.

c. Reduced Dredging Alternative

The reduced dredging alternative involves the reduction of adverse impacts to marine habitat and biota. In particular, impacts to eelgrass will decrease from 1.37 acres under the maximum dredging alternative to from 0.33-0.61 acres. From the engineering perspective, the maximum dredging alternative is the preferred alternative. Implementation of the reduced dredging alternative decreases impacts to eelgrass in the short term but also means that dredging will have to be conducted with greater frequency. Still, the reduced dredging alternative will achieve the goals of the maximum dredging alternative (restore navigation) and is also preferable from an environmental perspective.

The essential difference between the maximum dredging alternative and the reduced dredging alternative (project design) is that under the maximum dredging alternative involves dredging the entire length of the Grand Canal, while the reduced dredging alternative involves dredging on those areas where sand is accumulating and interfering with navigation. All the dredged materials would be kept on site. Both alternatives would restore the tidal prism and facilitate navigation.

Therefore, the Commission finds that the reduced dredging alternative achieves the project goals of restoring tidal prism and facilitating navigation and involves less environmental impacts and is the least environmentally damaging alternative.

3. Project Impacts & Mitigation Measures

Section 30233 of the Coastal Act requires that where fill is permitted, feasible mitigation measures are provided to minimize adverse impacts.

a. Impacts Analysis

1. Temporary Impacts: Temporary adverse impacts to water quality from dredging are unavoidable. The Grand Canal was last dredged in the mid-1980's, at which time eelgrass was removed. Since then the eelgrass has grown back. Water quality is temporarily degraded when bottom sediments are disturbed, re-suspended in the water and then dispersed outside the dredging area via tidal currents. Use of a hydraulic dredge causes a localized turbidity plume but use of a hydraulic dredge is preferable over a clamshell dredge and results in less turbidity.

Impacts of dredging are short term and the reduced water quality conditions are expected to return to ambient conditions following the project termination. The impact of the project on the invertebrate community, fish and bird communities are expected to be minimal.

The *Grand Canal Eelgrass Surveys, Impact Assessment and Mitigation Plan* prepared for the City of Newport Beach by Coastal Resources Management (CRM) concludes that the project impacts are temporary and do not constitute a significant adverse effect. Therefore, no mitigation is required for the short term impacts from dredging of the Grand Canal.

2. Long Term Impacts: The long term impacts from the project involve two aspects: 1) the dredging of the Canal and placement of material on the canal bank slopes, and 2) placement of rock to restore existing rock revetments and to establish one new rip-rap revetment.

There are no long-term adverse effects from dredging and re-establishing the channel slopes. Dredging will have beneficial effects in that navigation will be restored, the tidal prism will be restored, tidal flushing will continue, and water quality will be improved.

Two of the existing rip-rap buttresses are located opposite each other at the corners of South Bay Front and Grand Canal (see Exhibit 7a). Rock will be placed adjacent to piers which extend out into the Main Channel and adjacent to the Grand Canal seawall. A third existing rip-rap buttress which will be reinforced is located at and around the corner of the seawall at East Bay Front and Grand Canal (see Exhibit 7b). The fourth existing rip-rap buttress is located at the corner of East Bay Front and South Bay Front, and is not located on the Grand Canal but on Balboa Island Channel (see Exhibit 7c). The new rip-rap buttress would be located at and around the corner of North Bay Front and Grand Canal (see Exhibit 7b).

Placement of rock (850 tons or 212 ¼ ton boulders) will have potential long term effects in that it represents a transition from a soft bottom habitat to a hardened bottom habitat, each with different biotic communities. Exhibit 6 is a section of an existing rip-rap buttress and Exhibit is a cross section of the proposed rip-rap buttress.

The purpose of reinforcement of the four existing rip-rap buttresses is to restore the buttresses to their original engineered specifications for the protection of seawalls. The additional and retrieved rip-rap will increase the height of the buttresses by approximately four feet and the width at the base of the buttress by approximately 8 feet. For the existing buttresses filter fabric will be placed on the floor bottom extending several feet up the buttress. The new rip-rap buttress will have include filter fabric placed on 20 feet of the channel bottom.

Over time and due to the impact of winter storms, many of the rip-rap boulders have shifted and migrated out into the channel. A condition of the construction contract, requires any contractor to retrieve rip-rap boulders which have migrated from the main configuration of the rip-rap buttresses. This does not mean that the area around the buttress would be subject to widespread disruption by dredging but that during low tide contractors would identify boulders which would be easily retrievable and re-used. Retrieval of these boulders would then result in soft bottom habitat being restored.

The rip-rap buttresses are necessary to protect seawalls and a public walkway at the corners where the Grand Canal meets the Balboa Island Channel and the Main Channel. However, these locations are subject to greater tidal stress and scour than other sheltered or open soft bottom habitat locations in part because they are located at the point of convergence of two bodies of water and because of the influence of the existing hardened seawalls which do not absorb wave velocity but reflect it. These locations are therefore subject to scour and are not resource rich locations. The only long-term impact from the buttresses is the installation of the new rip-rap buttress. The long-term impact here is the conversion of existing soft bottom habitat to hard-bottom habitat. On the other hand, installation of the rip-rap will provide a

secure medium for organisms which thrive on hardened habitat. In effect, then the long term impact would be to replace one marine habitat with another marine habitat.

Therefore, the Commission finds that the proposed development will not have significant long term adverse effects on the environment.

b. Mitigation Measures

Section 30233 requires that feasible mitigation measures be provided to mitigate adverse environmental impacts.

The *Grand Canal Eelgrass Surveys, Impact Assessment and Mitigation* Plan prepared by Coastal Resources Management outlines some of the proposed mitigation measures. These mitigation measures fall into three categories: measures to reduce water quality impacts, measures to avoid and reduce short-term disturbances to eelgrass habitat, and measures to avoid, reduce and compensate for the loss of eelgrass.

The project proposal, conditions of the Regional Water Quality Control Board and provisions of the Southern California Eelgrass Mitigation Policy require specific conditions to protect water quality and biological resources. These mitigation measures are described in detail in the Marine Environment section of this staff report. RWQCB measures include no net loss of wetlands, criteria for use of fill, restrictions regarding the use of fuel, lubrication and maintenance of construction equipment, provisions for clean-up of any spilled material, and disposition of spoils.

The selection of the reduced dredging alternative is in itself a mitigation measure to avoid impacts on eelgrass. Under the reduced dredging alternative impacts to eelgrass would be reduced from 1.37 acres to 0.61 acres, a reduction of 55%T. The City will restore both physical habitat and eelgrass vegetation. 2,548.9 square meters of soft bottom habitat at depths between -.5 ft and –0.1 feet will be replaced to compensate for project related bay bottom habitat losses. Eelgrass losses will be mitigated on a 1.2:1 ratio in conformance with the *Southern California Eelgrass Mitigation Policy* adopted by the National Marine Fisheries Service, U.S. Fish and Wildlife Service and the California Department of Fish and Game.

C. Marine Environment

Sections 30230 and 30231 of the Coastal Act pertain to water quality and biological productivity. They state:

Section 30230

> 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 30231.

> 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 entertainment, 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.

1. Water Quality

Implementation of the proposed development will have beneficial impacts on both water quality and biological productivity. Implementation of the proposed project will result in an increase in the tidal prism, tidal flushing, and a consequent increase in water quality.

The applicant has supplied a Waiver of Waste Discharge Requirements and Water Quality Certification from the California Regional Water Quality Control Board. This document states that:

> Provided that the criteria and conditions for Projects Which Impact Wetlands and/or Riparian Habitats specified on Page 2 (of Attachment "A" to the Resolution), Minor Stream Channel Alterations specified on page 3, and the general conditions specified on page 4 are met, waste discharge requirements are waived for this project.

