CALIFORNIA COASTAL COMMISSION
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Staff: KFS-LB
Staff Report: November 16, 2000
Hearing Date: December 12-15, 2000
Commission Action:

Items M8a, M8b, M8c, M8d, and M8k

	5-98-179 5-98-201	5-98-443 5-98-444 5-99-473
Filed	10/27/00	10/20/00
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COMBINED STAFF REPORT: REGULAR CALENDAR

APPLICATION NUMBERS: 5-98-179, 5-98-201, 5-98-443, 5-98-444, and 5-99-473

Item #	Application	Applicant(s)	Project Location: Humboldt Island, Huntington Beach, Orange County
1	5-98-179	Kompaniez, Peter & Valerie	16581 Carousel Lane (Lot 134)
2	5-98-201	Anderson, John O.	16682 Wanderer Lane (Lot 158)
3	5-98-443	Whyte, William & Elizabeth	16541 Carousel Lane (Lot 130)
4	5-98-444	Barrad, Bernie	16551 Carousel Lane (Lot 131)
5	5-99-473	Gelbard, Alex	16575 Ensign Circle (Lot 170)

AGENT FOR ITEMS 1 & 2 ABOVE: Cash & Associates

AGENT FOR ITEMS 3 - 5 ABOVE: Tetra Tech, Inc.: Fernando Pagés and Sarah McFadden

COMBINED PROJECT DESCRIPTION FOR ALL APPLICATIONS THAT ARE THE SUBJECT OF THIS STAFF REPORT: Repair and enhancement of an existing bulkhead consisting of replacing portions of the timber pile foundation supports with steel jacks, installation of a total of 333 linear feet of sheet pile 1 foot 7 inches seaward of the existing bulkhead and filling the voids between the bulkhead and sheet pile, under the bulkhead and around the jacks with concrete and grouting. In addition, place 133.5 cubic yards of rock slope protection against the toe of the seawall. Mitigation of 349.3 square feet of impact to soft bottom bay habitat with 698.6 square feet of tidal mud flat at Bolsa Chica. 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, quantity of toe stone, quantity of soft bottom habitat impact/mitigation).

SUMMARY OF STAFF RECOMMENDATION:

Staff recommends **APPROVAL** of the proposed development with special conditions which require: 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 the absence of eelgrass; 4) preparation of a survey to confirm the absence of Caulerpa taxifolia in the project area; 5) the applicant to acknowledge this coastal development permit is not a waiver of public rights on the property; 6) the applicant to provide evidence of an approved coastal development permit for the off site soft bottom mitigation; 7) a requirement that the applicant implement the proposed soft bottom mitigation; 8) a requirement the applicants demonstrate their legal ability to carry out the proposed project and all conditions of approval; and 9) a requirement

for the submittal of an anchor management plan (applies only to 5-98-179/5-98-201). The major issue of this staff report is impacts upon the marine environment. The proposed projects do involve permanent impacts upon soft bottom habitat, but no impacts upon eelgrass.

LOCAL APPROVALS RECEIVED: City of Huntington Beach approvals-in-concept dated November 25, 1998; 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 eelgrass. Meanwhile, other applications on the current December 2000 agenda include impacts upon either soft bottom habitat only or both eelgrass and soft bottom habitat. Those other applications include proposed mitigation for impacts to eelgrass and soft bottom habitat. However, separate coastal development permits will be processed for the eelgrass and soft bottom mitigation plans. These separate applications will be processed at a subsequent hearing. 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 #5-98-179 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 5-98-179, 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 #5-98-201 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 5-98-201, 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 #3

I move that the Commission approve CDP #5-98-443 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 5-98-443, 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 #4

I move that the Commission approve CDP #5-98-444 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 5-98-444, 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 #5

I move that the Commission approve CDP #5-99-473 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 5-99-473, 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:

1. **Compliance With Plans Submitted** (applicable to all permits)

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** (applicable to all permits)

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** (applicable to all permits)

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** (applicable to all permits)

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** (applicable to all permits)

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.

6. **Coastal Development Permit – Soft Bottom Habitat Mitigation** (applicable to all permits)

This coastal development permit does not serve as a coastal development permit approval for the implementation of the proposed soft bottom habitat mitigation contained within *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. **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT,** the applicant shall provide evidence of an approved and valid coastal development permit for the implementation of the soft bottom habitat mitigation plan required by Special Condition 7 below.

7. **Compliance with Soft Bottom Habitat Mitigation Plan** (applicable to all permits)

The applicant shall implement and comply with the recommendations and mitigation contained within *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 as they pertain to the development that is the subject of this coastal development permit. The proposed soft bottom mitigation shall be implemented prior to or concurrent with the proposed bulkhead repair and enhancement. Any changes to the approved mitigation plan, including but not limited to changes to the monitoring program to ensure success of the mitigation site, shall require an amendment to this permit from the Coastal Commission or written

concurrence from the Executive Director that the changes do not require a permit amendment.

8. **Legal Interest** (applicable to all permits)

PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit, for the review and approval of the Executive Director, written documentation demonstrating that it has the legal ability to carry out the proposed project and all conditions of approval of this permit.

9. **Anchor Management Plan** (applies to 5-98-179 and 5-98-201 only)

A. **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit, for the review and approval of the Executive Director, a plan for the avoidance of adverse impacts upon eelgrass due to the placement of anchors utilized by barges in construction of the proposed project. The plan shall be prepared by a qualified professional and shall include the following:

1. The plan shall demonstrate that the use of anchors by barges utilized in the proposed project will avoid impacts upon eelgrass beds.

2. The plan shall include, at a minimum, the following components: a map showing the proposed location of barges and anchors with respect to existing eelgrass beds.

B. The permittee shall undertake development in accordance with the approved final plan. Any proposed changes to the approved final plan shall be reported to the Executive Director. No changes to the approved final plan shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is required.

IV. FINDINGS AND DECLARATIONS:

The Commission hereby finds and declares:

A. Project Description and Location

The proposed project is 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 5 non-contiguous bulkheaded properties located seaward of the first public road (Exhibit 2).

The proposed project consists of the repair and enhancement of an existing bulkhead. The repairs and enhancements will entail replacing portions of the timber pile foundation supports

with steel jacks, installing a sheet pile 1 foot 7 inches seaward of the existing bulkhead and filling the voids between the bulkhead and sheet pile, under the bulkhead and around the jacks with concrete and grouting. In addition, rock slope protection (a.k.a. toe stone) will be placed at a 2(h) to 1(v) slope seaward of the existing bulkhead. A layer of geotextile fabric will be placed beneath the proposed toe stone to prevent the toe stone from sinking into the bay mud (Exhibit 3). The applicants also propose to mitigate for impacts to soft bottom bay habitat by restoring a tidal mud flat at Bolsa Chica.

The length of bulkhead involved at each property varies as does the length of sheet pile installed, the quantity of toe stone to be placed, the width of the proposed toe stone from the existing bulkhead and the quantity of soft bottom habitat impacted and mitigated. These details are outlined in the following table:

App#	Site Address	Applicant	Lot #	Bulkhead Length (ft)	Sheet Pile Length (ft)	Qty Toe Stone (CY)	Width of Toe Stone (ft)	Temp. Toe Stone Impact (ft^2)	Eelgrass Impacted (ft^2)	Eelgrass Mitigation (ft^2)	Soft Bottom Impacted (ft^2)	Soft Bottom Mitigated (ft^2)
5-98-179	16581 Carousel Ln.	Kompaniez, Peter and Valerie	134	50	50	7.5	10	500	0	0	64.6	129.2
5-98-201	16682 Wanderer Ln.	Anderson, John O.	158	95	95	14	8	778	0	0	122.7	245.4
5-98-443	16541 Carousel Ln.	Whyte, William & Elizabeth	130	78	78	55	11	858	0	0	81	162
5-98-444	16551 Carousel Ln.	Barrad, Bernie	131	60	60	42	11	600	0	0	62.3	124.6
5-99-473	16575 Ensign Cir.	Gelbard, Alex	170	50	18	15	8	290	0	0	18.7	37.4
		Totals:		**333**	**301**	**133.5**		**3026**	**0**	**0**	**349.3**	**698.6**

In total, the proposed project will involve 333 lineal feet of bulkhead. Three hundred and one (301) linear feet of sheet pile will be installed impacting 349.3 square feet of soft bottom habitat. In addition, a total of 133.5 cubic yards of rock slope protection will be placed against the toe of the seawall resulting is 3,026 square feet of soft bottom temporarily impacted. A total of 698.6 square feet of soft bottom mitigation will occur at Bolsa Chica.

