CALIFORNIA COASTAL COMMISSION
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Hearing Date:	December 12-15, 2000
Commission Action:	

Items M8i and M8j

Note: The above information applies to all applications that are the subject of this staff report

COMBINED STAFF REPORT: REGULAR CALENDAR

APPLICATION NUMBERS: 5-99-471 and 5-99-472

Application	Applicant(s)	Project Location: Humboldt Island, Huntington Beach, Orange County
5-99-471	Maginot, Andre	16418 Ladona Circle (Lot 107)
5-99-472	Bjork, Larry & Susan	3943 Mistral Drive (Lot 79)

AGENT: Tetra Tech, Inc.: Mr. Fernando Pagés, and Ms. Sarah McFadden

COMBINED PROJECT DESCRIPTION FOR ALL APPLICATIONS THAT ARE THE SUBJECT OF THIS STAFF REPORT: Place a total of 995 square feet (52 cubic yards) of toe stone to protect 208.5 lineal feet of an existing bulkhead. The toe stone will extend between 4.5 and 5 feet, at a 2 to 1 slope, seaward of the existing bulkhead. Please see table in Section IV.A. of this staff report for break down of the elements of the individual projects (i.e. linear feet of bulkhead involved and quantity of toe stone).

SUMMARY OF STAFF RECOMMENDATION:

Staff recommends **APPROVAL** of the proposed development with five special conditions: 1) compliance with plans submitted by the applicant; 2) conformance with specific construction responsibilities to avoid impacts upon water quality and marine resources; 3) Preparation of a pre-construction eelgrass survey to confirm, prior to commencement of development, that no eelgrass will be impacted by the proposed project; 4) preparation of a survey to confirm the absence of Caulerpa taxifolia in the project area; and 5) a requirement the applicant acknowledges the Commissions approval is not a waiver of any public interest in any land. The major issue of this staff report is impacts upon the marine environment. However, there are no permanent impacts upon soft bottom habitat or impacts upon eelgrass in these applications.

LOCAL APPROVALS RECEIVED: City of Huntington Beach approvals-in-concept dated November 17, 1999; Negative Declaration No. 00-05 approved by the City of Huntington Beach Zoning Administrator on September 13, 2000.

SUBSTANTIVE FILE DOCUMENTS: See Appendix A

STAFF NOTE:

The proposed project is part of a group of applications which have been submitted by various property owners for approval of bulkhead reinforcements in Huntington Harbour. The subject applications do not result in impacts to environmentally sensitive habitat areas such as

eelgrass. However, other applications (also on this December 2000 agenda) include impacts upon eelgrass as well as the permanent loss of soft bottom habitat. Those other applications include mitigation for impacts to eelgrass and soft bottom habitat. It should also be noted that Commission staff anticipate a large number of applications in the future for similar repairs to bulkheads throughout Huntington Harbour. For instance, there are 4 additional applications for repairs to the bulkhead on Trinidad Island (another bulkheaded island in Huntington Harbour) which will be going forward at a future hearing. The existing bulkhead system in Huntington Harbour was constructed at approximately the same time using a similar design. Therefore, the problems with the bulkheads encountered on Humboldt Island and the proposed solution may be similar throughout the harbor.

I. STAFF RECOMMENDATION, MOTION AND RESOLUTION OF APPROVAL.

Staff recommends that the Commission APPROVE the permit applications with special conditions.

MOTION #1

I move that the Commission approve CDP #5-99-471 pursuant to the staff recommendation.

Staff recommends a YES vote. This will result in adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

RESOLUTION

APPROVAL WITH CONDITIONS

The Commission hereby **GRANTS** Coastal Development Permit 5-99-471, 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, is located between the nearest public road and the sea and is in conformity with the public access and public recreation policies of the Coastal Act, will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3 of the Coastal Act, and will not have any significant adverse effects on the environment within the meaning of the California Environmental Quality Act.

MOTION #2

I move that the Commission approve CDP #5-99-472 pursuant to the staff recommendation.

Staff recommends a YES vote. This will result in adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

RESOLUTION

APPROVAL WITH CONDITIONS

The Commission hereby **GRANTS** Coastal Development Permit 5-99-472, 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, is located between the nearest public road and the sea and is in conformity with the public access and public recreation policies of the Coastal Act, will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3 of the Coastal Act, and will not have any significant adverse effects on the environment within the meaning of the California Environmental Quality Act.

II. STANDARD CONDITIONS (Applicable to all permits):

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

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

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

III. SPECIAL CONDITIONS (applicable to all permits)

1. Compliance With Plans Submitted

The permittee shall undertake development in strict conformance with the proposal and plans as set forth in the application for permit, subject to any special conditions set forth in this coastal development permit approval. Any proposed changes to or deviations from the approved plans shall be reported to the Executive Director. No changes to the approved plans shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is required.

2. Construction Responsibilities and Debris Removal

The permittee shall comply with the following construction-related requirements:

(a) No construction materials, debris, or waste shall be placed or stored where it may be subject to wave erosion and dispersion;
(b) Any and all debris resulting from construction activities shall be removed from the site within 10 days of completion of construction;
(c) No machinery or construction materials not essential for project improvements shall be allowed at any time in the intertidal zone;
(d) Sand from the beach, cobbles, or shoreline rocks shall not be used for construction material;
(e) In order to control turbidity a geotextile fabric shall be installed in the area where the toe stone will be placed prior to placement of the toe stone;
(f) Toe stone shall be placed, not dumped, using means to minimize disturbance to bay sediments and to minimize turbidity;
(g) If turbid conditions are generated during construction a silt curtain shall be utilized to control turbidity.

3. Pre-Construction Eelgrass Survey

A valid pre-construction eelgrass (Zostera marina) survey shall be completed during the period of active growth of eelgrass (typically March through October). The pre-construction survey shall be completed prior to the beginning of construction and shall be valid until the next period of active growth. The survey shall be prepared in full compliance with the "Southern California Eelgrass Mitigation Policy" Revision 8 (except as modified by this special condition) adopted by the National Marine Fisheries Service and shall be prepared in consultation with the California Department of Fish and Game. The applicant shall submit the eelgrass survey for the review and approval of the Executive Director within five (5) business days of completion of each eelgrass survey and in any event no later than fifteen (15) business days prior to commencement of any development. If the eelgrass survey identifies any eelgrass within the project area which would be impacted by the proposed project, the

development shall require an amendment to this permit from the Coastal Commission or a new coastal development permit.

4. **Pre-Construction Caulerpa taxifolia Survey**

Prior to commencement or re-commencement of any development authorized under this coastal development permit, the applicant shall undertake a survey of the project area to determine the existence of Caulerpa taxifolia. The survey shall be prepared in consultation with the Regional Water Quality Control Board and the California Department of Fish and Game. The applicant shall submit the survey for the review and approval of the Executive Director within five (5) business days of completion of each survey and in any event no later than fifteen (15) business days prior to commencement of any development. If the survey identifies any Caulerpa taxifolia within the project area, the development shall require an amendment to this permit from the Coastal Commission or a new coastal development permit, unless the Executive Director determines that no amendment or new permit is required.

5. **Public Rights**

The Coastal Commission's approval of this permit shall not constitute a waiver of any public rights that exist or may exist on the property. The permittee shall not use this permit as evidence of a waiver of any public rights that may exist on the property.

IV. FINDINGS AND DECLARATIONS:

The Commission hereby finds and declares:

A. Project Description and Location

The proposed projects are located on Humboldt Island in Huntington Harbour, City of Huntington Beach, Orange County (Exhibit 1). Humboldt Island is an artificial island surrounded by an approximately 14,000 foot long cast in place, concrete seawall/bulkhead constructed in the 1960's. The island is developed primarily with single family residences. The proposed project includes 2 non-contiguous bulkheaded properties located seaward of the first public road.

The proposed project is the placement of toe stone at the footing of the existing concrete bulkhead (Exhibits 2 and 3). The length of bulkhead involved at each property varies as does the quantity of toe stone to be placed and the width of the proposed toe stone from the existing bulkhead. These details are outlined in the following table:

Application	Site	Length of Affected Bulkhead (feet)	Quantity of Proposed Toe Stone (cubic yards)	Width of Proposed Toe Stone from Existing Bulkhead (feet)	Area of temporarily affected soft bottom habitat (square feet)
5-99-471	Lot 107	158.5	41	5	780
5-99-472	Lot 79	50	11	4.5	215
	Total:	208.5	52		995

In total, the proposed projects will involve 208.5 lineal feet of bulkhead. Fifty two (52) cubic yards of toe stone will be placed at a 2(h) to 1(v) slope seaward of the existing bulkhead at widths ranging from 4.5 feet to 5 feet from the toe of the bulkhead depending upon the condition of the bay mud profile at each property. A layer of geotextile fabric will be placed beneath the proposed toe stone to prevent the toe stone from sinking into the bay mud.

The proposed toe stone is necessary to protect the existing bulkhead. The existing bulkhead is a reinforced concrete cast in place structure supported on vertical and battered timber piles built in the 1960's. The applicant has stated that this bulkhead was designed with toe stone placed seaward of the footing at a slope of 3(h) to 1(V). Due to the size and weight of the formerly present toe stone, the protective stones have either sunk into the bay mud or migrated away from the bulkhead. In absence of the toe stone, the unconsolidated fine silty and sandy sediments have easily eroded due to tidal currents, propeller wash from recreational boats, maintenance dredging, and the activity of burrowing fish (e.g. the specklefin midshipman). This erosion threatens to undermine the bulkhead footing, exposing the existing untreated timber piles which provide the primary vertical and lateral support for the existing bulkhead. Currently, the mud line at the subject properties has dropped 3 to 27 inches below design profile. If left unabated, continued erosion will undermine the bulkhead footing. On nearby properties this same type of erosion has undermined the bulkhead and exposed the untreated timber piles. Marine boring organisms have damaged those piles and threaten to destabilize the existing bulkhead. Several applications have been received for repair and reinforcement of those bulkheads, and are on the December 2000 Commission agenda with these applications. Repair and reinforcement of bulkheads where the footing has been undermined requires more extensive repairs than those proposed, including the placement of a sheetpile and concrete seaward of the existing bulkhead. The proposed toe stone is designed to restore to design elevation the protective coverage of the footing and to prevent the type of more extensive repairs and reinforcements required on nearby properties.

The proposed slope protection toe stone will consist of 8-inch minus quarry waste with a mixture of particles ranging from sand to stones less than 8 inches in diameter. The coastal engineer has stated that this type of toe stone will not migrate or accrete to other areas under the hydrodynamic conditions at the subject site (see Appendix A for technical studies). Therefore, the proposed solution will not replicate the problems associated with the previous protective toe stone structure.

B. Marine Resources

1. Shoreline Protective Devices

Section 30235 of the Coastal Act states:

> *Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply. Existing marine structures causing water*

stagnation contributing to pollution problems and fish kills should be phased out or upgraded where feasible.

The proposed development involves structural reinforcements to protect an existing bulkhead necessary to protect 2 existing homes. Humboldt Island is located in Huntington Harbour. On nearby properties the slope seaward of the bulkhead has eroded, creating a gap between the footing of the bulkhead and the bottom of the harbor floor. This has allowed water to enter behind (i.e. landward of) the bulkhead and undermine the bulkhead foundation. Further, the gap and erosion has exposed the bulkhead's supporting timber piles to deterioration from burrowing marine organisms. The mud line at the subject sites has dropped between 3 to 27 inches below the bottom of the footing of the existing bulkhead. However, at this stage, there are minimal voids beneath the footing of the bulkhead at the subject sites. Accordingly, the applicant has stated that the placement of protective toe stone will be adequate to prevent additional erosion and the development of voids with subsequent damage to the timber piles. If protective measures are not implemented at this stage, more extensive structural reinforcements would be necessary to protect the bulkhead.

The proposed project involves the fill of coastal waters with toe stone. The purpose of the proposed fill is to protect an existing structure, which is not one of the eight allowable uses enumerated under section 30233 of the Coastal Act. However, as stated above, section 30235 of the Coastal Act requires the Commission to approve revetments and other similar structures provided that such structures are for the purpose of protecting existing structures and provided that the structures are designed to eliminate or mitigate adverse impacts on local shoreline sand supply. The proposed structure is for the purpose of protecting existing structures. In addition, the proposed project is occurring within an urban harbor at a location isolated from the nearest open coastal shoreline and longshore littoral sand transport mechanisms. Furthermore, bathymetric conditions were evaluated at each individual property in order to establish the minimum amount of toe stone necessary to protect the bulkhead and to minimize the amount of soft bay bottom covered which may contribute to shoreline sand supply. Therefore, in this case, by minimizing the area of soft bay bottom covered, the proposed project mitigates adverse impacts on local shoreline sand supply. Accordingly, the proposed project is approvable under section 30235 of the Coastal Act rather than section 30233 of the Coastal Act.

The coastal engineer indicates that the proposed project is the least environmentally damaging feasible alternative. Other alternatives considered were: 1) no project; 2) soft bottom fill; 3) placement of cement slurry to form a protective concrete shield; 4) placement of course rock; 5) installation of a deepened plastic sheet pile which would extend below the depth of scour, instead of the proposed toe stone, to prevent the formation of voids underneath the bulkhead; 6) landward placement of a sheetpile; and 7) minimizing the amount of toe stone placed in front of the bulkhead.

According to the applicant, the no project alternative would not be the least environmentally damaging feasible alternative because without the project the bulkhead at the subject site would loose structural integrity, causing the bulkhead to fail. If the bulkhead were allowed to fail, it would collapse into the harbor. Debris from the collapsed bulkhead would likely fall upon sensitive marine habitat, including eelgrass, resulting in impacts upon that habitat. In

addition, sediment released from behind the collapsed bulkhead would enter the water column causing turbidity and potentially smothering eelgrass beds. The proposed project would have less impact than the no project alternative because any impacts to eelgrass will be mitigated under the proposed project while such impacts from the no project alternative would not be mitigated.

The applicant has stated that the second alternative, soft bottom fill, is not a feasible solution because it would replicate the existing condition. Once placed against the footing, erosive forces would erode the unconsolidated fine silty and sandy sediments in the same fashion that the existing sediment has eroded.