These conditions include provisions to implement RWQCB water quality specifications to limit the dispersion of the turbidity plume and prevent water quality degradation. Specifications will include maximum turbidity levels and minimum allowable concentrations of dissolved oxygen in the waters of the project site. Other RWQCB measures include no net loss of wetlands, criteria for use of fill, restrictions regarding the use of fuel, lubrication and maintenance of construction equipment, provisions for clean-up of any spilled material, and disposition of spoils.

One water quality mitigation measure proposed in the mitigation plan is that silt curtains be deployed around dredged areas and at canal ends to minimize the spread of turbidity.

The RWQCB waiver of discharge requirements states that if implemented the mitigation measures will minimize adverse impacts to water quality resulting from the project. Therefore, the Commission finds that the applicant shall be conditioned to implement the mitigation measures specified in the RWQCB Waiver of Waste Discharge Requirements and Water Quality Certification (No. 98-00462-SDM). Only as conditioned, does the Commission find that the proposed development conforms with Sections 30230 and 30231 of the Coastal Act.

2. Biological Resources

a. Importance of Eelgrass

The Grand Canal contains 1.37 acres of eelgrass. The proposed development is expected to impact between 0.33 to 0.61 acres of eelgrass. Mitigation in the form of 1.2:1 will result in the transplantation of between 0.40 and 0.73 acres of eelgrass. The applicant submitted the *Grand Canal Eelgrass Surveys, Impact Assessment and Mitigation Plan* prepared for the City of Newport Beach by Coastal Resources Management. According to E. Yale Dawson, Seashore Plants of Southern California, eelgrass or Zostera marina grows in tidal mud flats and in bays and estuaries from low tide to 20 feet or more. Eelgrass is described in Exploring Pacific Coast Tide Pools (Braun & Brown) as a 3-10" long plant with branch stems rising from thick root stock with ribbon like leaves common to mud flats and estuaries. Disturbances of coastal bays and wetlands in California have resulted in the substantial reduction of this habitat. The July 1993 edition of Shore and Beach magazine contains an article by Rich Ware entitled "Eelgrass (Zostera Marina) in Southern California Bays and Wetlands with Emphasis on Orange County, California". Ware writes that seagrass provides a vertical component to featureless, soft-bottom habitat, attracts invertebrates and fishes and serves a nursery function for many fishes. Various diatoms, algae, worms, snails and crustaceans live on the shoots and blades of eelgrass. Worms, clams and crustaceans also live in the sediment among the roots and rhizomes. Eelgrass also provides foraging habitat for pipefish, kelpfish, lobster, sand bass, California halibut, topsmelt, anchovy, perch, and sting rays. Also utilizing eelgrass habitat are crabs, sea stars, and urchins. In a review of research, Ware found studies that support the position that "...vegetated bay sediments support a higher diversity of invertebrates compared to unvegetated bay sediments because of the added structure and habitat."

Ware writes that although eelgrass meadows were once common in Newport Bay, it is more commonly found now in Anaheim/Sunset Bay. "Eelgrass meadows occur at depths of 3 m to 6.1 m (10 to 20 ft.) in the Newport Harbor entrance channel and sporadically at shallower depths along bulkheaded shorelines near Balboa and Harbor Islands." Ware states that eelgrass and its associated biota are "sensitive to environment perturbations that result in shading, water motion changes, and habitat alteration...".

The CRM survey and mitigation plan reports that the largest eelgrass meadows in Newport Bay are found between the Newport Bay entrance channel and the Coastal Guard facility in Corona del Mar. Low intertidal and shallow subtidal beds extend along North Bay Front and South Bay Front and the Grand Canal. Eelgrass was removed from the Grand Canal as a result of dredging operations in the mid-1980's. However, the eelgrass meadows re-established naturally by the late 1980s.

b. Project Impacts

The eelgrass mitigation policy was adopted on July 31, 1991 by the National Marine Fisheries Service, U.S. Fish and Wildlife Service and the California Department of Fish and Game. The policy contains several guidelines which include specific requirements for: 1) mapping the area, distribution and density of eelgrass beds; 2) time periods when mapping takes place; 3) requirements for mitigation sites; 4) mitigation ratios of 1.2:1 for impacted habitat replacement; 5) requirements for success and monitoring; and 6) requirements for planting and transplanting eelgrass.

In 1997 CRM conducted an eelgrass mapping survey of the Grand Canal. The limits of eelgrass were re-surveyed in 1998 following heavy rains. Divers collected data on eelgrass in 10 meter transects. They surveyed the habitat for beginning and end of water depths, observation times, eelgrass locations and shoot densities, presence of other marine organisms and sediment characteristics. Eelgrass habitat was deemed continuous if there was no more than one meter separation between patches. Shoot density was plotted at three different locations.

A total of 1.37 acres of canal seafloor was vegetated with eelgrass and formed a nearly continuous meadow except where there was shadowing effects from a bridge. Eelgrass extended to within 6 to 10 meters of the east and wet bulkheads and along the shoreline on South, North and East Bay Front. Eelgrass in the center of the canal grew to depths between -2.7 and -7.9 feet. Along the east and west bulkheads the upper elevational limit for eelgrass was -0.1 to +0.7. Shoot density was highest between the Main Channel and Park Ave. Bridge, but overall densities were very high, especially in the shallow to mid-depth ranges on both sides of the canal.

Dredging is proposed in the southern end of the channel from stations 0+50 to 5+00. Fill would be placed against upper channel slopes from stations 6+00 to 10+00. Dredging at the northern end of the channel would occur at stations 15+00 and 15+50 (see Exhibits 4 and 5). The City is dredging only in areas where it has determined that shoaling has reached critical shallow depths, in order to minimize impacts to eelgrass. Because the City selected a reduced dredging alternative, it has to import sand (2,300 c.y.) to supplement the dredged materials used to rebuild Grand Canal slopes. The maximum dredging alternative would have resulted in the loss of 1.37 acres of eelgrass. The reduced dredging alternative results in the loss of between 0.33 and 0.61 acres of eelgrass habitat, depending upon which biological survey is utilized.

3. Mitigation and Monitoring

Under the reduced dredging alternative impacts to eelgrass would be reduced from 1.37 acres to from 0.33-0.61 acres, a reduction of 55%. The City will restore both physical habitat and eelgrass vegetation. 2,548.9 square meters of soft bottom habitat at depths between -.5 ft and -0.1 feet will be replaced to compensate for project related bay bottom habitat losses. Eelgrass losses will be mitigated on a 1.2:1 ratio in conformance with the *Southern California Eelgrass Mitigation Policy* adopted by the National Marine Fisheries Service, U.S. Fish and Wildlife Service and the California Department of Fish and Game.

Eelgrass mitigation occurs in the form of transplantation only. There are no commercial nurseries propagating eelgrass. Because of the discrepancy between the results of surveys conducted before and after the winter storms, the amount of eelgrass to be actually replaced will be determined within 120 days of the dredging activity at which time another field survey will be conducted. It is expected that the results of that survey will indicate that between 0.33 and 0.61 acres of eelgrass will be impacted.

In reference to protection of eelgrass the mitigation plan includes measures to schedule dredging operations between September 31 and March 1, mark the boundaries of eelgrass meadows with buoys prior to commencement of dredging, and avoiding anchoring barges or other vessels over eelgrass vegetation.

In addition, the City will restore impacts to the soft-bottom habitat by dredging and will restore 0.73 acres of soft bottom habitat, a replacement ratio of 1.2:1.

The eelgrass transplant program consists of collecting stock material from donor sites, identifying suitable acceptor sites, preparing the material for transplanting, replanting the eelgrass in the receptor area and monitoring the success of the transplantation. Donor material, preferably from the project site, will be harvested by divers, transferred to shore, separated into planting units (bundles), and replanted by divers.

The transplant program should be beneficial to the eelgrass ecosystem in the long run because the biologists will select optimum growing sites in the project vicinity and by physically transplanting bundles of eelgrass will aid dispersal faster than the plant can reproduce by itself.

It should also be noted that the Eelgrass Mitigation Policy generally recommends that eelgrass be selected from several geographically distinct donor sites in order to increase biological diversity. Because the project is small transplanted eelgrass will be taken from the project vicinity.