As noted above, the sheet pile and concrete/grout backfill between the sheet pile and bulkhead will permanently impact 349.3 square feet of soft bay bottom habitat in the project area. The applicant is proposing to mitigate the loss of the soft bottom habitat by restoring a tidal mud flat near the intersection of Pacific Coast Highway and Warner Avenue in the Bolsa Chica Ecological Reserve. The mitigation will be carried out concurrent with the soft bottom habitat mitigation necessary under the other associated Humboldt Island bulkhead reinforcement projects. A separate coastal development permit will be processed for the soft bottom habitat mitigation project which will encompass all of the soft bottom mitigation necessary for all of the coastal development permits presently pending for bulkhead reinforcements on Humboldt Island [5-98-179, 5-98-201, 5-98-443, 5-98-444, 5-99-031, 5-99-032, 5-99-108, 5-99-473].

The proposed bulkhead repair and enhancement is necessary to protect the existing bulkhead and the residential structures landward of the 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 has undermined the bulkhead footing, exposing the existing untreated timber piles which provide the primary vertical and lateral support for the existing bulkhead. Marine boring organisms have damaged the exposed piles and threatens to destabilize the existing bulkhead.

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. Therefore, the proposed solution will not replicate the problems associated with the previous protective toe stone structure.

B. 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 existing homes. Humboldt Island is located in Huntington Harbour. At the subject sites 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. Damage to the supporting timber piles has caused the bulkhead to begin to collapse in certain areas. In other areas, the timber piles have not yet been extensively damaged, but will deteriorate over time causing those areas to collapse. If protective measures are not implemented at this stage, additional damage to the bulkhead would result, causing failure of the bulkhead and damage to the structures landward of the bulkhead. The proposed development is designed to shore the existing bulkhead, repair the damage, and prevent similar deterioration in the future.

The proposed project involves the fill of coastal waters with a sheet pile, concrete/grout backfill between the sheet pile and the bulkhead, and with toe stone. The purpose of the proposed fill is to protect existing structures, which is not one of the eight allowable uses enumerated under section 30233 of the Coastal Act. However, as stated in the policy 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. The proposed sheet pile and backfill have been designed to minimize the amount of fill of coastal waters. Furthermore, bathymetric conditions were evaluated at the site 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 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 which exist in the project area. Furthermore, debris from the collapsed bulkhead would result in the fill of coastal waters, covering soft bottom habitat. The proposed project would have less impact than the no project alternative because there are no impacts upon eelgrass and any permanent impacts upon soft bottom habitat will be controlled and will be mitigated under the proposed project while such impacts from the no project alternative would be uncontrolled and much more extensive.

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. Furthermore, the placement of soft bottom fill only would not provide the shoring that is necessary to stabilize the existing bulkhead.

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. Furthermore, the placement of cement slurry only would not provide the shoring that is necessary to stabilize the existing bulkhead.

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. Furthermore, the placement of course rock only would not provide the shoring that is necessary to stabilize the existing bulkhead.

The fifth alternative, placement of a deepened sheet pile in place of the proposed shallower sheet piles and 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 located substantially seaward in order to avoid intersecting the battered timber piles. The proposed shallower sheet pile minimizes the seaward encroachment of the structure to 1 foot 7 inches seaward of the footing of the existing bulkhead. This distance is the minimum necessary to clear the footing and to provide structural mass to shore the existing bulkhead. 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 nor is it the least environmentally damaging alternative.

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 extends 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 seaward encroachment of the bulkhead and by minimizing the amount of toe stone placed in front of the bulkhead, as proposed. Minimizing the seaward encroachment of the bulkhead and the width of the toe stone from the bulkhead also minimizes permanent impacts upon soft bottom habitat and avoids impacts upon eelgrass in the project vicinity. In addition, the applicant is proposing to mitigate for the loss of soft bottom habitat. Therefore, the proposed project is the least environmentally damaging feasible alternative.

The proposed bulkhead repair and reinforcement 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.

C. Marine Habitat

Section 30230 of the Coastal Act requires that marine resources shall be maintained, enhanced, and where feasible, restored. 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.*

Section 30230 of the Coastal Act requires that marine resources be protected and that the use of the marine environment be carried out in a manner that will sustain the biological productivity of coastal waters. The proposed deposition of material above and below the mean high tide line may impact marine resources. Therefore, mitigation measures are necessary to protect the biological productivity of coastal waters.

1. Soft Bottom Habitat

The proposed development is occurring in the waters of Huntington Harbour. Except at extreme low tides, the development area would be underwater. The proposed placement of toe stone will result in the coverage of approximately 3,026 square feet of unvegetated soft bottom habitat. These softbottom areas contain infaunal clam beds consisting of wavy chione, California chione, and common littlenecks. 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 January 27, 1999 and July 6, 1999, CDFG stated that the proposed impact will be short term and will not be significant (see Exhibit 5). Further, the subject site is not designated in the certified local coastal program as an environmentally sensitive habitat area.

In addition to the temporary impact upon soft bottom caused by placing the toe stone, the proposed project will have permanent impacts upon soft bottom habitat resulting from the installation of the sheet pile and backfilling the gap between the sheetpile and bulkhead with concrete and grout. The applicant is proposing to mitigate for the permanent loss of this soft bottom habitat. The proposed mitigation plan is contained within the document submitted with the application titled *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. As it pertains to the development that is the subject of this staff report, the proposed projects will permanently fill 349.3 square feet of soft bay bottom. The applicants are proposing to mitigate this impact with 698.6 square feet of tidal wetlands to be restored in the Bolsa Chica Ecological Reserve at a location near the intersection of Warner Avenue and Pacific Coast Highway in Huntington Beach (Exhibit 9). This mitigation site is approximately 1 mile southwest of the proposed impact area at Humboldt Island. The proposed ratio of mitigation is 2:1 mitigation to impact.

The proposed mitigation will occur in conjunction with other soft bottom mitigation required due to bulkhead reinforcement projects elsewhere on Humboldt Island (5-99-031 and 5-99-032). In total, 1,243.1 square feet of soft bottom habitat will be impacted by the bulkhead reinforcement projects on Humboldt Island which are currently pending before the Commission (5-98-179, 5-98-201, 5-98-443, 5-98-444, 5-99-031, 5-99-032, 5-99-108, 5-99-473). In total, 2,486.2 square feet of mitigation will be implemented in the Bolsa Chica Ecological Reserve for the proposed impacts by projects on Humboldt Island. The proposed mitigation will consist of removing concrete debris from a former wetland, grading the area to match site elevations of adjacent functioning wetlands, and restoring tidal influence to the graded area to create a tidal wetland. The mitigation is proposed to be undertaken concurrent with the bulkhead reinforcement project. The mitigation program also includes a 5 year monitoring period, with yearly monitoring and reporting during that period. The proposed soft bottom mitigation has been reviewed and approved by the California Department of Fish and Game (Exhibit 5).

The proposed mitigation is necessary to mitigate permanent losses to soft bottom habitat. Therefore, the Commission imposes Special Condition 7 which requires the applicants to implement the proposed soft bottom mitigation plan. Any deviations from the plan must be reported to the Executive Director and may require an amendment to the coastal development permit.