The third alternative, placement of cement slurry for slope protection, would not be less environmentally damaging than the proposed solution. It is anticipated that the proposed toe stone will provide a suitable substrate for colonization by marine organisms. In addition, over time it is anticipated by the applicant that sediment will settle upon the proposed toe stone. Providing that there is adequate sunlight it is also anticipated by the applicant that conditions may allow colonization of the toe stone by eelgrass. However, the use of a cement slurry for slope protection would not provide a suitable substrate for colonization by marine organisms. Therefore, the proposed solution is less environmentally damaging than the second alternative.

The fourth alternative, placement of course rock only, would also not be less environmentally damaging than the proposed solution. The placement of course rock, instead of the proposed mixture of 8-inch minus quarry waste, would replicate the problems associated with the previous protective structure. Due to the presence of unconsolidated fine silty bay mud and existing hydrodynamic conditions, course rock would tend to sink into the bay mud or migrate from the slope targeted for protection. Accordingly, the course rock would need to be replaced over time, with the attendant construction related impacts upon the marine environment. Therefore, the proposed solution is less environmentally damaging than the third alternative.

The fifth alternative, placement of a deepened sheet pile in place of the proposed toe stone, is not feasible for several reasons. First, deepened sheetpiles would intersect the existing battered timber piles which angle seaward under the bulkhead below the harbor floor, cutting into those support piles (see Exhibit 10 for view of existing bulkhead and timber pile configuration). To avoid this, the deepened sheetpile would have to be relocated seaward of the existing footing. The area between the footing and sheetpile would continue to be exposed to erosive forces in the harbor. Second, PVC sheetpiles are not long enough to extend deep enough into the harbor bottom. Steel sheetpiles, which are long enough, would be subject to corrosion. Therefore, the fifth alternative is not a feasible solution to the present problem.

The sixth alternative would involve the installation of a sheetpile landward of the face of the existing bulkhead and then removing the portion of the existing bulkhead seaward of the newly installed sheet pile. The applicant has stated that this alternative is not technically feasible because the foundation slab for the existing bulkhead projects at least 10 feet landward of the face of the existing bulkhead to a point underneath existing patios and

houses which are built upon the lot. If a sheet pile were installed landward of the existing bulkhead the sheet pile would need to penetrate through the foundation slab of the existing bulkhead. First, a plastic or steel sheet pile is not strong enough to penetrate the concrete foundation slab of the bulkhead. In addition, even if a strong material could be found to penetrate the concrete foundation slab, the portion of the existing bulkhead seaward of the newly installed sheet pile would loose structural integrity and collapse into the harbor. Any methods used to temporarily stabilize the bulkhead seaward of the sheet pile would require the placement of structures in the water, resulting in impacts similar or greater than the proposed project. Therefore, the sixth alternative is neither technically feasible or the least environmentally damaging feasible alternative.

The seventh alternative is to minimize the impact of the proposed design by minimizing the amount of toe stone placed in front of the bulkhead, as proposed. Minimizing the width of the toe stone from the bulkhead also minimizes any impacts upon eelgrass in the project vicinity. In addition, the applicant is proposing to mitigate for the loss of impacts to eelgrass. Therefore, the proposed project is the least environmentally damaging feasible alternative.

The proposed toe stone is necessary to protect an existing bulkhead and single family residences. In addition, the proposed development mitigates adverse impacts upon shoreline sand supply and is the least environmentally damaging feasible alternative. Therefore, the Commission finds that the proposed project is consistent with Section 30235 of the Coastal Act.

2. Marine Habitat

Section 30230 of the Coastal Act 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.*

The proposed development is occurring in the waters of Huntington Harbour. Except at extreme low tides, the development area would be underwater. The proposed project will result in the coverage of approximately 995 square feet of unvegetated soft bottom habitat. These softbottom areas contain infaunal clam beds consisting of wavy chione, California chione, and common littlenecks. Eelgrass, a sensitive marine plant which provides valuable, high quality habitat for a variety of sensitive species, was not present on the subject sites within the area affected by the placement of the proposed toe stone (see Exhibit 4). The applicant estimates that while the toe stone will bury the existing softbottom habitat and clam beds, the toe stone will be re-colonized by marine organisms within three to five years.

The California Department of Fish and Game (CDFG) has reviewed the proposed development. In their memorandums to Commission staff dated July 6, 1999 and January 31, 2000, CDFG stated that the proposed impact will be short term and will not be significant (see Exhibits 5

and 6). Further, the subject sites are not designated in the certified local coastal program as an environmentally sensitive habitat area.

However, the proposed development will occur in areas adjacent to existing eelgrass beds. The proposed toe stone will be placed using a 40 foot by 50 foot barge mounted crane which will retrieve the material for placement from a nearby 40 foot by 60 foot barge upon which the material is staged. The applicant has stated that the anchors for these barges will be placed to avoid eelgrass. In order to demonstrate the location where barge anchors will be placed, the applicant has submitted an anchor management plan. Since it is necessary to place anchors in specified locations to avoid eelgrass impacts, in accordance with the anchor management plan submitted, the Commission imposes Special Condition 1 which requires the applicant to comply with the anchor management plan submitted. If any changes to the anchor management plan is necessary to avoid impacts to eelgrass, Special Condition 1 requires the applicant to report the change to the Executive Director and to obtain an amendment to the coastal development permit or obtain a new coastal development permit, unless the Executive Director determines that no amendment or new permit is required.

According to eelgrass surveys conducted by the applicants, eelgrass was not present at the project sites in August 1999 (Exhibit 4). The eelgrass survey submitted by the applicants indicates that the presence of a floating dock 10 to 12 feet out from the bulkhead results in shading which prevents eelgrass from growing in that area. However, there is a 10 to 12 foot area between the bulkhead and the floating dock where sunlight may penetrate the water providing conditions which may allow eelgrass to grow.

At least 15 months have elapsed since the eelgrass survey was conducted in August 1999. In addition, pursuant to Standard Condition 2, the coastal permit will be valid for an additional 24 months. Due to the ephemeral nature of eelgrass, the National Marine Fisheries Service, U.S. Fish and Wildlife Service, and the California Department of Fish and Game recommends that eelgrass surveys be conducted during the active growth phase of eelgrass (typically March through October in southern California). In addition, the resource agencies state that any eelgrass survey performed is only valid until the beginning of the next growing season (see Exhibit 9, "Southern California Eelgrass Mitigation Policy"). Therefore, based on this criteria, the eelgrass survey provided is outdated and no new eelgrass survey is proposed. If eelgrass is present in the project area which could be impacted, measures to avoid or minimize such impacts must be utilized in order for the project to be consistent with Section 30230 of the Coastal Act. Therefore, the Commission imposes Special Condition 3 which requires that a valid pre-construction eelgrass survey be conducted within the boundaries of the proposed project be undertaken during the period of active growth of eelgrass (typically March through October). The pre-construction survey shall be completed prior to the beginning of construction and shall be valid until the next period of active growth. The pre-construction survey will identify any eelgrass beds which could be impacted and which must be avoided. If the eelgrass survey identifies any eelgrass within the project area which would be impacted by the proposed project, the development shall require an amendment to this permit from the Coastal Commission or a new coastal development permit. An amendment or new permit is required in order to address any eelgrass impacts. The Commission previously imposed similar conditions for pre-construction eelgrass surveys on Coastal Development Permits 5-97-230 and 5-97-230-A1 (City of Newport Beach),

5-97-231 (County of Orange), 5-97-071 (County of Orange), and 5-99-244 (County of Orange-Goldrich-Kest-Grau).

Also, as noted above, eelgrass is a sensitive aquatic plant species which provides important habitat for marine life. Recently, a non native and invasive aquatic plant species, Caulerpa taxifolia, has been discovered in parts of Huntington Harbour (Emergency Coastal Development Permit 5-00-403-G). Caulerpa taxifolia is a type of seaweed which has been identified as a threat to California's coastal marine environment because it has the ability to displace native aquatic plant species and habitats. For instance, Caulerpa taxifolia has been identified as a threat to California's kelp forests because it can overtake areas where kelp forest would normally grow, resulting in a decrease or elimination of kelp forest and associated marine life. Caulerpa taxifolia is known to grow on rock, sand, or mud substrates in both shallow and deep water areas. Since eelgrass grows in shallow areas, Caulerpa taxifolia could displace eelgrass in Huntington Harbour.

If present in the project area, Caulerpa taxifolia could be dispersed through construction of the proposed project. The placement of rock in areas where Caulerpa taxifolia is present, could cause pieces of the plant to break off and settle elsewhere, where it can regenerate. By causing dispersal of Caulerpa taxifolia, the proposed project could have adverse impacts upon marine life, especially sensitive eelgrass habitat. In order to assure that the proposed project does not cause the dispersal of Caulerpa taxifolia, the Commission imposes Special Condition 4. Special Condition 4 requires the applicant, prior to commencement of development, to survey the project area for the presence of Caulerpa taxifolia. If Caulerpa taxifolia is present in the project area, no work may commence and the applicant shall seek an amendment or a new permit to address impacts related to the presence of the Caulerpa taxifolia, unless the Executive Director determines that no amendment or new permit is required. The RWQCB has similarly conditioned their approval of the proposed project (Exhibit 7, page 3).

Thus, as conditioned, the Commission finds that the proposed project is consistent with Section 30230 of the Coastal Act.

3. Water Quality

Section 30231 of the Coastal Act states:

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

The proposed project will involve the placement of toe stone consisting of 8-inch minus quarry waste in coastal waters. If such materials are not placed in an appropriate manner, unconsolidated bay sediments may be disturbed causing turbidity in the water column. The

applicant has stated that turbidity will be addressed by first installing the proposed geotextile fabric in the area where the toe stone will be placed and by placing, not dumping, the toe stone at the target location. The applicant has additionally stated that a silt curtain will be used in the event that turbid conditions are generated during construction. Since the proposed methods are required to assure compliance with Section 30231 of the Coastal Act, the Commission imposes Special Condition 2.

The proposed development will occur within and adjacent to coastal waters. Construction will require the use of heavy machinery and require the stockpiling of construction materials. In order to protect the marine environment from degradation, Special Condition 2 requires that all construction materials and machinery shall be stored away from the water. In addition, no machinery or construction materials not essential for the project improvements shall be placed in coastal waters. Local sand, cobbles, or shoreline rocks, not presently used in the existing development, shall not be used for backfill or construction material.

The proposed development has been reviewed by the California Regional Water Quality Control Board (RWQCB), Santa Ana Region. The RWQCB has waived waste discharge requirements for the project (Exhibit 7).

Therefore, as the conditioned, the Commission finds the proposed development is consistent with Section 30231 of the Coastal Act.

C. Public Access

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, or,*
>
> *(b) For purposes of this section, "new development" does not include:*
>
> *(4) The reconstruction or repair of any seawall; provided, however, that the reconstructed or repaired seawall is not a seaward of the location of the former structure.*

The subject site is located on Humboldt Island in Huntington Harbour. Much of Huntington Harbour consists of private communities. However, Humboldt Island is publicly accessible via a bridge from the mainland. On-street parking is the major source of public parking. In addition, the City of Huntington Beach certified LCP shows a public beach flanking Humboldt Drive at the entrance to Humboldt Island.

The proposed development involves structural reinforcements to an existing bulkhead which would result in seaward encroachment of the structure. Therefore, the proposed project is considered new development for the purposes of Coastal Act section 30212. However, the proposed project would be underwater. There is no beach area which provides lateral public

access on-site upon which the proposed project would encroach. Further, there is no beach area off-site which provides public access that could be eroded as a result of changes in shoreline processes due to the proposed project.

Therefore, the Commission finds that no public access is necessary with the proposed development and that the proposed project is consistent with section 30212 of the Coastal Act.

D. Legal Ability to Undertake Development

Section 30211 of the Coastal Act states:

> *Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.*

Section 30601.5 of the Coastal Act requires states in part,

> *...prior to the issuance of a coastal development permit, the applicant shall demonstrate the authority to comply with all conditions of approval.*

Certain portions of submerged lands within Huntington Harbour are owned in fee by the State of California ("State") and certain portions are not owned in fee by the State, however, are subject to the public trust easement. Any construction of protective devices upon submerged lands in Huntington Harbour that are owned in fee interest by the state requires a Protective Works Lease (PWL) from the California State Lands Commission (CSLC). The proposed development is occurring upon submerged lands in Huntington Harbour.

The CSLC has been contacted by the applicants regarding the proposed development. In a letter dated March 24, 2000, the CSLC indicates that the proposed development is not located upon lands owned in fee interest by the State, therefore, no PWL is required. In addition, the letter dated March 24, 2000, indicates that CSLC staff believes "...that the projects are consistent with current Public Trust needs in the area and we have no objection to the projects as proposed" (Exhibit 8).

Comments provided in communications from CSLC indicate that their approval of the projects does not waive any potential public rights to the subject submerged lands. In addition, the comments provided by the CSLC were provided by their staff and not provided via a resolution or other action by the appointed members of the California State Lands Commission. While there is no indication that any further review by the CSLC is needed, it remains possible that the authorization of use of the submerged lands for the proposed purpose could be challenged. In order to assure that the subject Coastal Development Permit is not utilized to assert that any public rights to the land upon which the development is occurring have been waived, the Commission imposes Special Condition 5 which states that the Coastal Commission's approval is not a waiver of any public rights which exist or may exist on the property.

As conditioned the Commission finds the proposed project is consistent with Sections 30211 and 30601.5 of the Coastal Act.

E. Local Coastal Program

The City of Huntington Beach local coastal program ("LCP") is effectively certified. However, the proposed project is located seaward of the mean high tide line and thus is within the Coastal Commission's original permit jurisdiction area. Therefore, pursuant to Section 30519 of the Coastal Act, the LCP does not apply to the proposed project. However, the certified LCP may be used for guidance in evaluating the proposed project for consistency with the Chapter 3 policies of the Coastal Act.