The Eelgrass Mitigation Policy contains provisions for success criteria and monitoring. Monitoring is conducted at 3, 6, 12, 24, 36, 48 and 60 months following transplantation for density, areal coverage and overall health of the eelgrass. The success criteria are as follows:

Year 1: Minimum of 70% areal coverage & 30% density
Year 2: Minimum of 85% areal coverage & 70% density
Year 3-5: Sustained 100% areal coverage and 85% density.

CRM will continue to transplant eelgrass in the event that these criteria are not met.

There were two eelgrass surveys which came up with differing results as to how much eelgrass is present in the Grand Canal. For this reason a final survey will be conducted prior to commencement of dredging and a final determination will be made by the Army Corps and other resource agencies as to the exact amount of mitigation which will be required. Therefore, the Commission has conditioned the applicant to provide any final approvals required from resource agencies such as the Army Corps of Engineers. Only as conditioned does the Commission find that the project conforms with the biological resource protection policies of the Coastal Act.

4. Coastal Act Consistency

Section 30230 of the Coastal Act concerns the maintenance, enhancement and restoration of marine resources, particularly species of special biological significance. Section 30231 of the Coastal Act concerns the biological productivity and quality of coastal waters, bays, etc. Implementation of the proposed development involves impacts to eelgrass, a sensitive coastal resource. The applicant has submitted a mitigation and monitoring plan prepared by CRM dated May 1998.

There are several special conditions of this staff report designed to ensure consistency with Sections 30230 and 30231. Special condition no. 5, construction responsibilities and debris removal, and special condition no. 4, mitigation of construction impacts, are designed to ensure that the biological productivity and water quality is not adversely impacted by construction of the proposed development. Special condition no. 4 includes measures such as placement of silt curtains to

minimize siltation during dredging, having a biologist on site to monitor construction, and conducting post-construction survey of eelgrass to determine if there are additional adverse impacts resulting from dredging. Special condition no. 5 also requires that all construction materials be stored away from the harbor and that all debris be contained and removed after project construction is complete.

Special condition no. 2 requires that the applicant provide evidence of all required permits from applicable resource agencies prior to issuance of the coastal development permit and that if the project is changed by subsequent approvals, the changes are subject to review by the Executive Director and may require a coastal development permit amendment from the Coastal Commission. Special condition no. 6 requires that in the event the project does not meet its goals with respect to eelgrass mitigation, then the applicant must apply for a coastal development permit amendment to get approval from the Commission for any new mitigation measures. Special condition no. 3 requires that the applicant provide a comprehensive report at the conclusion of the five year monitoring plan, and details some of the report components. Therefore, as conditioned, the Commission finds that the proposed development is consistent with Sections 30230 and 30231 of the Coastal Act.

D. Public Access and Recreation

Section 30604(c) of the Coastal Act requires that every coastal development permit issued for any development between the nearest public road and the sea includes a specific finding that the development is in conformance with the public access and recreation policies of Chapter 3 of the Coastal Act. The proposed development is located between the sea and the first public road.

Section 30212 of the Coastal Act states, in relevant part:

(a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where:

(2) adequate access exists nearby.

Section 30224 of the Coastal Act states:

Increased recreational boating use of coastal waters shall be encouraged, in accordance with this division, by developing dry storage areas, increasing public launching facilities, providing additional berthing space in existing harbors, limiting non-water-dependent land uses that congest access corridors and precludе boating support facilities, providing harbors of refuge, and by providing for new boating facilities in natural harbors, new protected water areas, and in areas dredged from dry land.

The proposed development is located in the City of Newport Beach. The development is located in Newport Bay between Balboa Island and Little Balboa Island. There is a public walkway around both islands between residential development and the seawall.

The proposed development is a dredging project designed to facilitate public navigation. Rip-rap will be placed against portions of the seawall to protect the public walkway. The development will have no adverse impacts on coastal access and recreation.

Therefore, the Commission finds that the proposed development does not pose significant adverse impacts on public access and recreation and is consistent with Section 30212 of the Coastal Act.

E. Land Use Plan

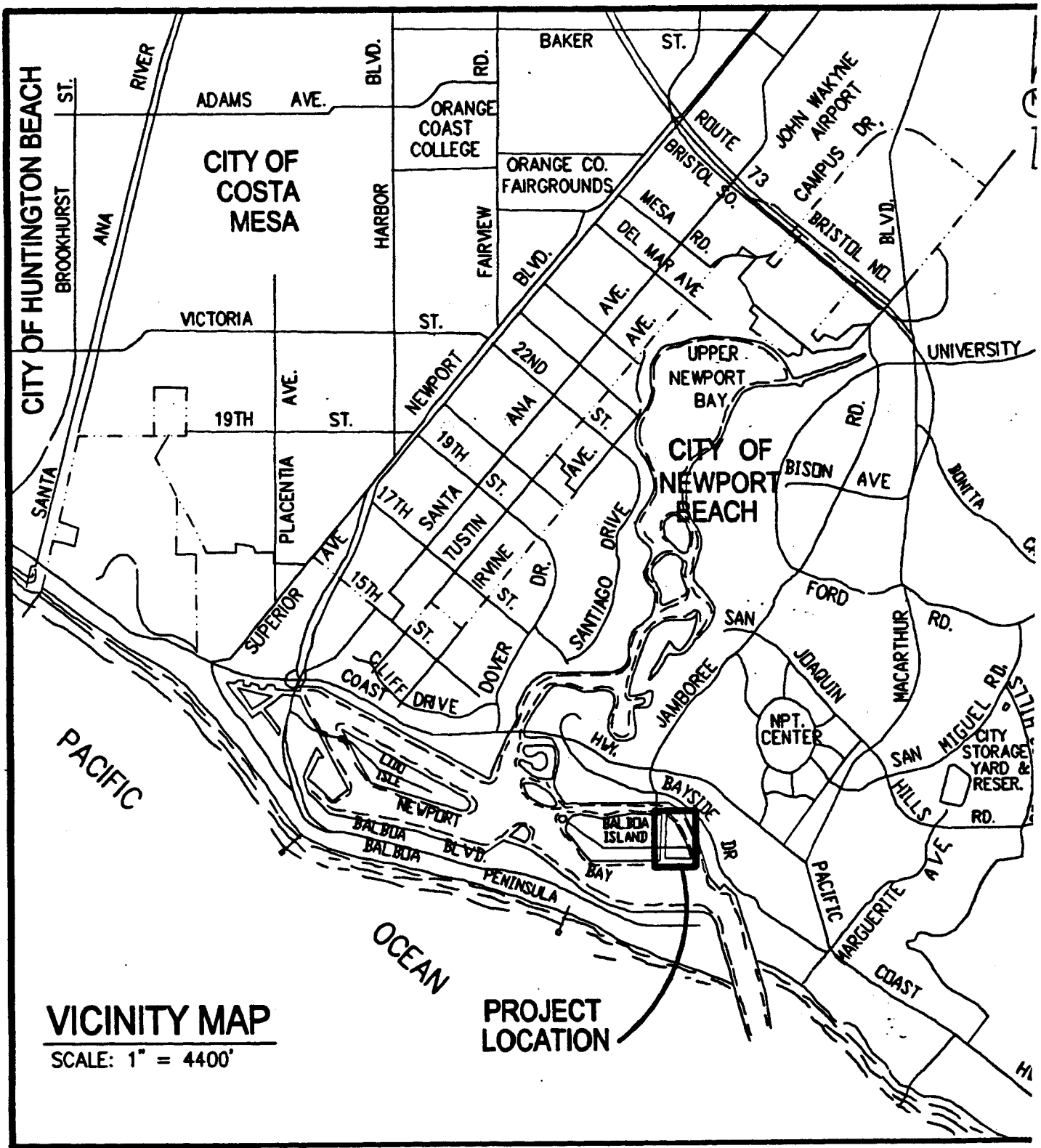
Section 30604(a) of the Coastal Act provides that the Commission shall issue a coastal permit only if the project will not prejudice the ability of the local government having jurisdiction to prepare a Local Coastal Program which conforms with Chapter 3 policies of the Coastal Act.