Since the proposed mitigation is occurring off-site and will be occurring in conjunction with other soft bottom mitigation, a separate coastal development permit will be processed for the mitigation project. In order to assure that the proposed soft bottom mitigation can occur concurrent with the bulkhead reinforcement, as proposed, the Commission imposes Special Condition 6 which requires the applicants to submit evidence that an approved and valid

coastal development permit has been obtained for implementation of the proposed soft bottom mitigation.

2. Eelgrass

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 3,026 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 and surveys listed in Appendix A). 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 Exhibit 5). 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 applicants have 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, certain applicants (5-98-443, 5-98-444, 5-99-473) have 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. Special Condition 1 will also assure that there are no unexpected direct impacts upon marine resources by requiring the applicants to conform with the plans they have submitted (subject to any other special conditions imposed). If any changes to the plans are necessary to avoid impacts to eelgrass or other marine resources, 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.

Also, certain applications (5-98-179 and 5-98-201) did not submit anchor management plans to demonstrate how impacts upon eelgrass will be avoided. Therefore, the Commission imposes Special Condition 9, which applies only to 5-98-179 and 5-98-201) which require the applicants to submit an anchor management plan prior to issuance of the coastal development permit.

According to eelgrass surveys conducted by the applicants, eelgrass was not present at the project sites in late 1998 (See Appendix A for references). The eelgrass survey submitted by the applicants indicates that the presence of floating docks 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 are between the bulkhead and the floating dock where sunlight may penetrate the water providing conditions which may allow eelgrass to grow.

Approximately 24 months have elapsed since the eelgrass surveys were conducted. 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 8, "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 bulkhead repairs and reinforcements (Exhibit 6).

3. Conclusion

Special Condition 1 requires the applicant to conform with plans submitted, assuring that impacts upon marine resources are known, avoided, minimized and mitigated, as necessary. Special Condition 3 assures that impacts to eelgrass are avoided and, if necessary, mitigated. Special Condition 4 assures that displacement of eelgrass habitat does not occur as a result of dispersal of the non-native, invasive Caulerpa taxifolia. Special Conditions 6 and 7 assure that impacts to soft bottom habitat are mitigated in accordance with a coastal development permit. As conditioned, the Commission finds that the proposed project is consistent with Section 30230 of the Coastal Act.

D. 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 projects (Exhibit 6).

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

E. 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.

F. 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. Letters from the CSLC indicate that certain properties are not located upon lands owned in fee interest by the State, therefore, no PWL is required (Exhibit 7). Meanwhile, other properties do require a protective works lease (Exhibit 7). CSLC's comments are summarized as follows: 1) a letter dated July 30, 1999 indicates that the property that is the subject of coastal development permit application 5-98-179 does require a protective works lease; 2) a letter dated November 2, 1998 indicates that 5-98-201 does not require a protective works lease; 3) a letter dated March 10, 1999 indicates that 5-98-443 does not require a protective works lease; 4) a letter dated March 10, 1999 indicates that 5-98-444 does require a protective works lease; and 5) a letter dated January 26, 2000, indicates that 5-99-473 does not require a protective works lease. In order to assure compliance with Section 30601.5 of the Coastal Act, the Commission imposes Special Condition 8. Therefore, prior to issuance of the coastal development permits for 5-98-179 and 5-98-444 the applicants must provide evidence of a final approved PWL from the CSLC.

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.

In addition, the proposed projects require soft bottom habitat mitigation. This mitigation is proposed to occur off-site in the Bolsa Chica Ecological Reserve. While the reserve manager, the California Department of Fish and Game, have approved the proposed mitigation, the applicants have not submitted evidence that they have the legal ability to undertake the mitigation. Commission staff have spoken with personnel with the California Department of Fish and Game who have indicated that a legal agreement between the applicants and CDFG to allow the mitigation is being prepared, but has not yet been finalized. Accordingly, Special Condition 8 would require that all of the applicants for all of the subject applications demonstrate their legal ability to undertake restoration at the proposed site in the Bolsa Chica Ecological Reserve.

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

G. 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.

H. 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 survey to confirm the absence of eelgrass in the project area; 4) a requirement that the applicant prepare of a survey to confirm the absence of Caulerpa taxifolia in the project area; 5) a requirement that the applicant acknowledge that this coastal development permit is not a waiver of any public rights which may exist on the property; 6) a requirement that the applicant demonstrate that a coastal development permit has been approved for the off site soft bottom mitigation; 7) a

requirement that the applicant implement the soft bottom mitigation; 8) a requirement that the applicant demonstrate their legal ability to undertake the development; and 9) a requirement for an anchor management plan. 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* dated January 1999 and updated April 1999 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
- *Eelgrass (Zostera marina) survey, impact assessment, and mitigation plan* dated December 1999 prepared for the County of Orange by Coastal Resources Management.
- 5-98-179: *Marine Biological Survey Results, 16851*[sic] *Carousel Lane*...dated November 16, 1998 and prepared by Coastal Resources Management of Corona del Mar, California
- 5-98-201: *Marine Biological Survey Results, 16682 Wanderer Lane*...dated December 1, 1998 and prepared by Coastal Resources Management of Corona del Mar, 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
- Memorandum from California Department of Fish and Game to the California Coastal Commission titled Kompaniez and Anderson Bulkhead Repair Projects in Huntington Harbor, Huntington Beach, California dated January 27, 1999

Other Agency Approvals and Correspondence

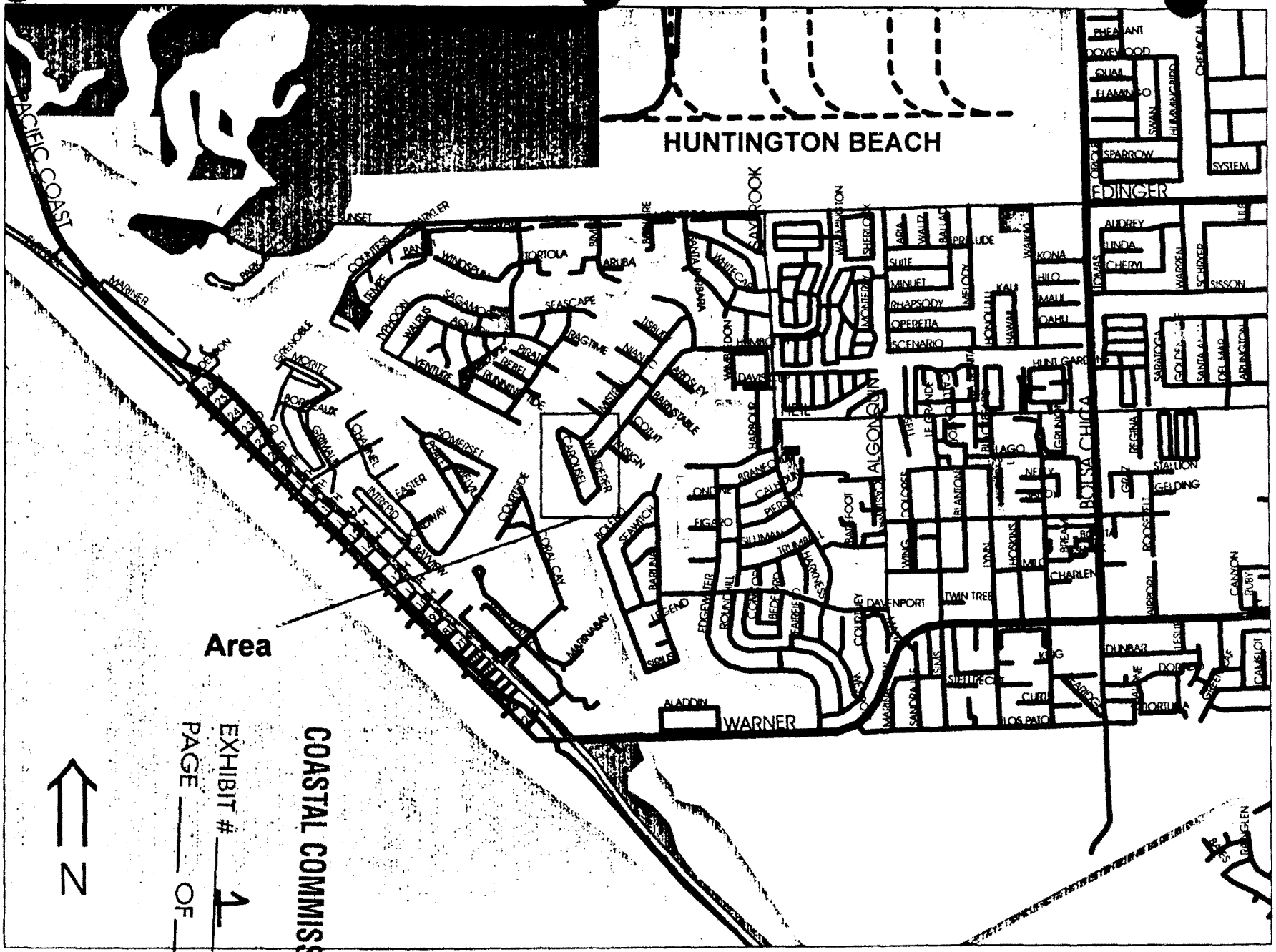
- *Public Notice* for application No. 199915697-YJC from the U.S. Army Corps of Engineers
- Letter from California State Lands Commission to the California Coastal Commission regarding status of applications and no objection to Coastal Commission action on subject properties dated August 25, 1999
- 5-98-179: Letter from California State Lands Commission to California Coastal Commission regarding status of application and no objection to Coastal Commission action on subject properties dated July 30, 1999
- 5-98-201: Letter from California State Lands Commission to California Coastal Commission stating that a protective works lease is not required dated November 2, 1998
- 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
- 5-98-179: Letter from California Regional Water Quality Control Board, Santa Ana Region, to Mr. and Mrs. Kompaniez dated April 5, 1999 regarding Waiver of Waste Discharge Requirements and Water Quality Certification for the Proposed Seawall Restoration Project, City of Huntington Beach, Orange County
- 5-98-201: Letter from California Regional Water Quality Control Board, Santa Ana Region, to Mr. John Anderson dated April 5, 1999 regarding Waiver of Waste Discharge Requirements and Water Quality Certification for the Proposed Seawall Restoration Project, City of Huntington Beach, Orange County