F. California Environmental Quality Act

Section 13096 of the Commission's regulations requires Commission approval of Coastal Development Permit applications to be supported by a finding showing the application, as conditioned by any conditions of approval, to be consistent with any applicable requirements of the California 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 project is located in an existing harbor in an urbanized area. Development already exists on the subject site. The project site does not contain any known sensitive marine resources, therefore the impacts arising from the proposed project will be minimal. In addition, the proposed development has been conditioned to assure the proposed project is consistent with the resource protection policies of the Coastal Act. The conditions also serve to mitigate significant adverse impacts under CEQA. The conditions are: 1) a requirement that the applicant comply with plans submitted with the application; 2) a requirement that the applicant conform with specific construction responsibilities to avoid impacts upon water quality and marine resources; 3) a requirement that the applicant prepare a pre-construction eelgrass survey to confirm, prior to commencement of development, that no eelgrass will be impacted by the proposed project; 4) a requirement that the applicant prepare of a survey to confirm the absence of Caulerpa taxifolia in the project area; and 5) an affirmation that this coastal development permit approval is not a waiver of any public rights that may exist on the property. There are no other feasible alternatives or mitigation measures available which will lessen any significant adverse impact the activity would have on the environment. Therefore, the Commission finds that the proposed project, as conditioned, can be found consistent with the requirements of CEQA.

Applicants Engineering Analyses and Letters

- Letter from Tetra Tech, Inc. to California Coastal Commission titled *Response to May 12, 1999 Letter Regarding Follow-Up Notice of Incomplete Applications* dated May 24, 1999
- Letter from Tetra Tech, Inc. to California Department of Fish and Game dated July 29, 1999
- Letter from Tetra Tech, Inc. to California Coastal Commission titled *Coastal Development Permit Applications for Humboldt Island Bulkhead Repairs* dated August 18, 1999
- Letter from Tetra Tech, Inc. to California Coastal Commission titled *Coastal Development Permit Applications for Humboldt Island Bulkhead Repairs* dated August 25, 1999

Biological Surveys and Mitigation Plans

- *Eelgrass Survey Report conducted October 22, 1998 and November 5-6, 1998* prepared by Tetra Tech, Inc. of Pasadena, CA
- Eelgrass survey letter dated December 6, 1999, titled *Eelgrass Survey in Huntington Harbour at 3943 Mistral Drive, 16418 Ladona Circle, and 16575 Ensign Circle, Huntington Beach, California* prepared by Tetra Tech, Inc. of Pasadena, California
- *Eelgrass Mitigation and Eelgrass Transplant Report, Humboldt Island & Trinidad Island Bulkhead Repair Project, Huntington Beach, California* dated August 2000 prepared by Tetra Tech, Inc. of Pasadena, California
- *Soft Bottom Mitigation Plan, Humboldt Island and Trinidad Island Bulkhead Repair Project, Huntington Beach, California* dated April 2000 prepared by Tetra Tech, Inc. of Pasadena, California

Local Government Approvals

- *Negative Declaration No. 00-05 for the Humboldt Island and Trinidad Island Seawall (Bulkhead) Repairs* prepared by the City of Huntington Beach and Tetra Tech, Inc. of Pasadena, California

California Department of Fish and Game Letters and Approvals

- Memorandum from California Department of Fish and Game to the California Coastal Commission titled *Humboldt Island Homeowners Association Bulkhead Repair* dated July 6, 1999
- Letter from California Department of Fish and Game to City of Huntington Beach dated August 31, 2000 approving the Soft Bottom Mitigation Plan and Eelgrass Mitigation and Eelgrass Transplant Report cited above

Other Agency Approvals and Correspondence

- *Public Notice* for application No. 199915697-YJC from the U.S. Army Corps of Engineers
- Letter from California State Lands Commission to the California Coastal Commission regarding status of applications and no objection to Coastal Commission action on subject properties dated August 25, 1999
- California Regional Water Quality Control Board, Santa Ana Region, Clean Water Act Section 401 Water Quality Certification for the Proposed Humboldt Island Bulkhead Repair

on Properties Requiring Mitigation, City of Huntington Beach (WDID 8 303271001) dated November 3, 2000

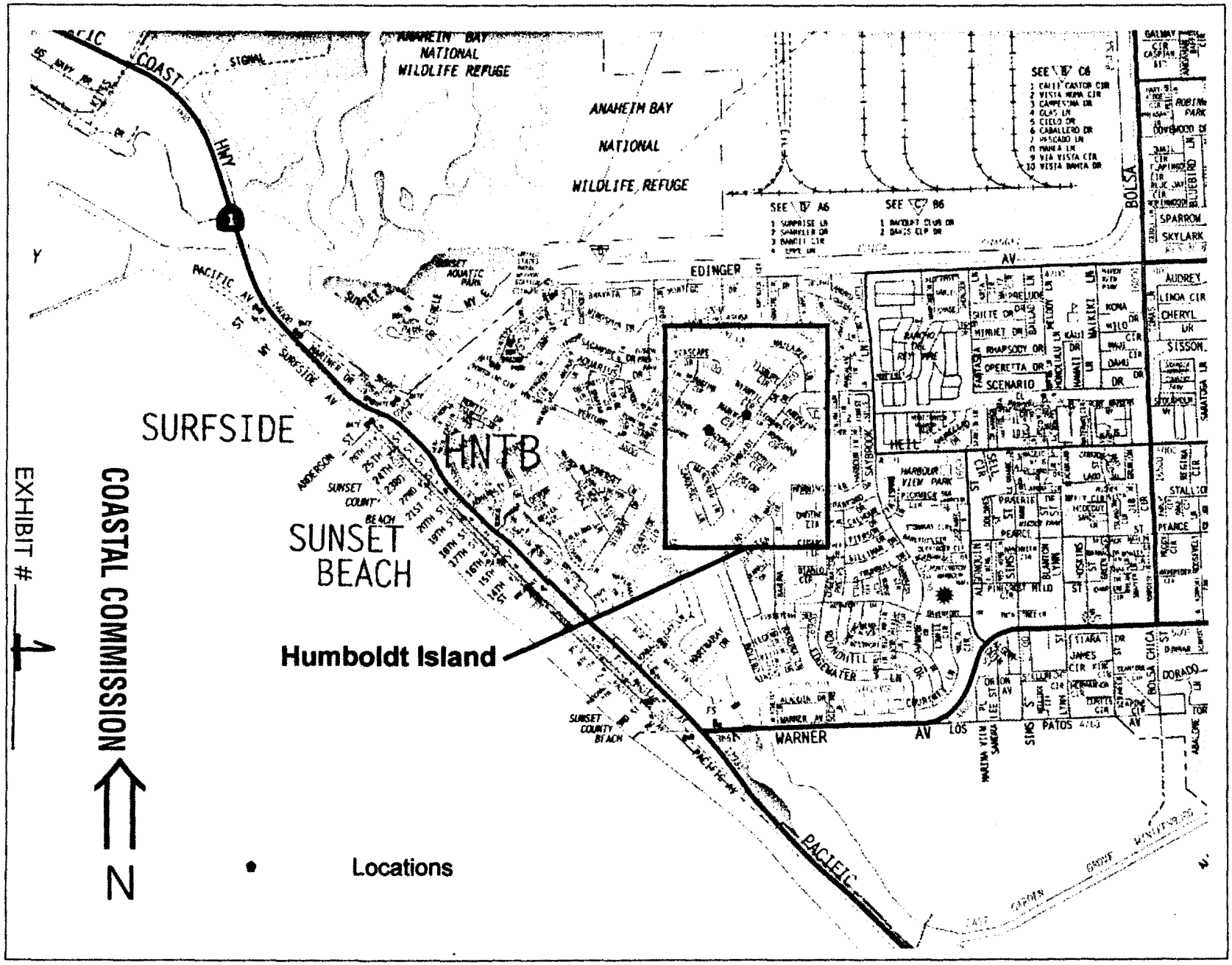
- California Regional Water Quality Control Board, Santa Ana Region, Clean Water Act Section 401 Water Quality Certification for the Proposed Humboldt Island Bulkhead Repair on Properties Requiring Mitigation, City of Huntington Beach (WDID 8 303270001) dated November 3, 2000

Coastal Development Permits

- Bulkhead Reinforcements: 5-97-223 (Shea/Albert), 5-99-005 (Dea); 5-99-006 (Fernbach/Holland), 5-99-007 (Aranda et al), 5-99-008 (Yacoel et al);
- Eelgrass Impacts: 5-97-230 and 5-97-230-A1 (City of Newport Beach), 5-97-231 (County of Orange), 5-97-071 (County of Orange), and 5-99-244 (County of Orange-Goldrich-Kest-Grau)
- Emergency Coastal Development Permit 5-00-403-G

Pending Coastal Development Permit Applications

- Humboldt Island: 5-98-179 (Kompaniez), 5-98-201 (Anderson), 5-98-443 (Whyte), 5-98-444 (Barrad), 5-99-031 (Lady, Jr./Zlatko/Woods), 5-99-032 (Yacoel et al), 5-99-108 (Pineda), 5-99-473 (Gelbard)
- Trinidad Island: 5-00-389 (Ashby et al); 5-00-390 (Burggraf et al); 5-00-401 (Baghdassarian et al); 5-00-402 (Buettner et al)



COASTAL COMMISSION

EXHIBIT # 1

PAGE 1 OF 2

Tetra Tech
INCORPORATED

Site Vicinity Map
Huntington Harbour Bulkhead Repair

TC 10200
FIGURE 1

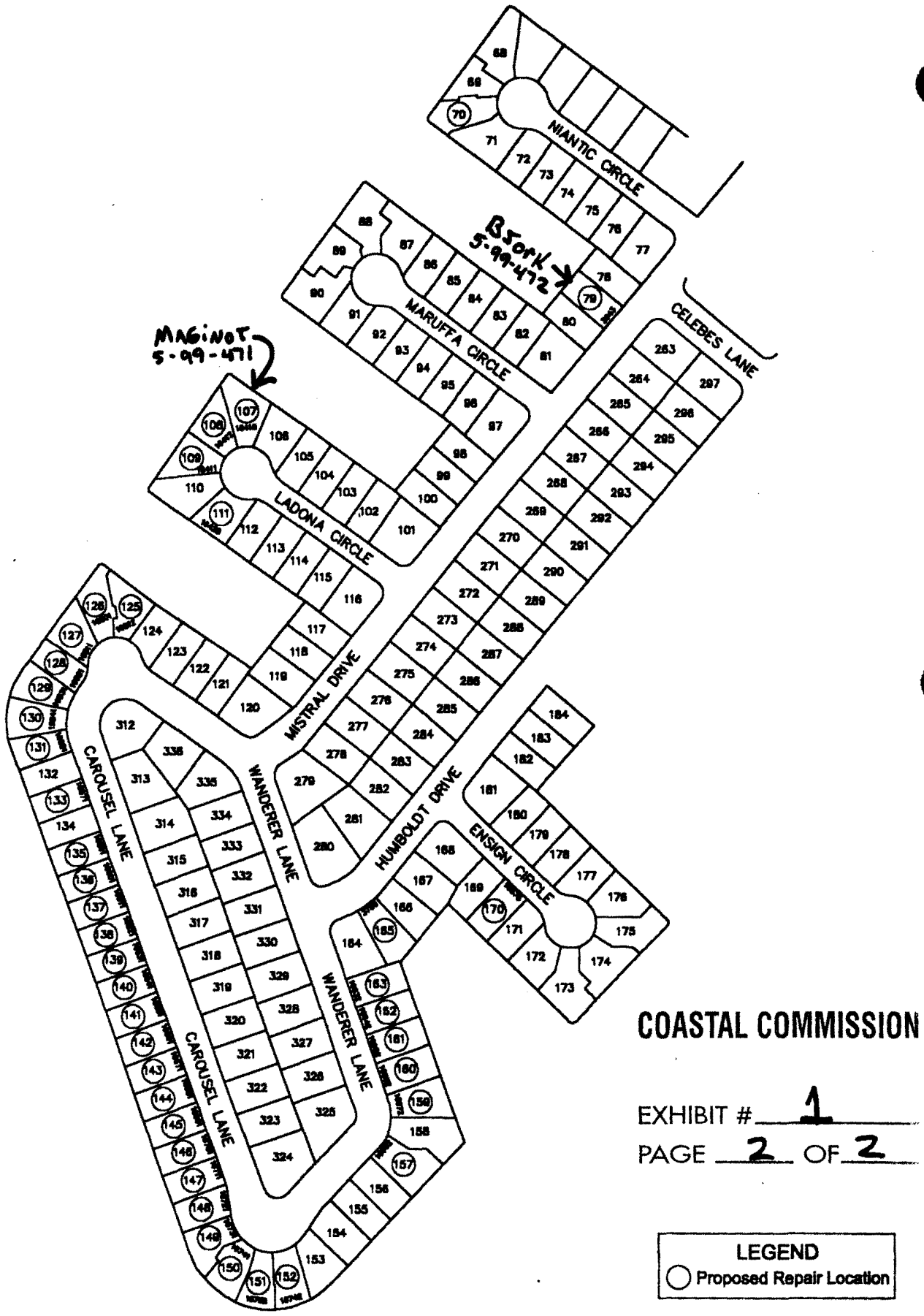
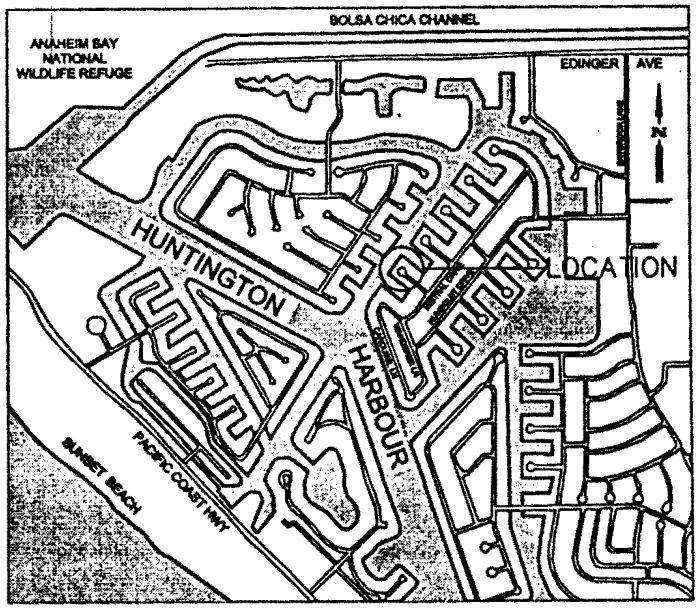


Figure 2. Location of Properties with Proposed Repairs, Humboldt Island, Huntington Beach, California, July 2000.