The Commission certified the Land Use Plan for the City of Newport Beach on May 19, 1982. As conditioned, the proposed development is consistent with the policies contained in the certified Land Use Plan regarding water quality and development in coastal waters. Therefore, approval of the proposed development will not prejudice the City's ability to prepare a Local Coastal Program for Newport Beach that is consistent with the Chapter 3 policies of the Coastal Act as required by Section 30604(a).

F. Consistency with the California Environmental Quality Act

Section 13096 of Title 14 of the California Code of Regulations requires Commission approval of Coastal Development Permits to be supported by a finding showing the amendment to the coastal development permit, as conditioned by any conditions of approval, to be consistent with any applicable requirements of the California Environmental 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 proposed project has been conditioned in order to be found consistent with the marine resource protection policies of Sections 30230 and 30231 of the Coastal Act. Mitigation measures; special conditions requiring removal of construction debris, provision of applicable permits, provision of final monitoring report, contingency for a CDP amendment, and mitigation of construction impacts, will minimize all adverse effects. As conditioned, there are no feasible alternatives or feasible mitigation measures available, beyond those required, which would substantially lessen any significant adverse effect which the activity may have on the environment. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified effects, is the least environmentally damaging feasible alternative and can be found consistent with the requirements of the Coastal Act to conform to CEQA.



VICINITY MAP

SCALE: 1" = 4400'

SYMBOL LEGEND

	POWER POLE
SSMH	SANITARY SEWER MANHOLE
	FIRE HYDRANT
WM	WATER METER BOX & SERVICE

ABBREVI[illegible]

AC	ASPHA
DIP	DUCTILE
VCP	VITRIFI
RWV	RESILIE

EXHIBIT No. 1

Application Number: 5-98-211

Vicinity Map

California Coastal Commission

EXHIBIT No. 2
Application Number:
5-98-211
Aerial Map
California Coastal Commission

Photograph 1. Aerial view of Lower Newport Bay and Balboa Island
Balboa Island is bisected by the Grand Canal which separates Balboa Island and Little Island

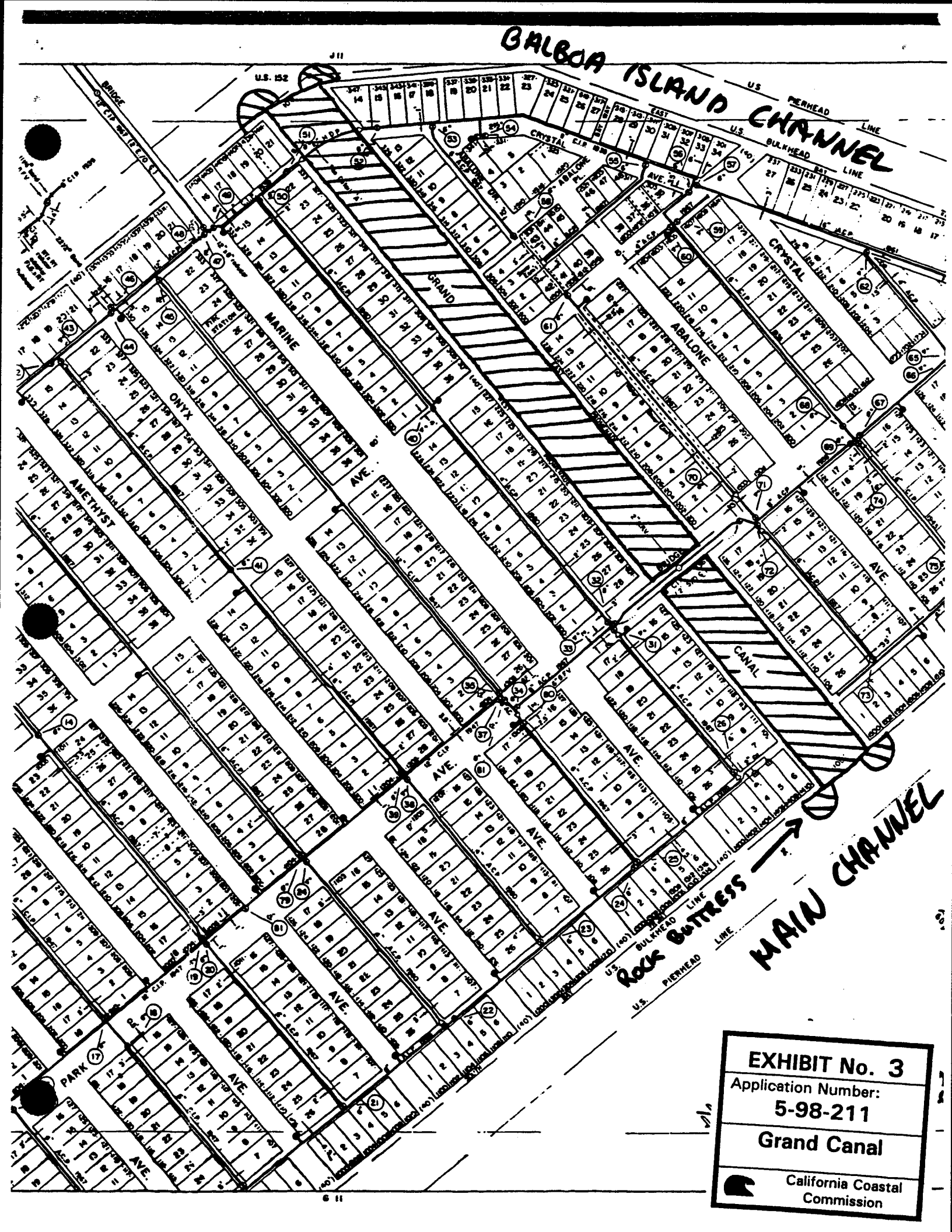
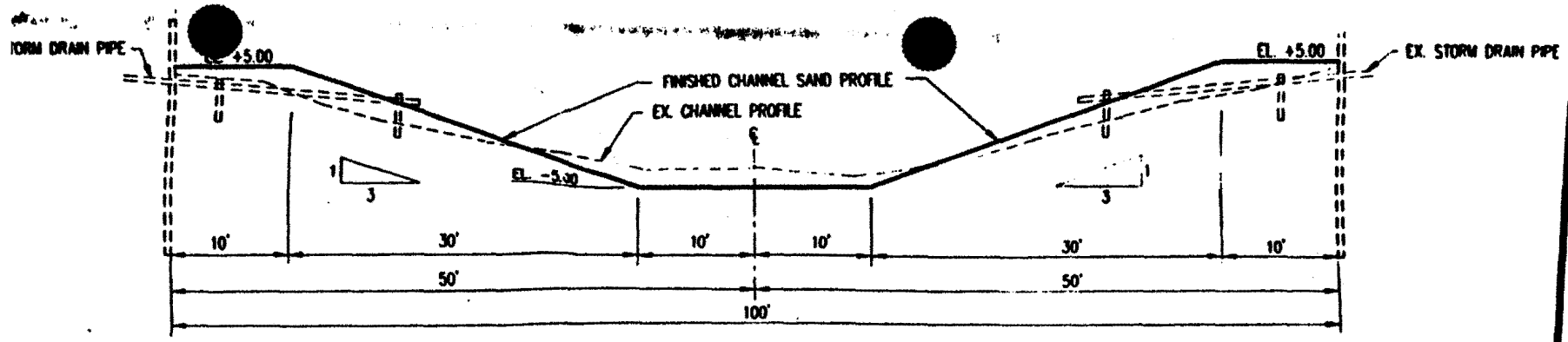