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)
- Caulerpa taxifolia: Emergency Coastal Development Permit 5-00-403-G
- Emergency Coastal Development Permits 5-98-179-G (Kompaniez) and 5-98-201-G (Anderson) (the follow up to which are 5-98-179 and 5-98-201 which are the subject of this staff report)
- Emergency Coastal Development Permits 5-98-443 (Whyte) and 5-98-444 (Barrad) (the follow up to which are 5-98-443 and 5-98-444 which are the subject of this staff report)

Pending Coastal Development Permit Applications

- Humboldt Island: 5-98-179 (Kompaniez), 5-98-201 (Anderson), 5-98-443 (Whyte), 5-98-444 (Barrad), 5-99-030 (Johnson); 5-99-031 (Lady, Jr./Zlatko/Woods), 5-99-032 (Yacoel et al), 5-99-108 (Pineda), 5-99-471 (Maginot); 5-99-472 (Bjork); 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)



Tetra Tech
INCORPORATED

Site Vicinity Map
Huntington Harbour Bulkhead Repair

TC 10200
FIGURE 1

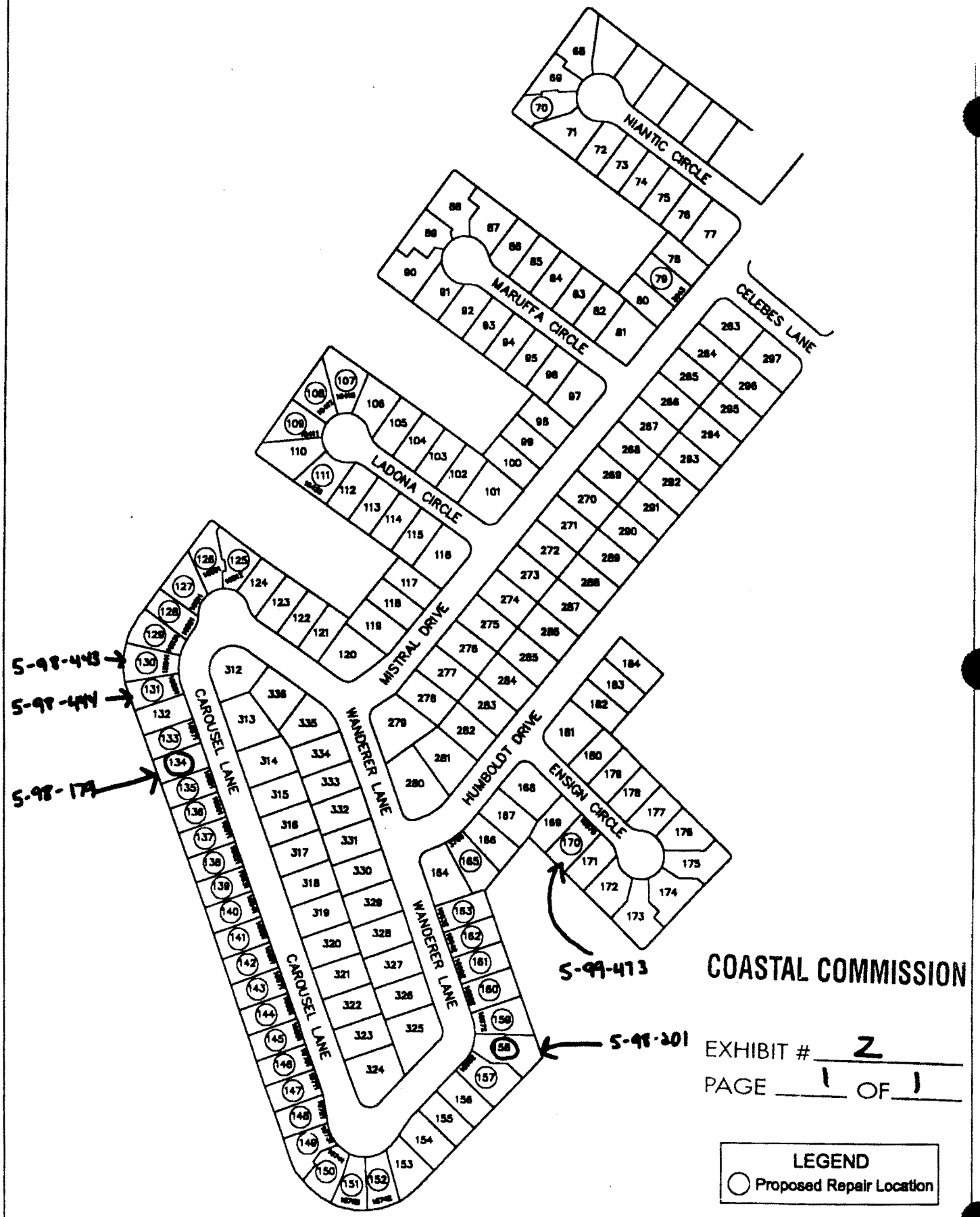
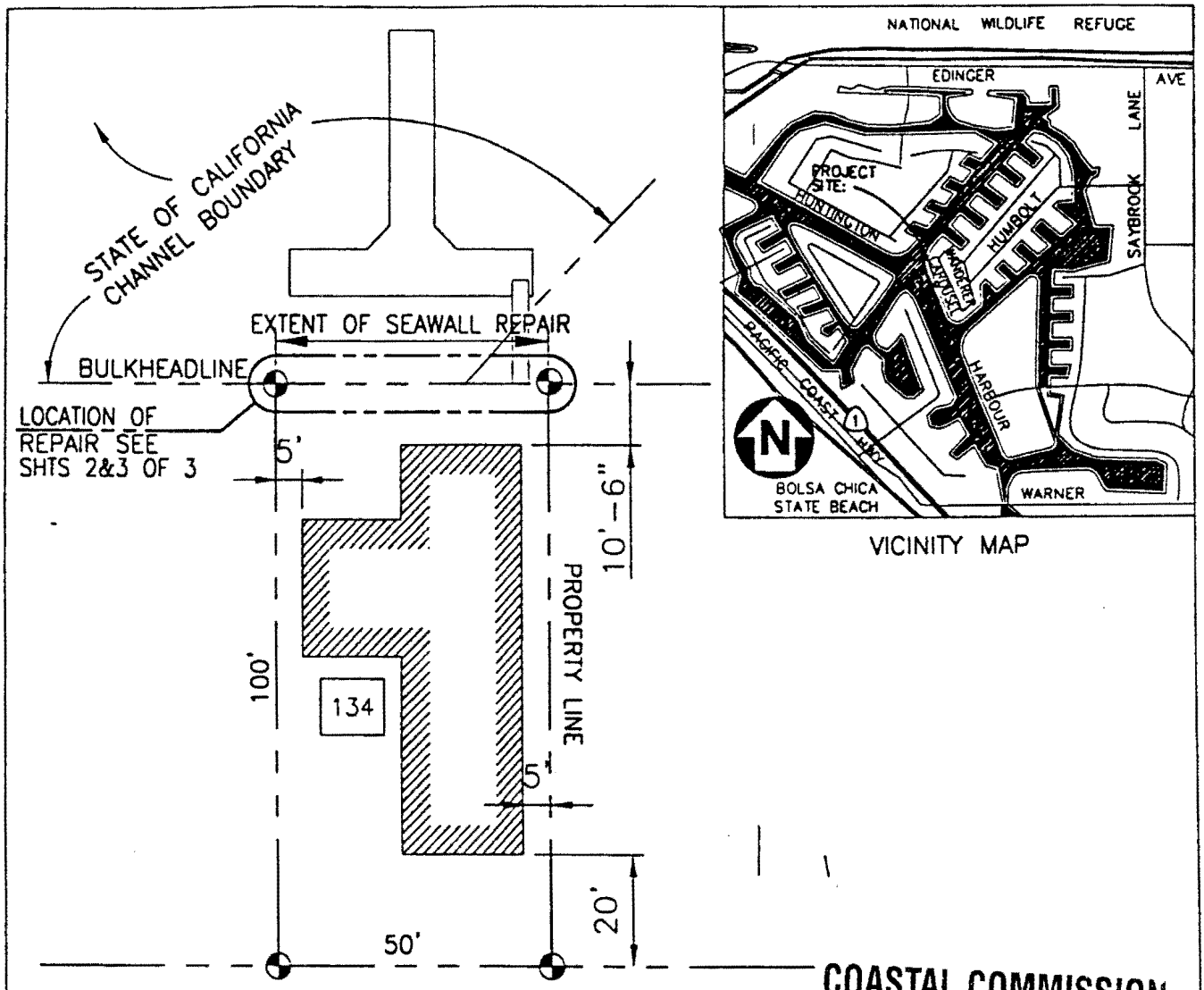