VICINITY MAP

FROM U.S.G.S. SEAL BEACH
QUADRANGLE CALIFORNIA
SCALE 1:24000

HUNTINGTON HARBOUR CHANNEL

N

BULKHEAD LINE

LOCATION OF REPAIR SEE SHT 4 OF 4

BULKHEAD LINE

PROPERTY LINE

LOT 107

LADONA CIRCLE

PROPERTY LINE

RECEIVED
South Coast Region

DEC 2 4 1999

CALIFORNIA COASTAL COMMISSION

NOTE:
ALL DEPTHS BASED ON MLLW=0.00 FT.

5-99-471
COASTAL COMMISSION

EXHIBIT # 2

PAGE 1 OF 4

TETRA TECH
600 The City Parkway West, Suite 300
Orange, CA 92868
(714)456-0166, Fax (714)456-0161

PURPOSE: Repair Existing Seawall

Datum: MLLW = 0
Adj. Property Owners:
1. See Attached List
2.
3.

PLAN VIEW

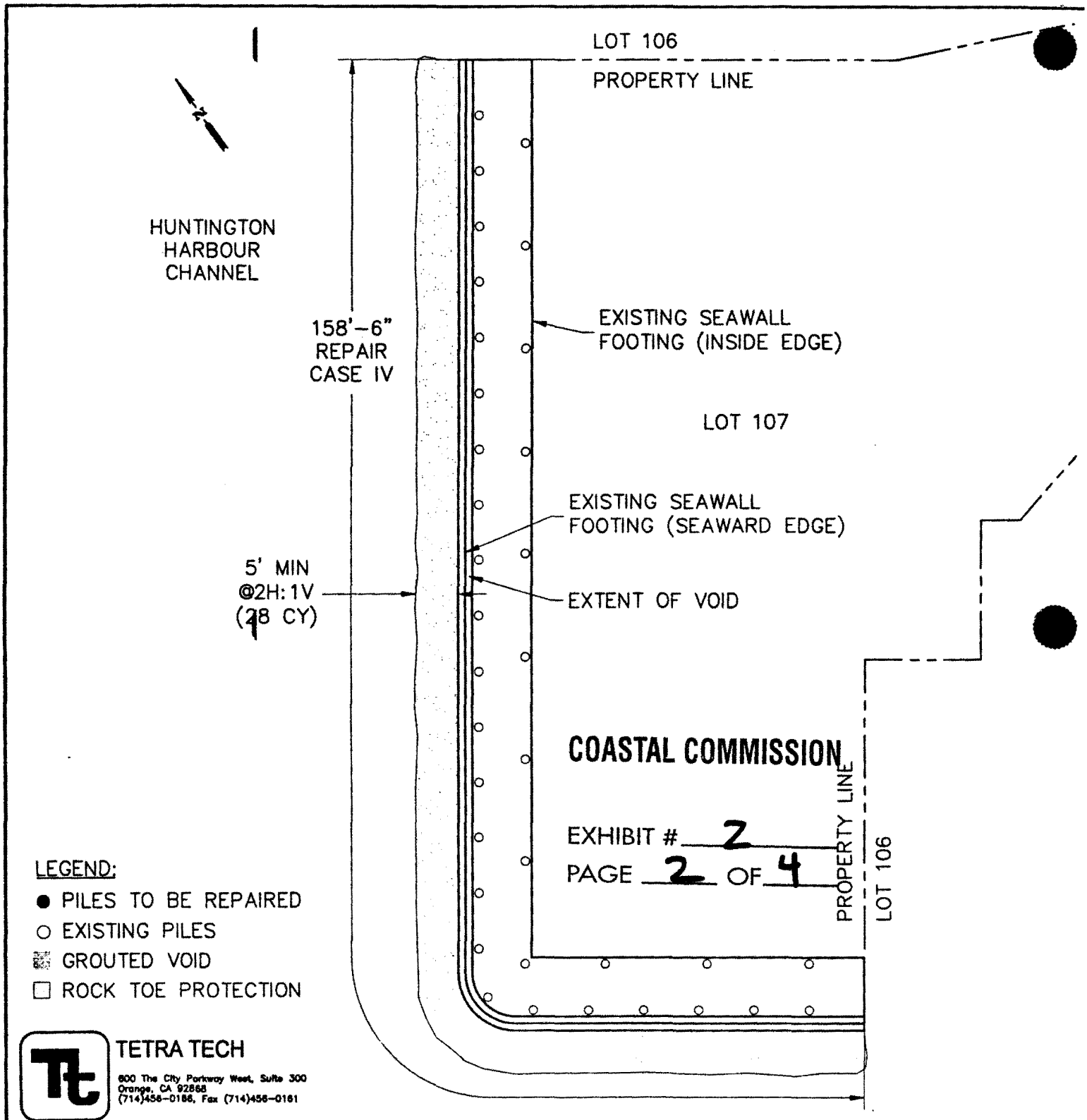
0 32 64

1" = 32'

Andre Maginot
16418 Ladona Circle
Huntington Beach, CA 92649

Proposed Repair of Existing Seawall

IN: Huntington Harbour
AT: Huntington Beach
County of Orange State: C
Application By: Andre Maginot
Sheet 1 of 4 Date: 8/14/9



COASTAL COMMISSION

EXHIBIT # 2

PAGE 2 OF 4

TETRA TECH

600 The City Parkway West, Suite 300
Orange, CA 92868
(714)456-0186, Fax (714)456-0161

PURPOSE: Repair Existing Seawall

Datum: MLLW = 0
Adj. Property Owners:
1. See Attached List
2.
3.

PLAN VIEW

0 10 20

1/16" = 1'- 0"

Andre Maginot
16418 Ladona Circle
Huntington Beach, CA 92649

Proposed Repair of Existing Seawall

IN: Huntington Harbour
AT: Huntington Beach
County of O.C. State: CA
Application By: Andre Maginot
Sheet 2 of 4 Date: 2/25/99

1. GENERAL CONDITIONS & EXISTING CONSTRUCTION: Contractor shall verify the existing conditions shown on the drawings prior to installation of the work and shall notify the engineer immediately of any discrepancies between the existing conditions and the conditions shown on the drawings.

Dimensions of the existing construction shown on the drawings are for information and estimating purposes only. Contractor is responsible for field verification of all dimensions relating to the existing construction prior to the installation of the work. Existing construction shall not be drilled, cut, or altered in any way except as specifically shown on the drawings. Contractor shall protect the existing construction from damage during the installation of the work shown.Contractor shall be responsible for the repair of any damage to the existing construction which may occur during the installation of the work shown, and shall restore any damaged area, at his expense, to its original condition.

It shall be the contractor's responsibility to obtain and pay for all necessary permits and approvals prior to commencement of the work. The contractor shall comply with all applicable requirements of the State Safety Orders and OSHA, and all work shall conform to the applicable requirements of the current edition of the Uniform Building Code (UBC).

Contractor shall supply, transport to the site, and install all items required for completion of the work shown in accordance with the drawings and the manufacturers written recommendations.

2. SLOPE PROTECTION: Slope protection shall be 8 inch minus quarry waste piled at a slope of 2H:1V as shown. Contractor shall submit certified gradation curves from material supplier. Slope protection shall be installed in accordance with CALTRANS placement method B (section 72) from a distance not exceeding 2 ft.

3. GEOTEXTILE: Shall be MIRAFI 700X woven polypropylene fabric with 135lb. or better puncture rating or approved equivalent.

4. CONSTRUCTION SEQUENCE: Construction shall be completed and inspected in accordance with the following:

1. Prior to start of construction, a diver certified in the state of California will inspect the existing foundation and piles and determine repair requirements.

2. Contractor shall place the appropriate width of geotextile fro the slope protection at a 2:1 slope with an additional 2 ft. min overhang at each side. Overhang to be folded back over first layer of rack and covered by subsequent layers of rock until specified slope is achieved. All sheet splices shall have a min. 18 inches of overlap and shall be secured together by staples or other approved means.

3. Contractor shall locate all existing weep holes in bulkhead walls, remove marine growth and clean out weep holes from the water side to the earth side of the wall.

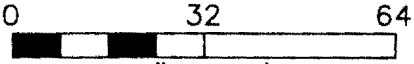
In order to avoid construction delays, contractor shall coordinate activities and schedule diver inspections. Divers shall be certified and approved by Tetra Tech. Contact Fernando Pages, (Tetra Tech, Inc.) @ (626) 351-4664.

TETRA TECH
800 The City Parkway West, Suite 300
Orange, CA 92868
(714)456-0166, Fax (714)456-0161

PURPOSE: Repair Existing Seawall

Datum: MLLW = 0
Adj. Property Owners:
1. See Attached List
2.
3.

PLAN VIEW

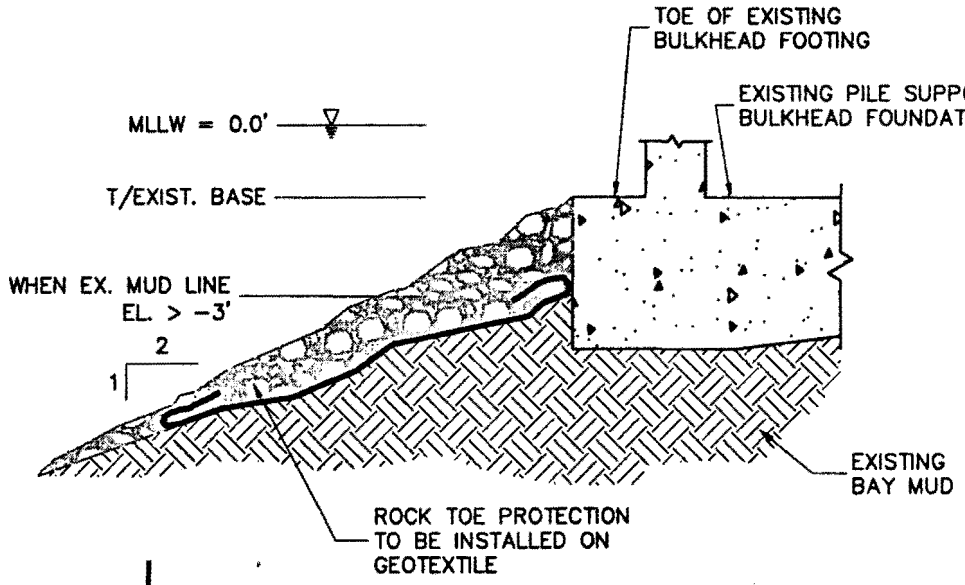


1" = 32'

Andre Maginot
16418 Ladona Circle
Huntington Beach, CA 92649

Proposed Repair of Existing Seawall

IN: Huntington Harbour
AT: Huntington Beach
County of Orange State: CA
Application By: Andre Maginot
Sheet 3 of 4 Date: 8/14/99



SECTION AT FOOTING TOE: CASE IV (1)

SCALE: 3/8" = 1'- 0" (FOR ROCK BACK FILL ONLY)

COASTAL COMMISSION

EXHIBIT # 2

PAGE 4 OF 4

TETRA TECH
800 The City Parkway West, Suite 300
Orange, CA 92868
(714)456-0166, Fax (714)456-0161

PURPOSE: Repair Existing Seawall

Datum: MLLW = 0
Adj. Property Owners:
1. See Attached List
2.
3.

PLAN VIEW

0 32 64

1" = 32'

Andre Maginot
16418 Ladona Circle
Huntington Beach, CA 92649

Proposed Repair of Existing Seawall

IN: Huntington Harbour
AT: Huntington Beach
County of Orange State: CA
Application By: Andre Maginot
Sheet 4 of 4 Date: 8/14/99

HUNTINGTON
HARBOUR
CHANNEL

N

EXTENT OF SEAWALL REPAIR 50'

BULKHEADLINE

LOCATION OF
REPAIR SEE
SHT 4 OF 4

100'-0"

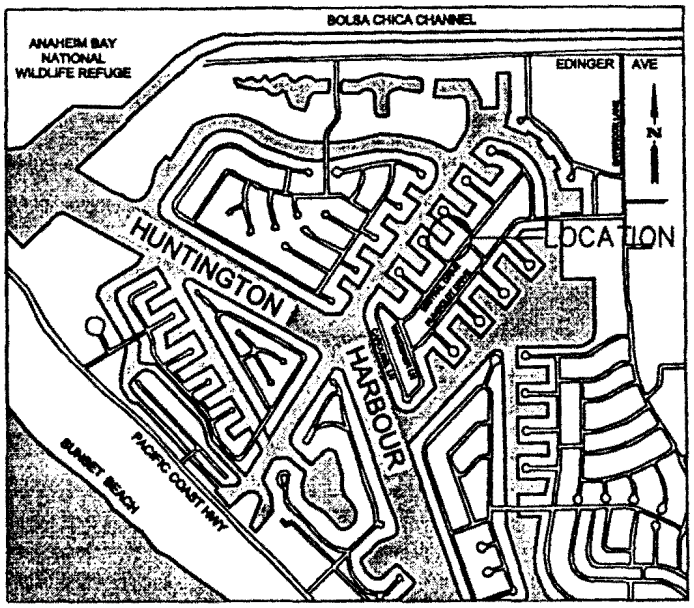
PROPERTY LINE

LOT 79

PROPERTY LINE

100'-0"

MISTRAL DRIVE



VICINITY MAP

FROM U.S.G.S. SEAL BEACH
QUADRANGLE CALIFORNIA
SCALE 1:24000

NOTE:
ALL DEPTHS BASED ON
MLLW=0.00 FT.