EXHIBIT No. 3

Application Number:
5-98-211

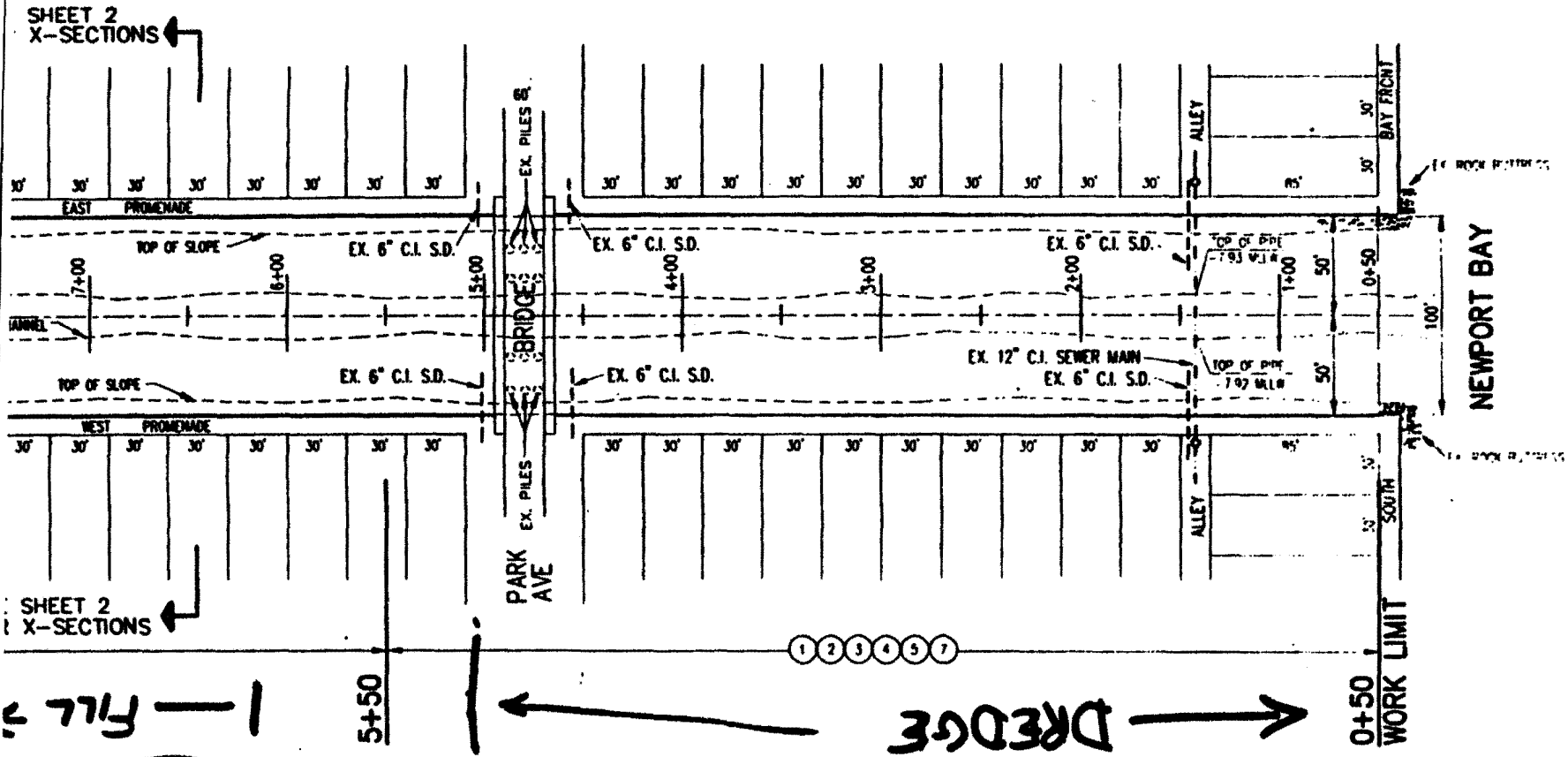
Grand Canal

California Coastal Commission



SIMPLIFIED CROSS SECTION
SEE SHT. #2 FOR DETAILS
NOT TO SCALE

SLAND



REGISTERED PROFESSIONAL ENGINEER
LLOYD R. DALTON
No. 19111

REF: H-5063-S, W-5137-S

APPROVED

DESIGN ENGINEER
R.C.E. NO. 19111

GRAND CANAL DREDGING
AND EELGRASS TRANSPLANT

EXHIBIT No. 4a
Application Number:
5-98-211
Site Plan
California Coastal Commission

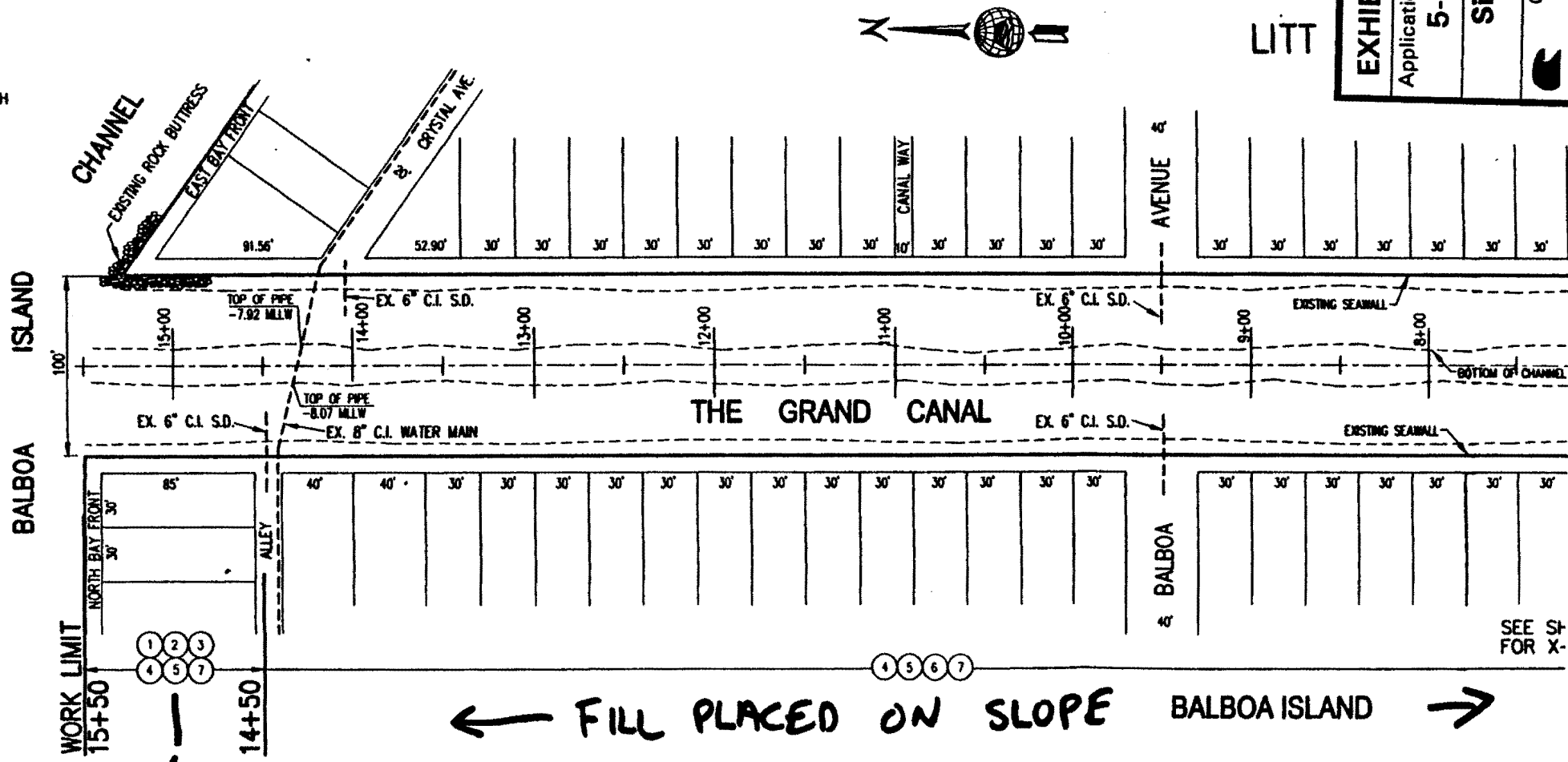


EXHIBIT No. 4b
Application Number: 5-98-211
Site Plan
California Coastal Commission