Figure 2. Location of Properties with Proposed Repairs, Humboldt Island, Huntington Beach, California, July 2000.



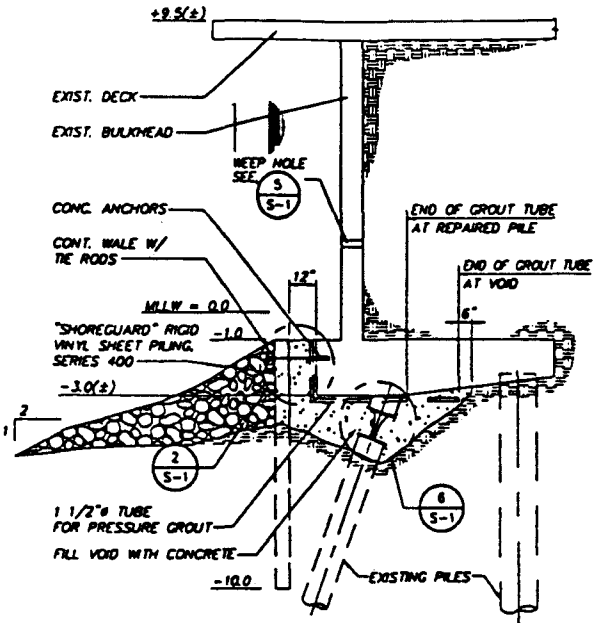
COASTAL COMMISSION

EXHIBIT # 3

PAGE 1 OF 3

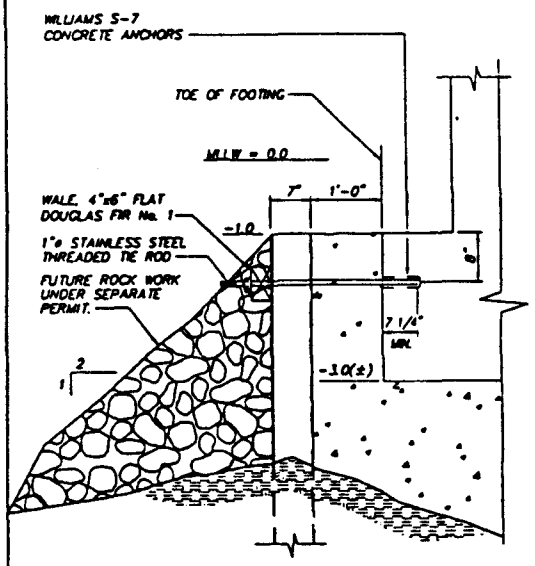
CASH & ASSOCIATES ENGINEERING AND ARCHITECTURE
5772 BOLSA AVENUE, SUITE 100
HUNTINGTON BEACH, CA. 92649
(213) 426-6145
(714) 895-2072

PURPOSE: Repair Existing Seawall Datum: MLLW = 0 Adj. Property Owners: 1. See Attached List 2. 3.	PLAN VIEW Peter & Valerie Kompaniez 16581 Carousel Lane Huntington Beach, CA 92649	Proposed Repair of Existing Seawall IN: Huntington Harbor AT: Huntington Beach County of O.C. State: CA. Application By: Peter Kompaniez Sheet 1 of 5 Date: 5/1/98



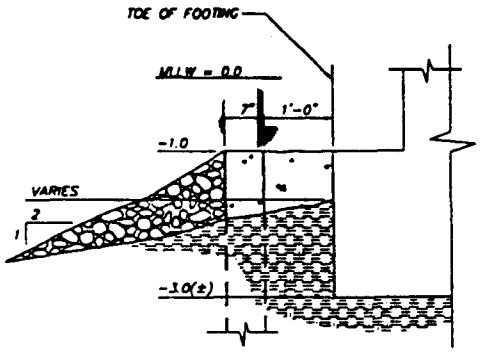
SECTION AT TIMBER PILE REPAIR (1 S-1)

SCALE: 3/16"=1'-0"



SECTION AT WALE: CASE I (2 S-1)

SCALE: 1/2"=1'-0" (FOUNDATION UNDERMINED)



SECTION AT SHEET PILE (WITHOUT WALE) (4 S-1)

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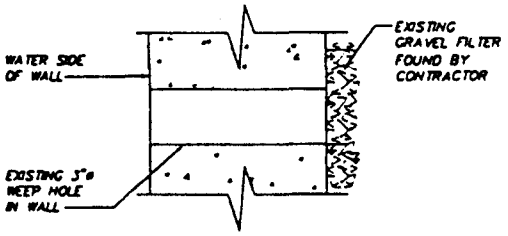


WEEP HOLE DETAIL (5 S-1)

SCALE: 1 1/2"=1'-0"

CASH & ASSOCIATES ENGINEERING AND ARCHITECTURE
5772 BOLSA AVENUE, SUITE 100
HUNTINGTON BEACH, CA. 92649
(213) 428-6145
(714) 895-2072

PURPOSE: Repair Existing Seawall

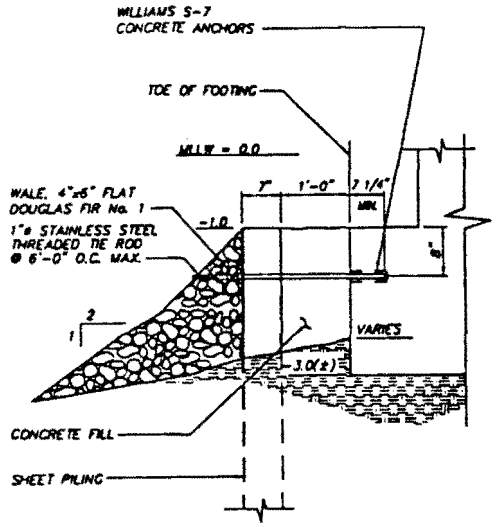
Datum: MLLW = 0
Adj. Property Owners:
1. See Attached List
2.
3.