EXHIBIT # 3
PAGE 1 OF 4

TETRA TECH
600 The City Parkway West, Suite 300
Orange, CA 92868
(714)456-0166, Fax (714)456-0181

PURPOSE: Repair Existing Seawall

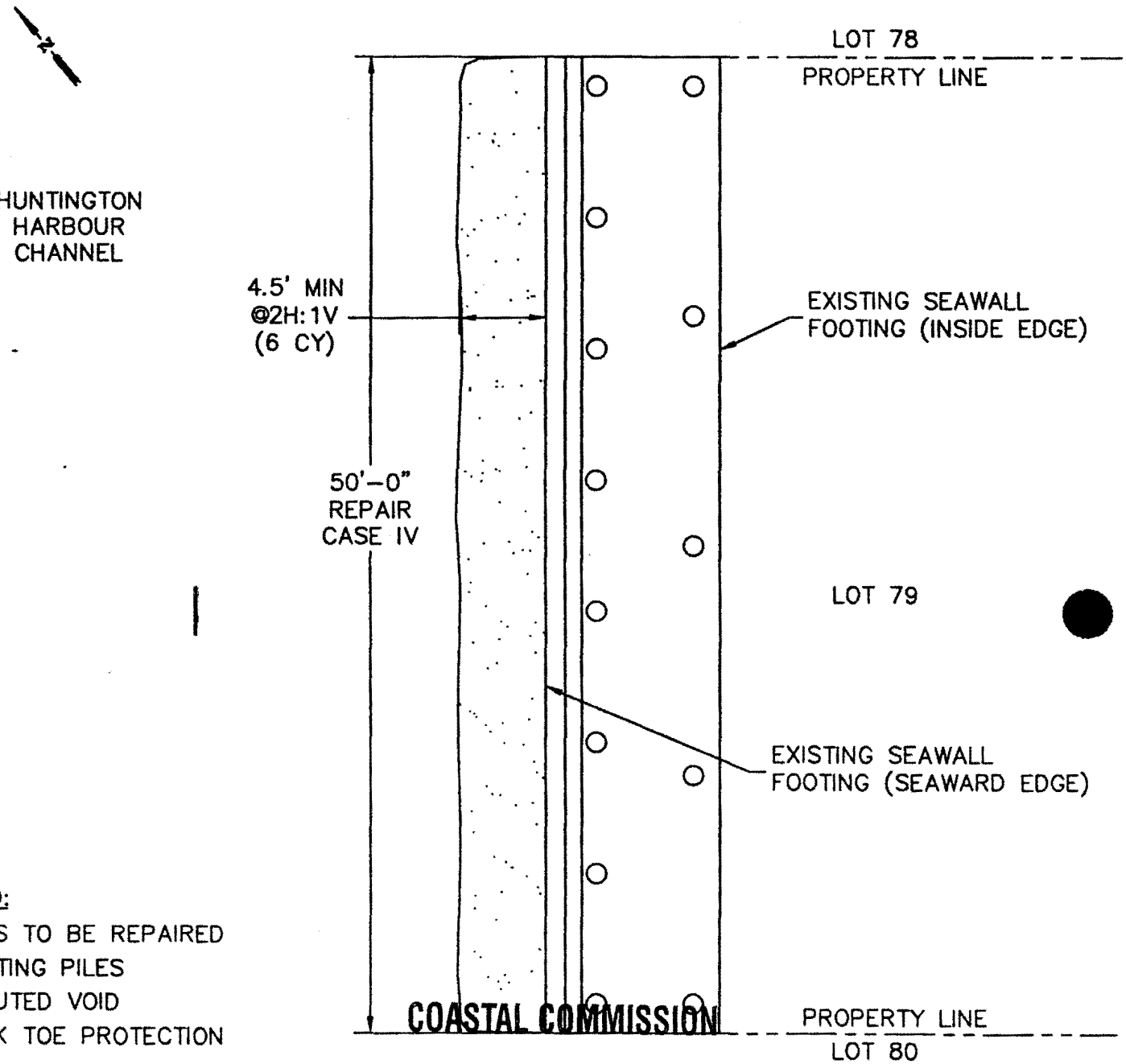
Datum: MLLW = 0
Adj. Property Owners:
1. See Attached List
2.
3.

PLAN VIEW
0 32 64
1" = 32'

Larry & Susan Bjork
3943 Mistral Drive
Huntington Beach, CA 92649

Proposed Repair of Existing
Seawall

IN: Huntington Harbour
AT: Huntington Beach
County of Orange State:
Application By: Larry & Susan
Sheet 1 of 4 Date: 4/13/99



LEGEND:

- ● PILES TO BE REPAIRED
- O EXISTING PILES
- ▩ GROUTED VOID
- ⊡ ROCK TOE PROTECTION

TETRA TECH
800 The City Parkway West, Suite 300
Orange, CA 92668
(714)456-0166, Fax (714)456-0161

EXHIBIT # 3
PAGE 2 OF 4

PURPOSE: Repair Existing Seawall

Datum: MLLW = 0
Adj. Property Owners:
1. See Attached List
2.
3.

PLAN VIEW
0 8 16
1/8" = 1'-0"

Larry & Susan Bjork
3943 Mistral Drive
Huntington Beach, CA 92649

Proposed Repair of Existing Seawall

IN: Huntington Harbour
AT: Huntington Beach
County of O.C. State: CA
Application By: Larry & Susan Bjork
Sheet 2 of 4 Date: 4/13/99

1. GENERAL CONDITIONS & EXISTING CONSTRUCTION: Contractor shall verify the existing conditions shown on the drawings prior to installation of the work and shall notify the engineer immediately of any discrepancies between the existing conditions and the conditions shown on the drawings.

Dimensions of the existing construction shown on the drawings are for information and estimating purposes only. Contractor is responsible for field verification of all dimensions relating to the existing construction prior to the installation of the work. Existing construction shall not be drilled, cut, or altered in any way except as specifically shown on the drawings. Contractor shall protect the existing construction from damage during the installation of the work shown. Contractor shall be responsible for the repair of any damage to the existing construction which may occur during the installation of the work shown, and shall restore any damaged area, at his expense, to its original condition.

It shall be the contractor's responsibility to obtain and pay for all necessary permits and approvals prior to commencement of the work. The contractor shall comply with all applicable requirements of the State Safety Orders and OSHA, and all work shall conform to the applicable requirements of the current edition of the Uniform Building Code (UBC).

Contractor shall supply, transport to the site, and install all items required for completion of the work shown in accordance with the drawings and the manufacturer's written recommendations.

2. SLOPE PROTECTION: Slope protection shall be 8 inch minus quarry waste piled at a slope of 2H:1V as shown. Contractor shall submit certified gradation curves from material supplier. Slope protection shall be installed in accordance with CALTRANS placement method B (section 72) from a distance not exceeding 2 ft.

3. GEOTEXTILE: Shall be MIRAFI 700X woven polypropylene fabric with 135lb. or better puncture rating or approved equivalent.

4. CONSTRUCTION SEQUENCE: Construction shall be completed and inspected in accordance with the following:

1. Prior to start of construction, a diver certified in the state of California will inspect the existing foundation and piles and determine repair requirements.

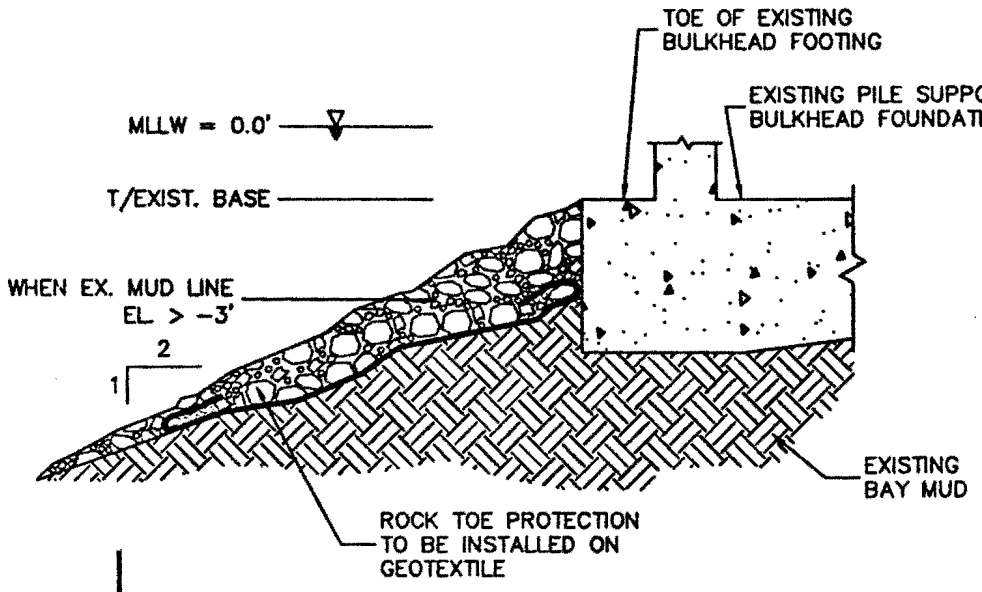
2. Contractor shall place the appropriate width of geotextile for the slope protection at a 2:1 slope with an additional 2 ft. min overhang at each side. Overhang to be folded back over first layer of rock and covered by subsequent layers of rock until specified slope is achieved. All sheet splices shall have a min. 18 inches of overlap and shall be secured together by staples or other approved means.

3. Contractor shall locate all existing weep holes in bulkhead walls, remove marine growth and clean out weep holes from the water side to the earth side of the wall.

In order to avoid construction delays, contractor shall coordinate activities and schedule diver inspections. Divers shall be certified and approved by Tetra Tech. Contact Fernando Rocco (Tetra Tech, Inc.) @ (626) 351-4664.

TETRA TECH
600 The City Parkway West, Suite 300
Orange, CA 92868
(714)456-0166, Fax (714)456-0161

PURPOSE: Repair Existing Seawall	SPECIFICATIONS	Proposed Repair of Existing Seawall
Datum: MLLW = 0 Adj. Property Owners: 1. See Attached List 2. 3.	Larry & Susan Bjork 3943 Mistral Drive Huntington Beach, CA 92649	IN: Huntington Harbour AT: Huntington Beach County of O.C. State: CA Application By: Larry Bjork Sheet 3 of 4 Date: 4/13/99



SECTION AT FOOTING TOE: CASE IV

SCALE: 3/8" = 1'- 0" (FOR ROCK BACK FILL ONLY)

1

COASTAL COMMISSION

EXHIBIT # 3

PAGE 4 OF 4

TETRA TECH
800 The City Parkway West, Suite 300
Orange, CA 92868
(714)456-0186, Fax (714)456-0161

PURPOSE: Repair Existing Seawall

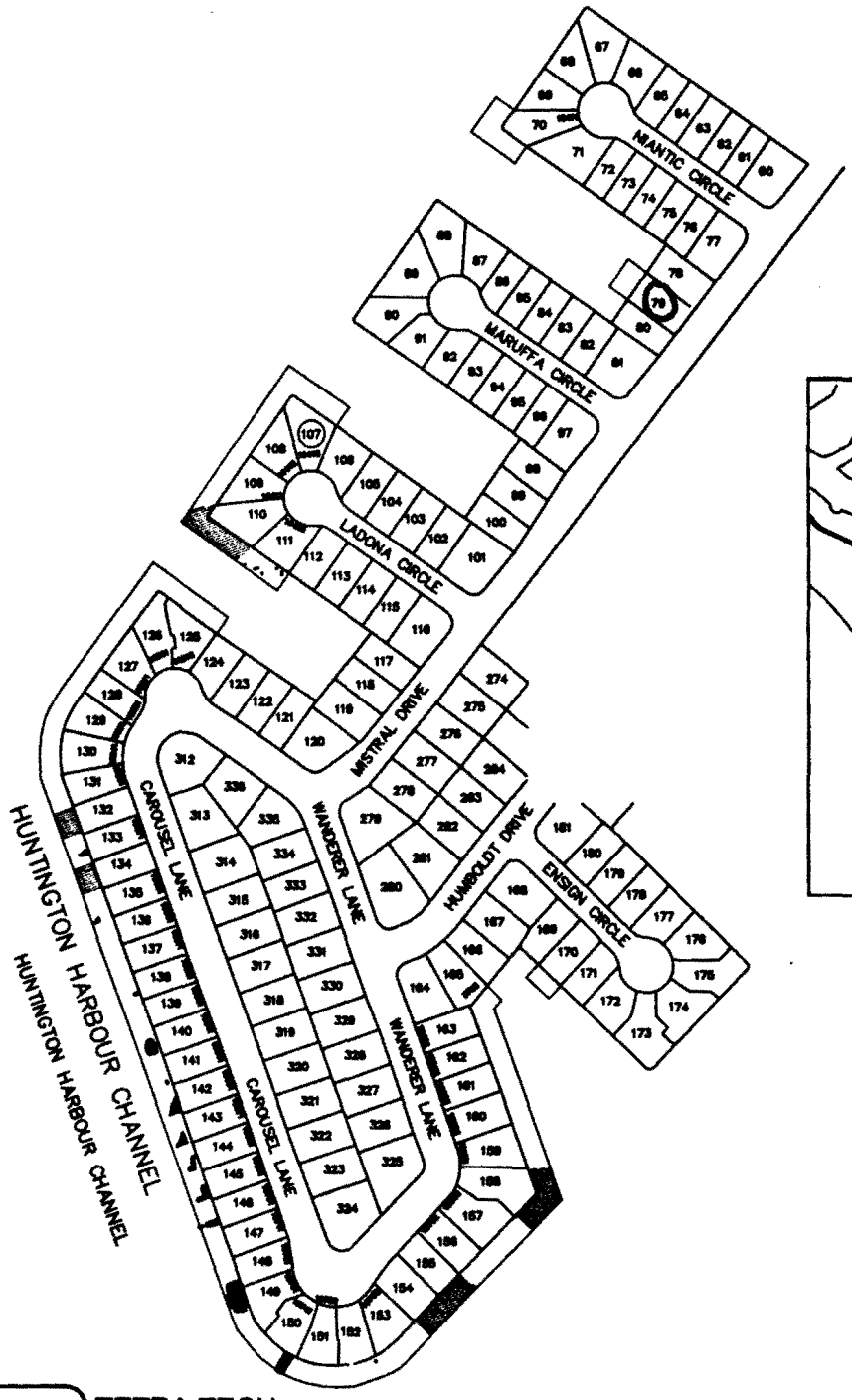
Datum: MLLW = 0
Adj. Property Owners:
1. See Attached List
2.
3.