LITT

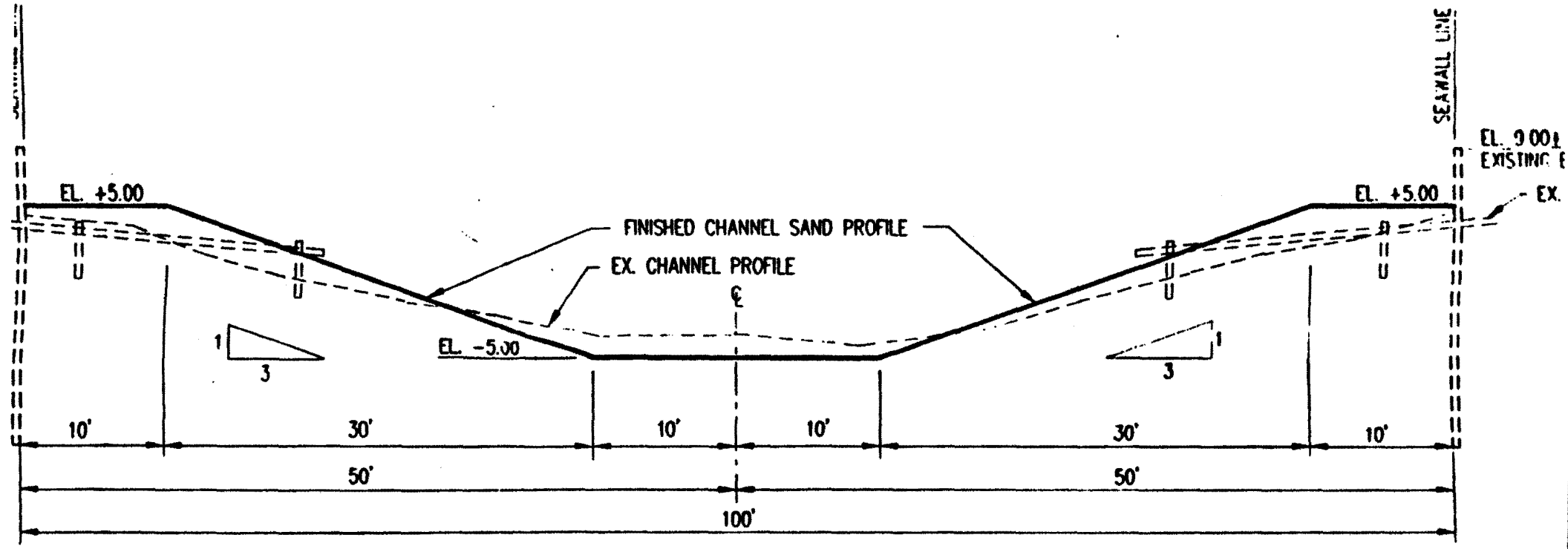
SEE SH
FOR X-

PLAN VIEW

SCALE 1" = 60'

UMBERS

AY	NIGHT
3127	634-3211
5200	835-5200
611	611
3011	644-3717
2411	
6222	6222



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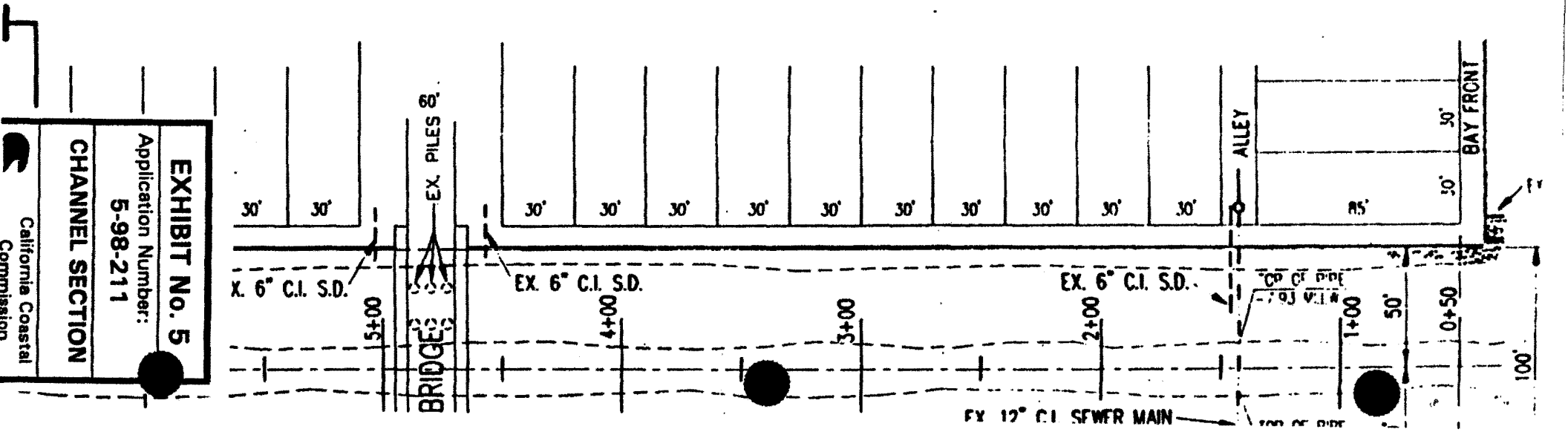
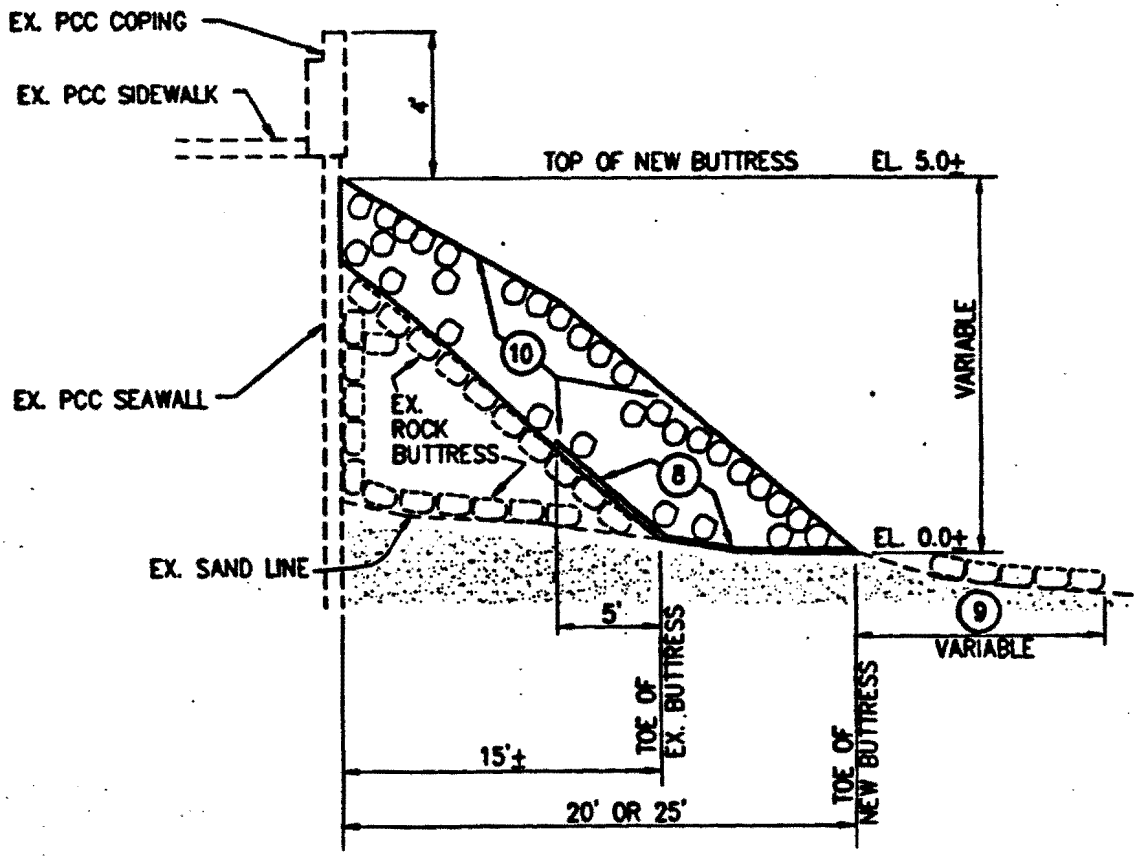
SEE SHT. #2 FOR DETAILS