PLAN VIEW

Peter & Valerie Komponiez
16581 Carousel Lane
Huntington Beach, CA 92649

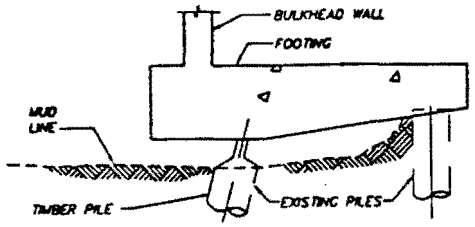
Proposed Repair of Existing Seawall

IN: Huntington Harbor
AT: Huntington Beach
County of O.C. State: CA.
Application By: Peter Komponiez
Sheet 2 of 5 Date: 5/1/98



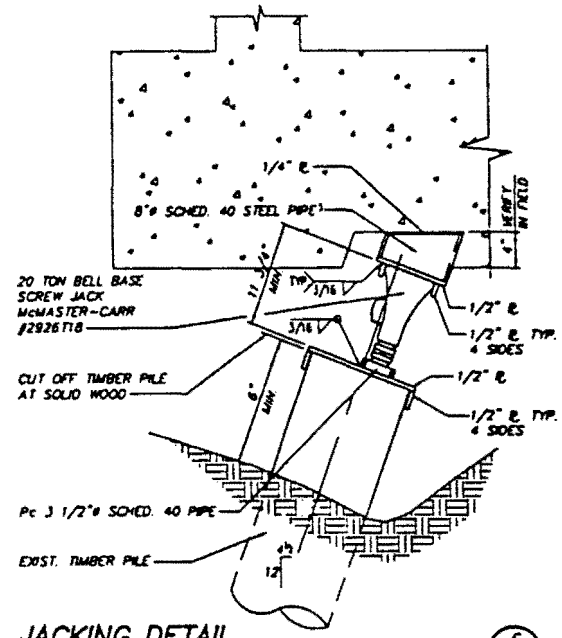
SECTION AT WALE: CASE II (3 / S-1)

SCALE: 1/2"=1'-0" (FOUNDATION NOT UNDERMINED)



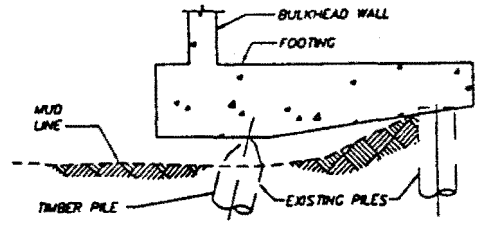
SECTION CASE III: 80% PILE TOP DETERIORATION (7 / S-1)

SCALE: NTS



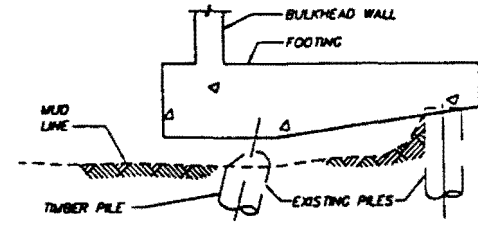
JACKING DETAIL (6 / S-1)

SCALE: 3/4"=1'-0"



SECTION CASE II: 90% PILE TOP DETERIORATION (8 / S-1)

SCALE: NTS



SECTION CASE I: 100% PILE TOP DETERIORATION (9 / S-1)

SCALE: NTS

COASTAL COMMISSION

CASH & ASSOCIATES ENGINEERING AND ARCHITECTURE
5772 BOLSA AVENUE, SUITE 100
HUNTINGTON BEACH, CA. 92649
(213) 426-6145
(714) 895-2072

EXHIBIT # 3

PAGE 3 OF 31

PURPOSE: Repair Existing Seawall	SECTION VIEW	Proposed Repair of Existing Seawall
Datum: MLLW = 0 Adj. Property Owners: 1. See Attached List 2. 3.	Peter & Valerie Komponiez 16581 Carousel Lane Huntington Beach, CA 92649	IN: Huntington Harbor AT: Huntington Beach County of O.C. State: CA. Application By: Peter Komponiez Sheet 3 of 5 Date: 5/1/98

A. GENERAL CONDITIONS & SPECIFICATIONS

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS BEFORE STARTING WORK. THE OWNER OR ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCY.
2. OWNER SHALL BEAR NO RESPONSIBILITY FOR EXPENSES INCURRED AS A RESULT OF FAILURE ON THE PART OF THE CONTRACTOR TO VERIFY DIMENSIONS AND/OR VERIFIABLE SITE CONDITIONS PRIOR TO BEGINNING WORK. THE OWNER SHALL BEAR NO RESPONSIBILITY FOR FAILURE ON THE PART OF THE CONTRACTOR TO COORDINATE ACTIVITIES OF CONTRACTOR'S EMPLOYEES OR SUBCONTRACTORS.
3. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER THESE GENERAL

B. NOTES.

1. DIMENSIONS TAKE PRECEDENCE OVER SCALE.
2. ALL DEBRIS AND TRASH SHALL BE REMOVED FROM THE SITE.
3. IF CONFLICTS APPEAR BETWEEN PLANS AND SPECIFICATIONS, THE CONTRACTOR(S) SHALL ASSUME THE MORE EXPENSIVE SOLUTION UNLESS DIRECTED OTHERWISE BY THE OWNER.
4. ALL PERMITS SHALL BE OBTAINED AND PAID BY THE CONTRACTOR. PRIOR TO BEGINNING ANY WORK.
5. THE CONTRACTOR SHALL, AT ALL TIMES, COMPLY WITH ALL OSHA AND STATE SAFETY ORDERS.
6. ALL MATERIALS AND WORK SHALL CONFORM TO THE UNIFORM BUILDING CODE, (UBC), 1994 EDITION.
7. INSTALL - SHALL MEAN TO FURNISH THE ITEM SPECIFIED, TRANSPORT TO THE SITE AND INSTALL IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND THESE DRAWINGS.

C. REPAIR EXISTING TIMBER PILES

1. JACKS SHALL BE MCMASTER-CARR NO. 2926T18 BELL BASE SCREW JACKS NO. 2926T18, OR EQUAL, WITH A CAPACITY OF 20 TONS.
2. STEEL PLATES SHALL BE ASTM A36.
3. STEEL PIPE SHALL BE ASTM A53, GRADE B.
4. WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1-94.
5. AFTER PLACING JACKS AND SHIMS, JACKS SHALL BE ADJUSTED TO THE HIGHEST CAPACITY POSSIBLE, BUT NOT EXCEEDING 20 TONS, AT HIGH TIDE.
6. ALL WELDING TO BE PERFORMED BY AN L.A. CERTIFIED WELDER. PROVIDE EVIDENCE OF WELDERS CERTIFICATIONS.