SECTION VIEW

Larry & Susan Bjork
3943 Mistral Drive
Huntington Beach, CA 92649

Proposed Repair of Existing Seawall

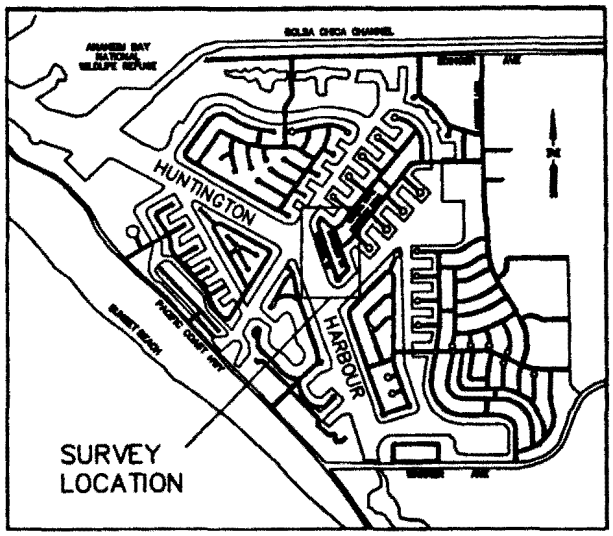
IN: Huntington Harbour
AT: Huntington Beach
County of O.C. State: CA
Application By: Larry & Susan Bjork
Sheet 4 of 4 Date: 4/13/99



COASTAL COMMISSION

EXHIBIT # 4

PAGE 1 OF 3



VICINITY MAP

LEGEND:

- ○ Lot in CCC Permit # 5-00-471
  5-00-472
- Area not surveyed
- Eelgrass (Zostera marina)

TETRA TECH
670 North Rosemead Blvd.
Pasadena, CA 91107
(626) 351-4664, Fax (626) 351-5291

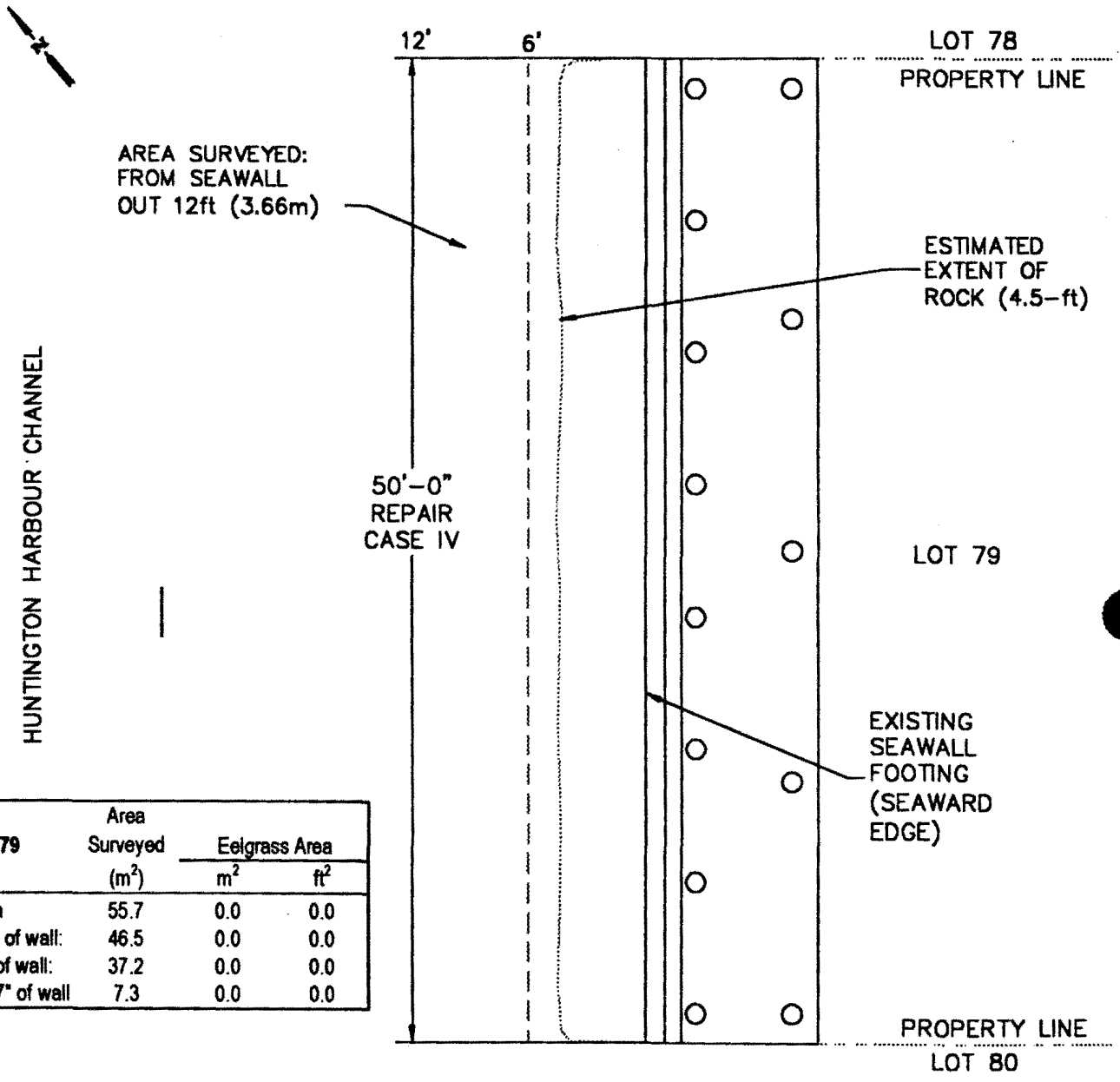
Coastal Commission
Permit # 5-99-471

PLAN VIEW
0 100 200 300
feet

Humboldt Island
Huntington Harbour
Huntington Beach, CA 92649

Figure 1
Eelgrass Survey Results
Survey Conducted:
8/25/99
IN: Huntington Harbour
AT: Huntington Beach
County of Orange State: CA
Application By: Homeowners

Eelgrass Survey



Lot 79	Area Surveyed (m^2)	Eelgrass Area	
		m^2	ft^2
Total Area	55.7	0.0	0.0
Within 10' of wall:	46.5	0.0	0.0
Within 8' of wall:	37.2	0.0	0.0
Within 1' 7" of wall	7.3	0.0	0.0

TETRA TECH
800 The City Parkway West, Suite 300
Orange, CA 92868
(714)456-0186, Fax (714)456-0181

LEGEND:

EELGRASS (Zostera marina)

Figure 2. Tract 5481, Lot 079

Datum: MLLW = 0

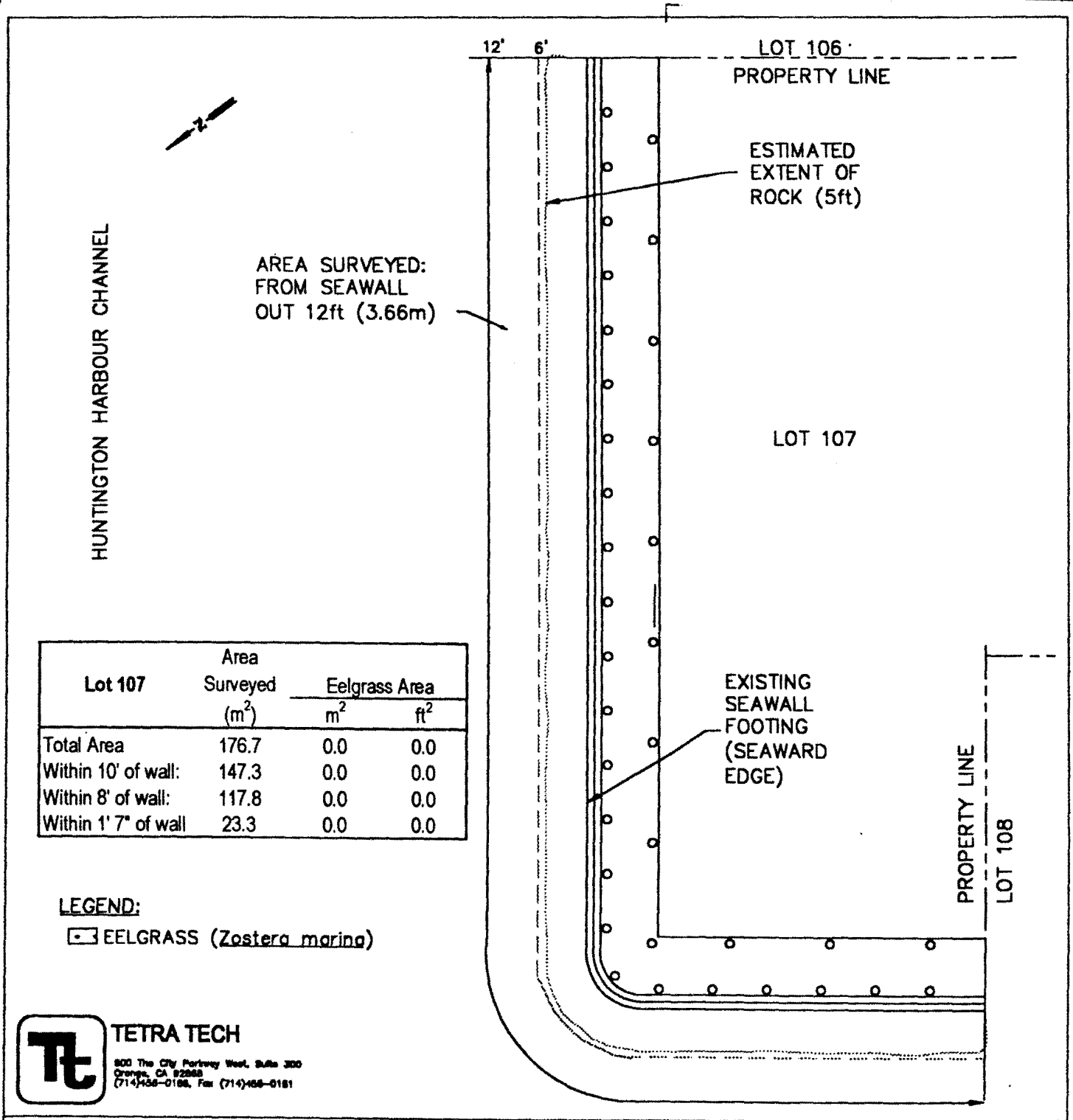
PLAN VIEW

0 8 16

1/8" = 1'-0"

Larry & Susan Bjork
3943 Mistral Drive
Huntington Beach, CA 92649

Eelgrass Survey Results
Survey Conducted 8/25/99
IN: Huntington Harbour
AT: Huntington Beach
County of O.C. State: CA
Application By: L. & S. Bjork
Sheet 1 of 1 Date: 11/12/99



Lot 107	Area Surveyed (m^2)	Eelgrass Area	
		m^2	ft^2
Total Area	176.7	0.0	0.0
Within 10' of wall:	147.3	0.0	0.0
Within 8' of wall:	117.8	0.0	0.0
Within 1' 7" of wall	23.3	0.0	0.0

LEGEND:

EELGRASS (*Zostera marina*)

TETRA TECH
800 The City Parkway West, Suite 300
Orange, CA 92868
(714)456-0188, Fax (714)456-0181

Figure 3. Tract 5481, Lot 107

Datum: MLLW = 0

PLAN VIEW

0 10 20

1/16" = 1'- 0"

Andre Maginot
16418 Ladona Circle
Huntington Beach, CA 92649

Eelgrass Survey Results
Survey Conducted 8/25/99
IN: Huntington Harbour
AT: Huntington Beach
County of O.C. State: CA
Application By: Andre Maginot
Sheet 1 of 1 Date: 11/11/99

DEPARTMENT OF FISH AND GAME
MARINE REGION
411 BURGESS DRIVE
MENLO PARK, CA 94025
(650) 688-6340

State of California

Memorandum

To : Mr. Karl Schwing
California Coastal Commission
200 Oceangate Ave., Suite 1000
Long Beach, California 90802

Date: January 31, 2000

From : **Department of Fish and Game**

Subject: Additional Properties Requiring Bulkhead Repair at Humboldt Island

This memo concerns proposed project plans to repair and renovate existing bulkheads for 3 residences (Lot numbers 107, 79 and 170, coastal application no. 5-99-471, 5-99-472, and 5-99-473, respectively) on Humboldt Island, Huntington Harbor, Huntington Beach, Orange County, California. Renovation will include placement of a protective rock footing extending out to a maximum of 8 feet from the existing bulkhead at all three properties. One property, Lot 170, will require the placement of vinyl sheetpile 1 foot, 7 inches seaward of the existing bulkhead for a length of 18 feet. Tetra Tech, Inc., representing the project applicants, have requested the Department's concurrence and approval on the issues concerning these properties.

According to Tetra Tech Inc., eelgrass (*Zostera marina*) habitat is not present in the area adjacent to the subject properties. Thus, we do not object to the placement of a rock toe protection at the subject properties. However, we are concerned about the loss of marine soft-bottom bay habitat from placement of sheet-pile seaward of the current bulkhead at Lot 170. In our response to the Public Notice for the Humboldt Island Homeowners renovation for 36 residences on southern Humboldt Island (No. 199915697-YJC), and our July 6, 1999 Memorandum to you regarding the same project, the Department recommended mitigation for loss of marine soft-bottom bay habitat. Thus, the Department recommends mitigation to compensate for soft -bottom habitat loss at Lot 170. It is our understanding that mitigation needs arising from bulkhead repair activities at Lot 170 will be mitigated along with the other 19 Humboldt Island residences requiring sheet-pile installation seaward of existing bulkheads. Although a specific mitigation project for loss of soft-bottom habitat has not been identified at this time, the Department and Tetra Tech, Inc., are investigating some local possibilities.

In summary, the Department does not object to the issuance of Coastal Development Permits (CDP) from the Commission for Lot numbers 107 and 79 (application no. 5-99-471 and 5-99-472, respectively). However, until Tetra Tech Inc., has finalized a mitigation plan to compensate for loss of soft bottom habitat we cannot concur with the issuance of a CDP for Lot no.170.

As always, Department personnel are available to discuss our comments, concerns, and recommendations in greater detail. To arrange for a discussion, please contact Ms. Marilyn Fluharty, Environmental Specialist, California Department of Fish and Game, 4949 Viewridge Avenue, San Diego, CA 92123, telephone (858) 467-4231.