NOT TO SCALE





SECTION A–A

NTS

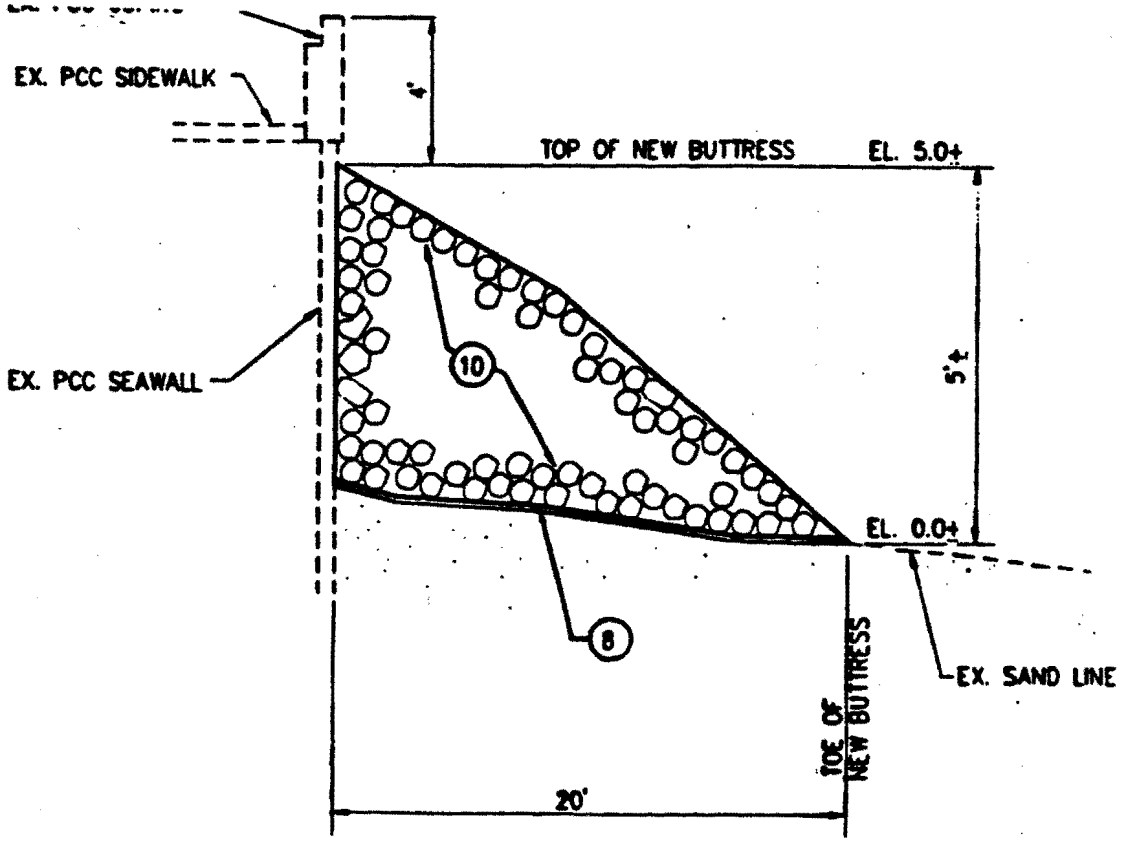


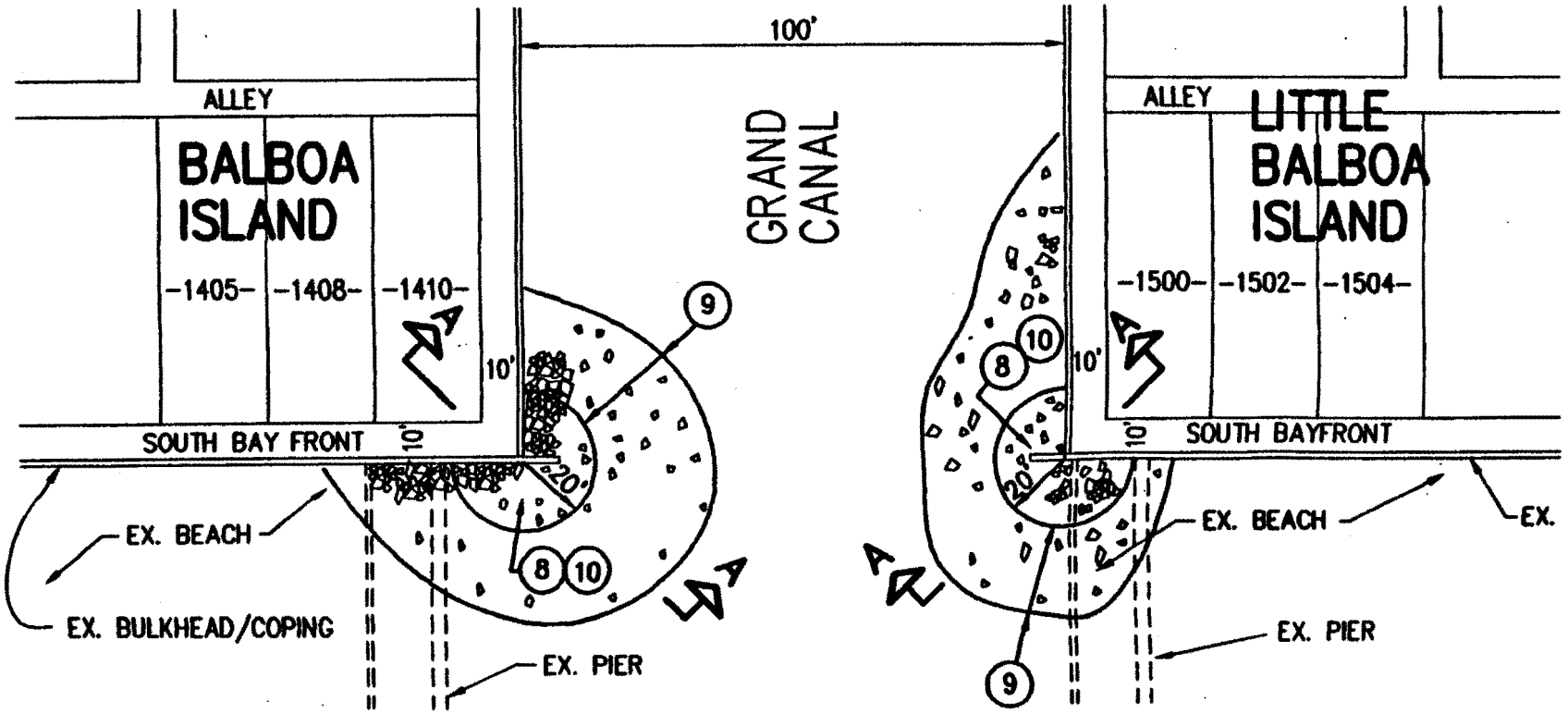
EXHIBIT No. 6

Application Number: 5-98-211

Cross-section

California Coastal Commission

NTS



SOUTH BAY FRONT AT GRAND CANAL

NTS

EXHIBIT No. 7a

Application Number: 5-98-211

Rock Buttress

California Coastal Commission