D. SHEET PILE CUT-OFF WALL

1. SHEET PILING SHALL BE SHORE GUARD RIGID VINYL SHEET PILING BY MATERIALS INTERNATIONAL, ATLANTA, GEORGIA, (800) 256-8857, SIZE AND LENGTH AS SHOWN ON THE DRAWINGS. SHEET PILING SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. WHEN THE FIRST SHEET PILE IS READY TO BE INSTALLED, NOTIFY AT HUNTINGTON BEACH PUBLIC WORKS. @ (714)536-5431 JOHN VON HOLLEY.
2. TIE BACKS SHALL BE WILLIAMS S-7 CONCRETE ANCHORS INSTALLED IN THE EXISTING BULKHEAD WALL FOOTING WITH THREADED TIE RODS CONNECTED TO THE WALE AT THE SHEET PILE. TIE RODS AND WASHERS SHALL BE TYPE 316 STAINLESS STEEL, SIZES AS SHOWN ON THE DRAWINGS. TIE-BACKS SHALL BE LEFT IN PLACE AFTER GROUTING.
3. WALE SHALL BE DOUGLAS FIR NO.1, SIZE AS SHOWN ON THE DRAWINGS. WALE SHALL BE CUT TO LENGTH, DRILLED FOR TIE RODS AND COATED WITH POLYURETHANE BASE COAT ELASTO-DECK 5001 AND TOP COAT ELASTO-GLAZE 6001 AL; BOTH MATERIALS BY PACIFIC POLYMERS AND SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. DAMAGED COATING SHALL BE TOUCHED-UP PER THE MANUFACTURER'S RECOMMENDATIONS.
4. VINYL SHEET PILING IS USED FOR FORM WORK ONLY. NO SPECIAL INSPECTION REQUIRED.

CASH & ASSOCIATES ENGINEERING AND ARCHITECTURE
5772 BOLSA AVENUE, SUITE 100
HUNTINGTON BEACH, CA. 92649
(213) 426-6145
(714) 895-2072

PURPOSE: Repair Existing Seawall	PLAN VIEW	Proposed Repair of Existing Seawall
1. Datum: MLLW = 0 Adj. Property Owners: 1. See Attached List 2. 3.	Peter & Valerie Kompaniez 16581 Carousel Lane Huntington Beach, CA 92649	IN: Huntington Harbor AT: Huntington Beach County of O.C. State: CA. Application By: Peter Kompaniez Sheet 4 of 5 Date: 5/1/96

GENERAL CONDITIONS (CONTINUED)

E. CONCRETE
1. READY MIX CONCRETE SHALL CONFORM TO ASTM C94, PORTLAND CEMENT ASTM C150 TYPE V. CONCRETE IS INTENDED TO FILL THE VOID UNDERWATER BENEATH THE BULKHEAD WALL FOOTING. CONCRETE MIX SHALL BE DESIGNED AND FURNISHED TO FLOW INTO THE VOID. DESIGN IS BASED ON 2000 PSI COMPRESSIVE STRENGTH AT 28 DAYS, MAXIMUM BUT CONTRACTOR SHALL PROVIDE CONCRETE WITH 3,000 PSI COMPRESSIVE STRENGTH AND SLUMP SHALL BE 7 INCHES. NO SPECIAL INSPECTION REQUIRED. MIX DESIGN SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW BEFORE THE CONCRETE IS FURNISHED. CONCRETE SHALL BE PLACED BY PUMPING AND CARE SHALL BE TAKEN TO MAINTAIN THE END OF THE PIPE OR HOSE IN THE CONCRETE MASS AT ALL TIMES AFTER THE PLACING IS STARTED TO PREVENT SEGREGATION OF THE CONCRETE MATERIALS. TREMLE CONCRETE PLACEMENT METHOD SHALL BE USED.
2. THE SURFACE OF CONCRETE AT THE TOP OF THE SHEET PILE CUT-OFF WALL SHALL BE LEVELED WITH A WOOD OR SIMILAR FLOAT.
3. CONTRACTOR TO HIRE A CERTIFIED CONCRETE TESTING LAB TO TAKE 3 CYLINDERS SAMPLES PER 10 CU AND TEST FOR COMPRESSION @ 7 DAYS, 14 DAYS, & 28 DAYS.

F. WEEP HOLES
1. CONTRACTOR SHALL LOCATE EXISTING WEEP HOLES IN BULKHEAD WALL AND REMOVE THE MARINE GROWTH IN AND AROUND THE WEEP HOLES. CONTRACTOR SHALL CLEANOUT THE WEEP HOLES FROM THE WATER SIDE TO THE EARTH SIDE OF THE BULKHEAD WALL.

G. PRESSURE GROUT
AFTER GROUT HAS SET, GROUT SHALL BE PUMPED UNDER PRESSURE THROUGH 1 1/2"ø PVC PIPE (ELECTRICAL CONDUIT, SCHED. 40) TO FILL ANY REMAINING VOIDS.

H. INSPECTION
1. C&A WILL REVIEW & EVALUATE THE COMPLETED CONSTRUCTION BASED ON PERIODIC SITE VISITS @ CRITICAL CONSTRUCTION STAGES & BASED ON DIVE REPORTS BY ENGINEERS CERTIFIED TO OPERATE IN THE STATE OF CALIFORNIA.

I. DIVER INSPECTION
1. DIVER WILL INSPECT WORK WHEN:
ONCE TIMBER PILES HAVE BEEN EXPOSED. FOR OBSERVATION.
ONCE STEEL JACKS & VINYL SHEET PILES HAVE BEEN INSTALLED, BUT PRIOR TO PUMPING GROUT.
AFTER GROUTING IS COMPLETE.
2. APPROVED DIVER
DIVE INSPECTOR: KIRK PYSHER, PYSHER ENGINEERING & ANALYSIS; 714-536-6900 RCE# C46118 OR
DIVE INSPECTOR: WILLIAM S. SWIGART, CASH & ASSOCIATES; 714-895-2072 RCE# C30918

J. MONITORING AND CONTINGENCY PLAN
CRACK CONTROL MONITORING DEVICES (MINIMUM 3) WILL BE INSTALLED BY THE CONTRACTOR @ LOCATIONS SELECTED BY THE ENGINEER. THESE DEVICES WILL BE MONITORED BY THE CONTRACTOR DAILY. IF MOVEMENT IS DETECTED, CONTRACTOR WILL IMMEDIATELY INFORM THE ENGINEER. AS A CONTINGENCY PLAN, THE CONTRACTOR SHALL HAVE TWO (2) CHANCE ANCHORS, MODEL #C110-0235 SS175 WITH ENOUGH ROD EXTENSIONS TO INSTALL A 30FT LONG EARTH ANCHOR. ALL EQUIPMENT NEEDED FOR "CHANCE" ANCHOR INSTALLATION SHALL BE ONSITE WITH ACCOMPANYING CERTIFICATIONS THAT EQUIPMENT GAGES HAVE BEEN PROPERLY CALIBRATED.

K. CONSTRUCTION SEQUENCING
1. DIVER TO INSPECT EXISTING PILES CONDITION AND RECOMMEND SEQUENCE OF REPAIR.
2. NO MORE THAN ONE PILE AT A TIME SHALL BE CUT AND REPAIRED BY INSTALLING STEEL JACKS BEFORE CONTINUING TO THE NEXT PILE.
3. VINYL SHEET PILES TO BE INSTALLED. ONCE ALL PILES WITHIN A GIVEN SEGMENT OF WALL HAVE BEEN REPAIRED.
4. WALES AND TIE BACK ANCHORS TO BE INSTALLED.
5. INSTALL GROUTING TUBES.
6. INSTALL ALL PUMP GROUT.