Sincerely,

Robert N. Tasto, Supervisor
Project Review and Water Quality Program
Marine Region

cc: Ms. Molly Mell
Tetra Tech, Inc.
600 City parkway West, Ste. 300
Orange, California 92868

Ms. Marilyn Fluharty
Department of Fish and Game
San Diego, California 92123

Memorandum

To : Mr. Karl Schwing
California Coastal Commission
200 Oceangate Avenue Suite 1000
Long Beach, California 90802

Date : July 6, 1999

From : Department of Fish and Game

Subject : Humboldt Island Homeowners Association Bulkhead Repair

This memo is in response to a request from Ms. Sarah McFadden, Tetra Tech Inc., representing the Humboldt Island Homeowners Association, concerning proposed project plans to repair and renovate existing bulkheads for 36 residences on southern Humboldt Island, Huntington Harbor, Huntington Beach, Orange County, California. Damaged piles will be removed and/or repaired at three properties. At 19 properties, vinyl sheet-pile will be installed 1 foot 7 inches seaward of the bulkheads. At all 36 properties a protective rip-rap footing, comprised of quarry waste material ranging from sand to 8 inch fragments, will be placed at the bulkheads. The footing will extend a maximum of 11 feet from the bulkheads.

The proposed project will impact hardscape, the water column, and soft bottom habitat. Impacts to hardscape (i.e., existing bulkheads and structures) and the water column are considered temporary, as the water quality will return to pre-construction conditions and the new structures will eventually be colonized by attachment organisms. However, impacts to soft bottom habitat will not be temporary. Based on information provided to the Department by Tetra Tech Inc., "expansion" of 19 bulkheads will result in a permanent loss of approximately 1,581 square feet of marine soft bottom bay habitat. In addition, approximately 17,700 square feet of soft bottom habitat will be buried by placement of rip-rap. Approximately 780 square feet of this soft bottom substrate is eelgrass (*Zostera marina*) habitat.

The permanent loss of marine soft bottom bay habitat is of concern to the Department. The Department strongly recommends that bulkhead projects be designed to eliminate or minimize loss of marine bay habitat. To accomplish this goal, we recommend that each property owner strive to construct its bulkhead either in place of the existing bulkhead or immediately in front of the existing bulkhead so that installation results in no net loss of intertidal habitat when measured at the Mean Higher High Water line. The Humboldt Island Homeowners' project has proposed sheet piling to be placed 1 foot 7 inches seaward of those bulkheads in need of repair. The sheet piling retains concrete and grout which is pumped in to fill existing voids in the bulkhead. Presumably the 1 foot 7 inch distance is necessary to allow sufficient clearance for concrete and grout piping, and to enable a pneumatic hammer to clear the bulkhead footing. It is the Department's position that bulkhead projects be constructed in such a manner to be the least environmentally damaging practicable alternative. Thus, we recommend the project proponent investigate alternative methodologies for filling voids in bulkheads. If this is deemed structurally unfeasible, then any incurred loss of marine soft bottom bay habitat should be mitigated.

The Department recognizes that placement of rip-rap at the bulkheads would result in an initial loss of ecological benefits to species associated with soft bottom habitat. However, in the case of unvegetated soft bottom habitat this loss would likely be short-term, as different organisms would recolonize the rip-rap. Thus, we believe that placement of rip-rap on unvegetated soft bottom habitat would not have a significant impact on the environment.

In contrast, impacts to vegetated soft bottom habitat, i.e., eelgrass, from placement of rip-rap are significant. It is well documented that eelgrass habitat provides forage, cover, reproductive opportunities, and other benefits to various fish species, and may be used by these species as permanent residence or nursery habitat. Impacts to eelgrass habitat have significant impacts on the environment, and eelgrass loss must be mitigated.

The project proponents plan to offset the loss of eelgrass in a manner consistent with the Southern California Eelgrass Policy, as amended. However, a specific eelgrass mitigation plan identifying the mitigation site has not been detailed at this time. In addition, the project proponent has not proposed a mitigation plan, nor recognized the necessity to compensate for the loss of 1,581 square feet of marine soft bottom bay habitat. The location and plans for mitigation sites are the responsibility of the project proponent. Therefore, until appropriate mitigation plans both for eelgrass loss and loss of soft bottom habitat have been developed and provided to the Department for review and approval, we cannot support this project.

As always, Department personnel are available to discuss our comments, concerns, and recommendations in greater detail. To arrange for a discussion, please contact Ms. Marilyn Fluharty, Environmental Specialist, California Department of Fish and Game, 4949 Viewridge Avenue, San Diego, California 92123, or by telephone at (619) 467-4231.

Sincerely,

DeWayne Johnston
Regional Manager
Marine Region

cc: Ms. Marilyn Fluharty
Department of Fish and Game
San Diego, California

COASTAL COMMISSION

EXHIBIT # 6
PAGE 2 OF 2

California Regional Water Quality Control Board
Santa Ana Region

Winston H. Hickox
Secretary for Environmental Protection

Internet Address: http://www.swrcb.ca.gov/rwqcb8
3737 Main Street, Suite 500, Riverside, California 92501-3348
Phone (909) 782-4130 - FAX (909) 781-6288

Gray Davis
Governor

November 3, 2000

Larry & Susan Bjork
3943 Mistral Drive
Huntington Beach, Ca 92649

Alex Gelbard
16575 Ensign Circle
Huntington Beach, CA 92649

Andre Maginot
16418 Ladona Circle
Huntington Beach, CA 92649

CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION FOR THE PROPOSED HUMBOLDT ISLAND BULKHEAD REPAIR ON PROPERTIES REQUIRING MITIGATION, CITY OF HUNTINGTON BEACH (WDID # 8 303271001) (ACOE#2000100038-YJC)

Dear Humboldt Island Homeowners:

This is in response to the January 18, 2000 transmittals we received on January 25, 2000 and additional information received on October 16, 2000 and October 19, 2000, requesting 401 water quality standards certification under section 401 of the Clean Water Act for the above referenced project.

1. Project Description:

Three Humboldt Island homeowners are proposing to repair and restore the foundation of an existing bulkhead that confines a portion of Humboldt Island in Huntington Beach. In locations of severe erosion, the proposed construction work will include removing damaged timber and replacing it with steel jacks. The voids within the repaired structure will be pressure-filled with concrete and grout to protect the steel surfaces from corrosion. A fiberglass reinforced plastic sheet will be placed 1'7" in front of the bulkhead face to retain the concrete pumped to fill the existing voids beneath the wall footing and to provide structural integrity for the bulkhead. A blanket of course material over filter fabric will be applied seaward of the sheet pile at a 2:1 (horizontal: vertical) slope from the top of the footing extending out to 6 to 8 feet from the bulkhead depending on existing slope and erosion conditions. The slope will help prevent scouring along the seawall footing as well as prevent fish from burrowing under the wall and exposing the pilings. In locations of minimal erosion, coarse material will be backfilled over a filter fabric as slope protection.

The construction activities will result in the loss of a significant amount of soft bottom habitat within one of the properties (Table 1).

2. Receiving water:	Huntington Harbour, Orange County
3. Fill area:	Ocean: 0.03 acres of permanent impact. No wetlands will be impacted.
4. Dredge volume:	N/A
5. Federal permit:	U. S. Army Corps of Engineers, Individual Permit # 2000100038-YJC
6. Compensatory mitigation:	The City of Huntington Beach serves as the lead agency representing the Humboldt Island homeowners with regard to mitigation. However, it is the responsibility of each homeowner to mitigate for the loss of soft bottom habitat as a result of the bulkhead repairs. On behalf of the city of Huntington Beach, Tetra Tech, Inc., the consulting firm representing the Humboldt Island Homeowners, prepared a *Soft Bottom Mitigation Plan* to mitigate for the loss of soft bottom habitat as a result of the bulkhead repair. The plan has been accepted by the California Department of Fish and Game (CDFG). The mitigation will occur in the Bolsa Chica Wetlands area, 0.5 – 1.2 miles southwest of the impacted properties. The *Soft Bottom Mitigation Plan* proposes to compensate for the 18.7 square feet of soft bottom impacted by: repair of an existing conduit; removal of concrete debris; regrading the mitigation area to elevations similar to adjacent wetland area; conducting monitoring surveys; and evaluating the success of the mitigation site. The mitigation plan does address mitigation required for other projects, but the mitigation required for this site will result in a total of 37.4 square feet to be regraded at the Bolsa Chica Wetlands, resulting in a ratio of 2.1:1. Best Management Practices will be implemented at the mitigation site to minimize impacts to surrounding areas. The pickleweed on site will be protected and salvaged. Any disturbed pickleweed will be replaced with pickleweed from an adjacent location, or from a nursery. The planting will be performed under the direction of the CDFG. Humboldt Island Homeowners propose to implement Best Management Practices (BMP) during project construction to ensure that there is not excessive erosion and to prevent pollutant discharges during project construction. Turbidity will be minimized by installing a filter fabric between the fine sediments and the coarse materials. If the sediments become suspended as a result of the work a silt curtain will be installed. Adherence to the *Soft Bottom Mitigation Plan*, submitted April 2000 is required. In addition, monitoring of the mitigation site must be for a minimum of five years.

TABLE 1

401 Water Quality Certification WDID #8 303271001			
Applicants Name	**Project Street Address**	**Lot Number**	**Habitat Impact**
Larry & Susan Bjork	3943 Mistral Drive	79	
Alex Gelbard	16575 Ensign Circle	170	SB
Andre Maginot	16418 Ladona Circle	107	

SB = Soft Bottom

Humboldt Island Homeowners have received an individual permit (#199915697-YJC) and a Letter of Permission from the U.S. Army Corps of Engineers in compliance with Section 404 of the Clean Water Act. A certified Negative Declaration was received for this project on October 19, 2000.

Resolution No. 96-9 (copy enclosed) provides that waste discharge requirements for certain types of discharges are waived provided that criteria and conditions specified in the Resolution are met. Provided that the criteria and conditions for Minor Dredging Projects specified on page 1 (of Attachment "A" to the Resolution), Other Insignificant Discharges of Wastewater to Land specified on page 4, and the general conditions specified on page 4 are met, waste discharge requirements are waived for this project.

Caulerpa taxifolia Stipulation:

In June 2000, *Caulerpa taxifolia*, an invasive marine seaweed, was reported to be found in a lagoon off Huntington Harbour. Since then, it has been located within Huntington Harbour itself. The regional Board, California Department of Fish and Game (CDFG), and other agencies are involved in extensive efforts to eradicate this seaweed and prevent its transport to other areas. Regional Board staff has contacted Tetra Tech, Inc. regarding this matter, and Tetra Tech, Inc. informed us that there were no signs of Caulerpa at the proposed project sites. This must be confirmed prior to any repair/restoration efforts since those efforts would likely contribute to the dispersal of this alga, if it is present. Therefore, coordination with CDFG regarding an extensive survey of the project site for Caulerpa is required prior to initiation of the project. A letter from CDFG stating that the properties that will be impacted do not have Caulerpa must be submitted to the Regional Board prior to the start of the project. If Caulerpa is found prior to or during implementation of the project, no work should begin or continue at that location until authorized by Regional Board staff. Upon discovery of the invasive seaweed, which must not be disturbed, the Regional Board must be notified immediately, reporting the location and date of discovery. In addition, should no Caulerpa be observed during the bulkhead repair, please notify the Regional Board of this fact when all property repairs at Humboldt Island have been completed. This will help us to establish a database of infestation or the occurrence or absence of Caulerpa. In turn, this will help us to locate and prevent the spread of this invasive seaweed, which has severe adverse effects on the ecosystem.

Pursuant to California Water Code, Section 1058, and Pursuant to 23 CCR §3860, the following shall be included as conditions of all water quality certification actions:

(a) Every certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to Section 13330 of the Water Code and Article 6 (commencing with Section 3867) of Chapter 28. Certification of 23 CCR.

(b) Certification is not intended and shall not be construed to apply to any activity involving a hydroelectric facility and requiring a FERC license or an amendment to a FERC license unless the pertinent certification application was filed pursuant to Subsection 3855(b) of Chapter 28 of 23 CCR and that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.

(c) Certification is conditioned upon total payment of any fee required under Chapter 28 of 23 CCR and owed by the applicant.

If the above stated conditions are changed, any of the criteria or conditions as previously described are not met, or new information becomes available that indicates a water quality problem, we may formulate additional Waste Discharge Requirements.

Please notify the Santa Ana Regional Board before construction on this project begins. Should there be any questions, please contact Wanda Smith at (909) 782-4468 or Stephanie M. Gasca at (909) 782-3221.

Sincerely,

for GERARD J. THIBEAULT
Executive Officer

Attachment

cc (with attachment):
Tetra Tech- Sarah McFadden

cc (w/out attachment):
U.S. Environmental Protection Agency, Director of Water Division (WTR-1) – Alexis Strauss
U.S. Army Corps of Engineers, Los Angeles District – Jae Chung
U.S. Fish and Wildlife Service, Carlsbad Office - Christine Moen
California Department of Fish and Game – Marilyn Fluharty
California Department of Fish and Game – Erick Burres
California Coastal Commission, Long Beach Branch – Karl Schwing
State Water Resources Control Board, Watersheds Project Support Section –
William R. Campbell, Chief

CALIFORNIA STATE LANDS COMMISSION
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825-8202

PAUL D. THAYER, *Executive Officer*
(916) 574-1800 FAX (916) 574-1810
California Relay Service From TDD Phone 1-800-735-2922
from Voice Phone 1-800-735-2929

Contact Phone: **(916) 574-1892**
Contact FAX: **(916) 574-1925**

January 26, 2000

File Ref: W 25524

Karl Schwing
California Coastal Commission
200 Oceangate, Suite 1000
Long Beach, CA 90802-4302

Dear Mr. Schwing:

SUBJECT: Bulkhead Repairs to Properties on Humboldt Island, Huntington Harbour, Orange County

Staff of the California State Lands Commission (CSLC) has been advised by Tetra Tech that three additional properties have been added to the group requesting bulkhead repairs on Humboldt Island. The properties are located at 3943 Mistral Drive (CDP 5-99-472), 16575 Ensign Circle (CDP 5-99-473), and 16418 Ladona Circle (CDP 5-99-471).

In Huntington Harbour, the State settled certain property ownership issues with the Huntington Harbour Corporation pursuant to two agreements entered into in 1961 and 1962, BLA 18 and SLL 34. The CSLC's area of leasing jurisdiction extends over the State's fee title ownership including the areas that are referred to as the Main and Midway Channels and a portion of Peter's Landing and Sunset Aquatic Park. There are various waterways not owned in fee by the State. However, most of Huntington Harbour remains subject to a Public Trust Easement, though fee title is in private ownership.