SOUTH BAY FRONT AT GRAND CANAL

NTS

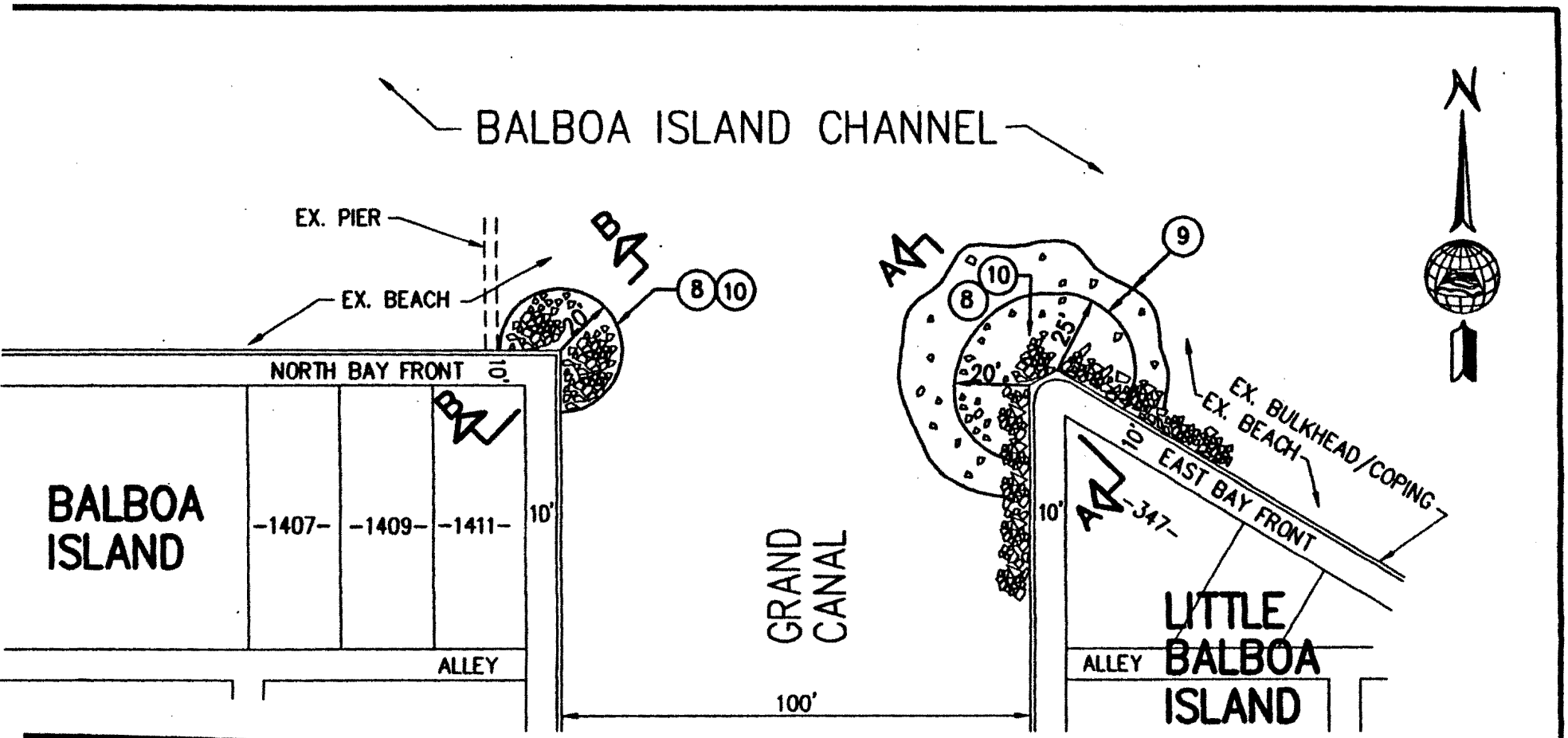


EXHIBIT No. 7b
Application Number: 5-98-211
Rock Buttress
California Coastal Commission

EAST BAY FRONT AT GRAND CANAL

NTS

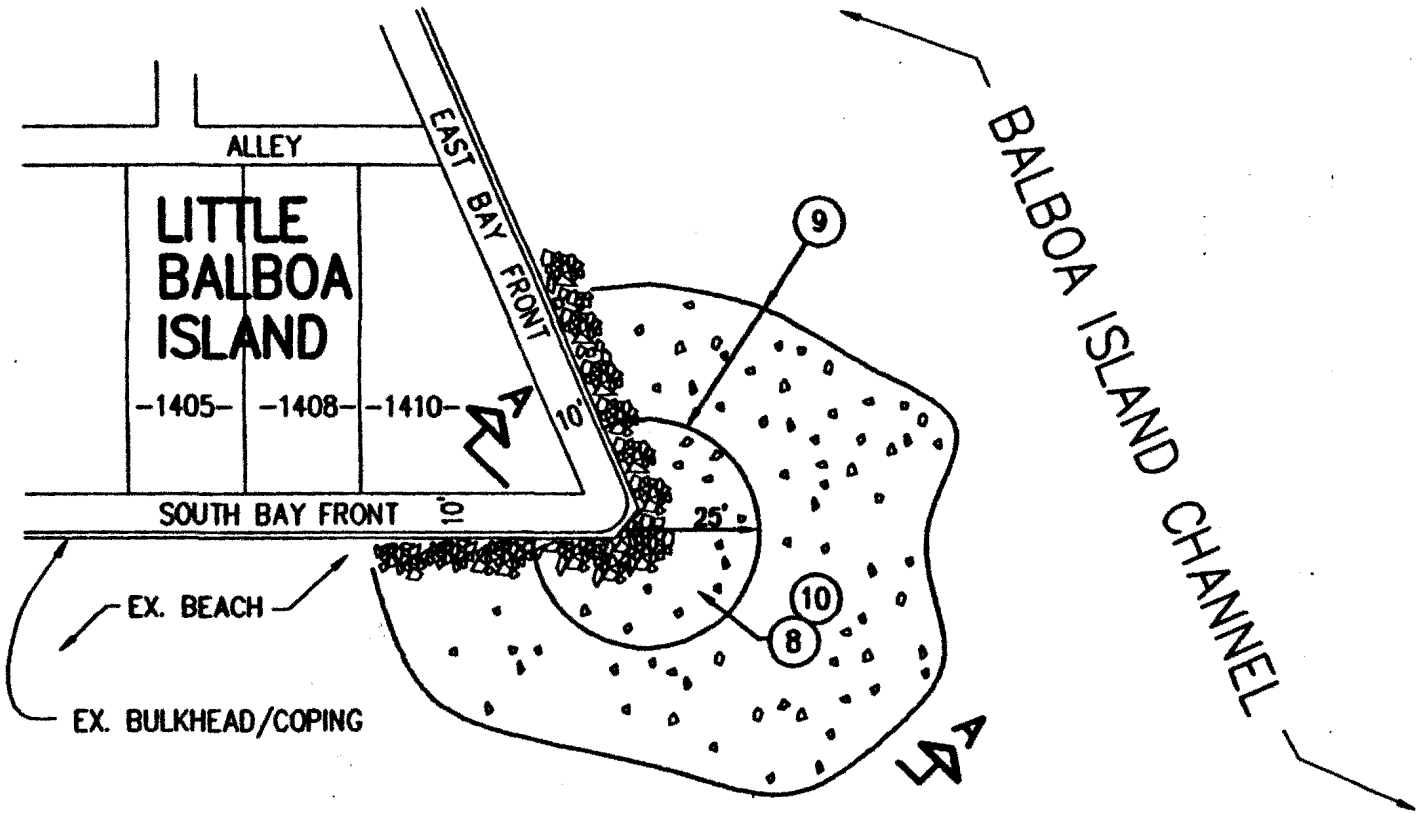


EXHIBIT No. 7c
Application Number:
5-98-211
Rock Buttress
California Coastal Commission

SOUTH BAY FRONT AT EAST BAY FRONT

NTS