Based on our review of the three properties cited above, they are not located within the area of the CSLC's leasing jurisdiction. Furthermore, it is CSLC staff's position that the projects are consistent with current Public Trust needs in the area and we have no objection to the projects as proposed.

If you have any questions, please call me at (916) 574-1892.

Sincerely,

Jane E. Smith
Public Land Management Specialist
Southern California Region

cc: Molly Mell, Tetra Tech

SOUTHERN CALIFORNIA EELGRASS MITIGATION POLICY

(Adopted July 31, 1991)

Eelgrass (Zostera marina) vegetated areas function as important habitat for a variety of fish and other wildlife. In order to standardize and maintain a consistent policy regarding mitigating adverse impacts to eelgrass resources, the following policy has been developed by the Federal and State resource agencies (National Marine Fisheries Service, U.S. Fish and Wildlife Service, and the California Department of Fish and Game). This policy should be cited as the Southern California Eelgrass Mitigation Policy (revision 8).

For clarity, the following definitions apply. "Project" refers to work performed on-site to accomplish the applicant's purpose. "Mitigation" refers to work performed to compensate for any adverse impacts caused by the "project". "Resource agencies" refers to National Marine Fisheries Service, U.S. Fish and Wildlife Service, and the California Department of Fish and Game.

1. **Mitigation Need.** Eelgrass transplants shall be considered only after the normal provisions and policies regarding avoidance and minimization, as addressed in the Section 404 Mitigation Memorandum of Agreement between the Corps of Engineers and Environmental Protection Agency, have been pursued to the fullest extent possible prior to the development of any mitigation program.

2. **Mitigation Map.** The project applicant shall map thoroughly the area, distribution, density and relationship to depth contours of any eelgrass beds likely to be impacted by project construction. This includes areas immediately adjacent to the project site which have the potential to be indirectly or inadvertently impacted as well as areas having the proper depth and substrate requirements for eelgrass but which currently lack vegetation.

Protocol for mapping shall consist of the following format:

1) Coordinates

Horizontal datum - Universal Transverse Mercator (UTM), NAD 83, Zone 11

Vertical datum - Mean Lower Low Water (MLLW), depth in feet.

2) Units

Transects and grids in meters.

Area measurements in square meters/hectares.

All mapping efforts must be completed during the active growth phase for the vegetation (typically March through October) and shall be valid for a period of 120 days with the exception of surveys completed in August - October.

A survey completed in August - October shall be valid until the resumption of active growth (i.e., March 1). After project construction, a post-project survey shall be completed within 30 days. The actual area of impact shall be determined from this survey.

3. **Mitigation Site.** The location of eelgrass transplant mitigation shall be in areas similar to those where the initial impact occurs. Factors such as, distance from project, depth, sediment type, distance from ocean connection, water quality, and currents are among those that should be considered in evaluating potential sites.

4. **Mitigation Size.** In the case of transplant mitigation activities that occur concurrent to the project that results in damage to the existing eelgrass resource, a ratio of 1.2 to 1 shall apply. That is, for each square meter adversely impacted, 1.2 square meters of new suitable habitat, vegetated with

eelgrass, must be created. The rationale for this ratio is based on, 1) the time (i.e., generally three years) necessary for a mitigation site to reach full fishery utilization and 2) the need to offset any productivity losses during this recovery period within five years. An exception to the 1.2 to 1 requirement shall be allowed when the impact is temporary and the total area of impact is less than 100 square meters. Mitigation on a one-for-one basis shall be acceptable for projects that meet these requirements (see section 11 for projects impacting less than 10 square meters).

Transplant mitigation completed three years in advance of the impact (i.e., mitigation banks) will not incur the additional 20% requirement and, therefore, can be constructed on a one-for-one basis. However, all other annual monitoring requirements (see sections 8-9) remain the same irrespective of when the transplant is completed.

Project applicants should consider increasing the size of the required mitigation area by 20-30% to provide greater assurance that the success criteria, as specified in Section 9, will be met. In addition, alternative contingent mitigation must be specified, and included in any required permits, to address situation where performance standards (see section 9) are not met.

5. **Mitigation Technique.** Techniques for the construction and planting of the eelgrass mitigation site shall be consistent with the best available technology at the time of the project. Donor material shall be taken from the area of direct impact whenever possible, but also should include a minimum of two additional distinct sites to better ensure genetic diversity of the donor plants. No more than 10% of an existing bed shall be harvested for transplanting purposes. Plants harvested shall be taken in a manner to thin an existing bed without leaving any noticeable bare areas. Written permission to harvest donor plants must be obtained from the California Department of Fish and Game.

Plantings should consist of bare-root bundles consisting of 8-12 individual turions. Specific spacing of transplant units shall be at the discretion of the project applicant. However, it is understood that whatever techniques are employed, they must comply with the stated requirements and criteria.

6. **Mitigation Timing.** For off-site mitigation, transplanting should be started prior to or concurrent with the initiation of in-water construction resulting in the impact to the eelgrass bed. Any off-site mitigation project which fails to initiate transplanting work within 135 days following the initiation of the in-water construction resulting in impact to the eelgrass bed will be subject to additional mitigation requirements as specified in section 7. For on-site mitigation, transplanting should be postponed when construction work is likely to impact the mitigation. However, transplanting of on-site mitigation should be started no later than 135 days after initiation of in-water construction activities. A construction schedule which includes specific starting and ending dates for all work including mitigation activities shall be provided to the resource agencies for approval at least 30 days prior to initiating in-water construction.

7. **Mitigation Delay.** If, according to the construction schedule or because of any delays, mitigation cannot be started within 135 days of initiating in-water construction, the eelgrass replacement mitigation obligation shall increase at a rate of seven percent for each month of delay. This increase is necessary to ensure that all productivity losses incurred during this period are sufficiently offset within five years.

8. **Mitigation Monitoring.** Monitoring the success of eelgrass mitigation shall be required for a period of five years for most projects. Monitoring activities shall determine the area of eelgrass and density of plants at the transplant site and shall be conducted at 3, 6, 12, 24, 36, 48, and 60 months after completion of the transplant. All monitoring work must be conducted during the active vegetative growth period and shall avoid the winter months of November through February. Sufficient flexibility in the scheduling of the 3 and 6 month surveys shall be allowed in order to ensure the work is completed during this active growth period. Additional monitoring beyond the 60 month period may be required in those instances where stability of the proposed transplant site is questionable or where other factors may influence the long-term success of transplant.

The monitoring of an adjacent or other acceptable control area (subject to the approval of the

resource agencies) to account for any natural changes or fluctuations in bed width or density must be included as an element of the overall program.

A monitoring schedule that indicates when each of the required monitoring events will be completed shall be provided to the resource agencies prior to or concurrent with the initiation of the mitigation.

Monitoring reports shall be provided to the resource agencies within 30 days after the completion of each required monitoring period.

9. **Mitigation Success.** Criteria for determination of transplant success shall be based upon a comparison of vegetation coverage (area) and density (turions per square meter) between the project and mitigation sites. Extent of vegetated cover is defined as that area where eelgrass is present and where gaps in coverage are less than one meter between individual turion clusters. Density of shoots is defined by the number of turions per area present in representative samples within the control or transplant bed. Specific criteria are as follows:

a. a minimum of 70 percent area of eelgrass bed and 30 percent density after the first year.

b. a minimum of 85 percent area of eelgrass bed and 70 percent density after the second year.

c. a sustained 100 percent area of eelgrass bed and at least 85 percent density for the third, fourth and fifth years.

Should the required eelgrass transplant fail to meet the established criteria, then a Supplementary Transplant Area (STA) shall be constructed, if necessary, and planted. The size of this STA shall be determined by the following formula:

$STA = MTA \times (|A_t + D_t| - |A_c + D_c|)$

MTA = mitigation transplant area.

A_t = transplant deficiency or excess in area of coverage criterion (%).

D_t = transplant deficiency in density criterion (%).

A_c = natural decline in area of control (%).

D_c = natural decline in density of control (%).

Four conditions apply:

1) For years 2-5, an excess of only up to 30% in area of coverage over the stated criterion with a density of at least 60% as compared to the project area may be used to offset any deficiencies in the density criterion.

2) Only excesses in area criterion equal to or less than the deficiencies in density shall be entered into the STA formula.

3) Densities which exceed any of the stated criteria shall not be used to offset any deficiencies in area of coverage.

4) Any required STA must be initiated within 120 days following the monitoring event that identifies a deficiency in meeting the success criteria. Any delays beyond 120 days in the implementation of the STA shall be subject to the penalties as described in Section 7.

10. **Mitigation Bank.** Any mitigation transplant success that, after five years, exceeds the mitigation requirements, as defined in section 9, may be considered as credit in a "mitigation bank". Establishment of any "mitigation bank" and use of any credits accrued from such a bank must be with the approval of the resource agencies and be consistent with the provisions stated in this policy. Monitoring of any approved mitigation bank shall be conducted on an annual basis until all credits are exhausted.

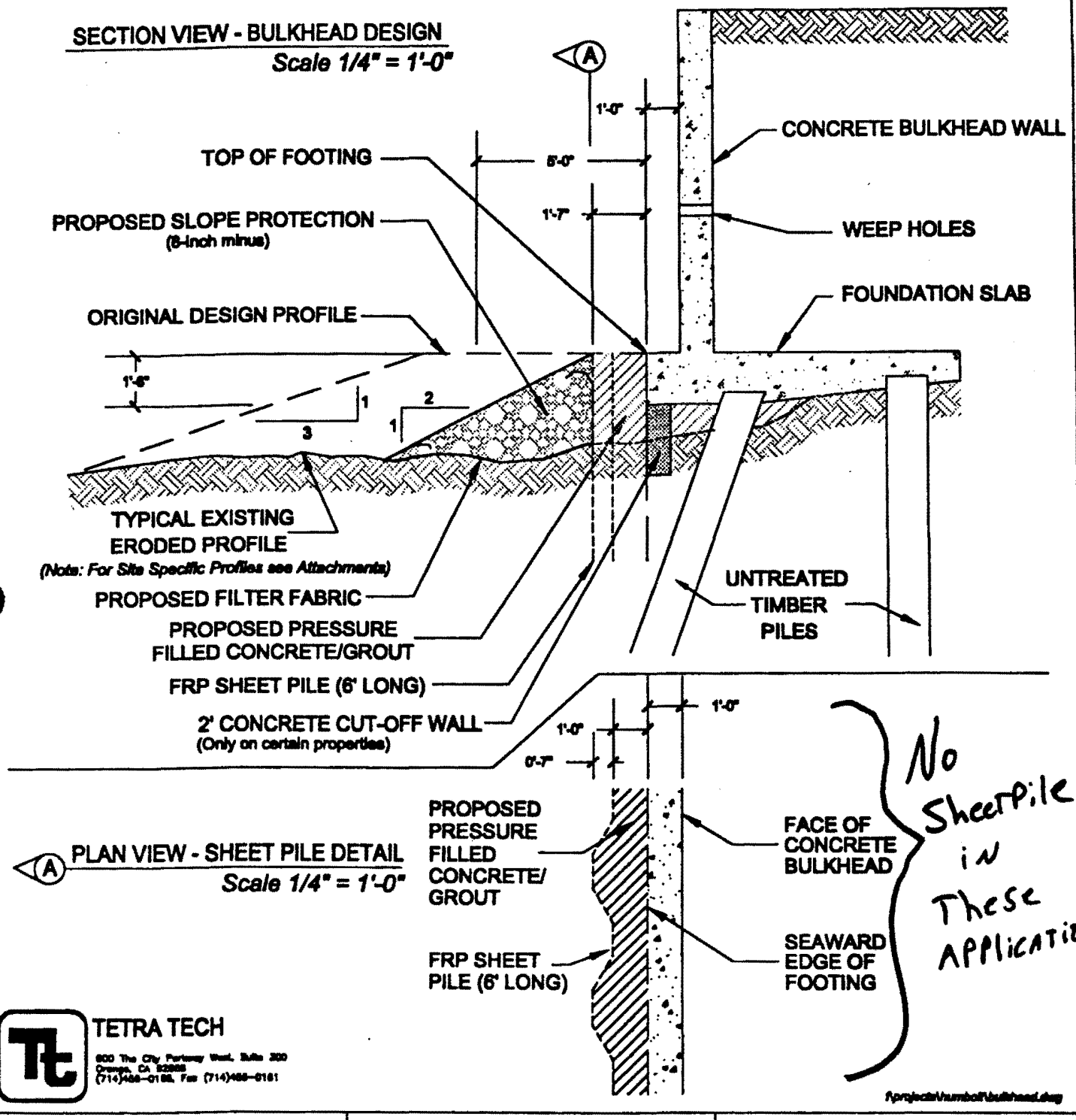
11. **Exclusions.**

1) Placement of a single pipeline, cable, or other similar utility line across an existing eelgrass bed with an impact corridor of no more than ½ meter wide may be excluded from the provisions of this policy with concurrence of the resource agencies. After project construction, a post-project survey shall be completed within 30 days and the results shall be sent to the resource agencies. The actual area of impact shall be determined from this survey. An additional survey shall be completed after 12 months to insure that the project or impacts attributable to the project have not exceeded the allowed ½ meter corridor width. Should the post-project or 12 month survey demonstrate a loss of eelgrass greater than the ½ meter wide corridor, then mitigation pursuant to sections 1-11 of this policy shall be required.

2) Projects impacting less than 10 square meters. For these projects, an exemption may be requested by a project applicant from the mitigation requirements as stated in this policy, provided suitable out-of-kind mitigation is proposed. A case-by-case evaluation and determination regarding the applicability of the requested exemption shall be made by the resource agencies.

(last revised 2/2/99)

- Policies
- Habitat Conservation Division
- Southwest Region Home Page



PURPOSE: Repair Existing Seawall Datum: MLLW = 0 Adj. Property Owners: 1. See Attached List	FIGURE 4. ORIGINAL BULKHEAD DESIGN AND SHEET PILE DETAIL Humbolt Island & Trinidad Island Huntington Beach, CA 92649	Proposed Repair of Existing Seawall Supplemental Info. Report California Coastal Commission Date: 3/18/99