CASH ASSOCIATES ENGINEERING AND ARCHITECTURE
5772 BOLSA AVENUE, SUITE 100
& HUNTINGTON BEACH, CA. 92649
(213) 426-6145
(714) 895-2072

PURPOSE: Repair Existing Seawall 1. Datum: MLLW = 0 Adj. Property Owners: 1. See Attached List 2. 3.	PLAN VIEW Peter & Valerie Kompaniez 16581 Carousel Lane Huntington Beach, CA 92649	Proposed Repair of Existing Seawall IN: Huntington Harbor AT: Huntington Beach County of O.C. State: CA. Application By: Peter Kompaniez Sheet 5 of 5 Date: 5/1/98

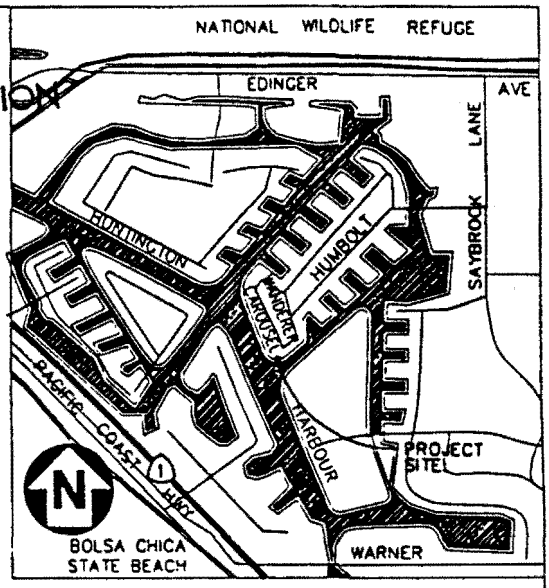
RECEIVED
JUL 02 1998
CALIFORNIA
COASTAL COMMISSION

HUNTINGTON BEACH
DEPT OF COMMUNITY DEVELOPMENT
-APPROVED-
FOR DISCIPLINES SIGNED BELOW

	SIGNED	DATE
PLANNING	KN	6/1/98
BUILDING	MS	6-2-98
STRUCTURAL		
ELECTRICAL		
MECHANICAL		

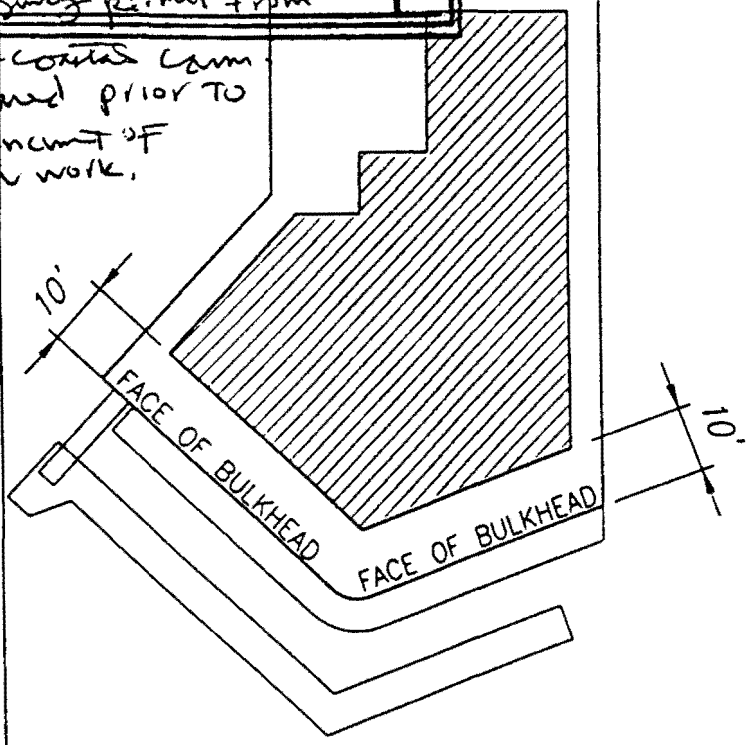
ADDRESS 16682 WANDERER LN
B.P. B061797 TYPE V-N
GROUP M OCC LOAD NA UBC ED. 97
MISC. Bulkhead repair

Emergency permit from Calif coastal comm required prior to commencmt of repair work.



VICINITY MAP

Wanderer Lane



REGISTERED PROFESSIONAL ENGINEER
RANDY HOWARD MASON
C 30661
CIVIL
STATE OF CALIFORNIA

3.31.00

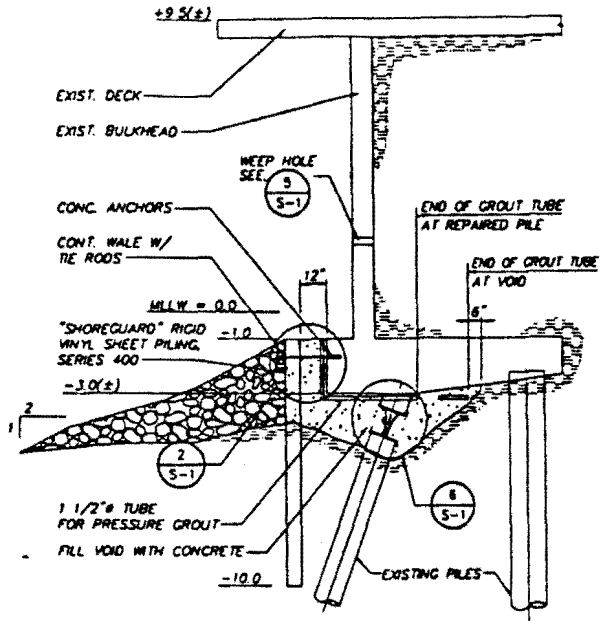
Legal Description
Tract 5481 Lot 158

5-28-98
COASTAL COMMISSION

CASH & ASSOCIATES ENGINEERING AND ARCHITECTURE
6772 BOLSA AVENUE, SUITE 100
HUNTINGTON BEACH, CA 92648
(714) 840-2072

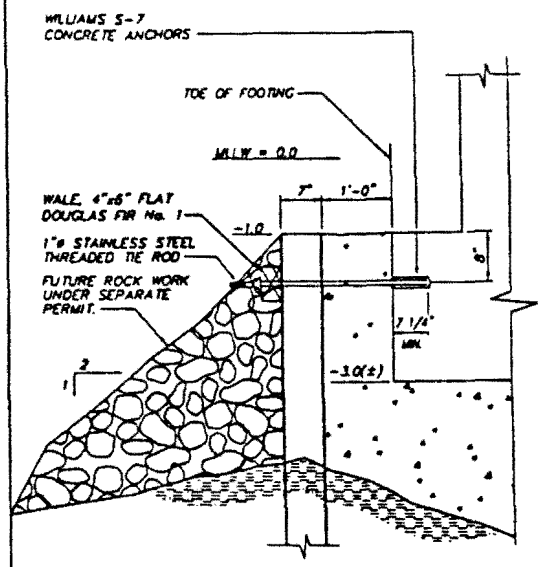
EXHIBIT # 3
PAGE 6 OF 31

PURPOSE: Repair Existing Seawall	PLAN VIEW	Proposed Repair of Existing Seawall
Datum: MLLW = 0 Adj. Property Owners: 1. See Attached List 2. 3.	John O. Anderson 16682 Wanderer Lane Huntington Beach, CA 92649	IN: Huntington Harbor AT: Huntington Beach County of O.C. State: CA. Application By: John O. Anderson Sheet 1 of 5 Date: 5/1/98



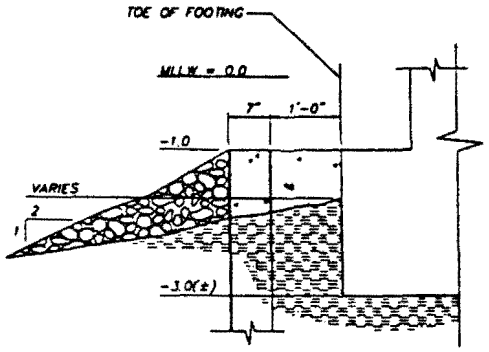
SECTION AT TIMBER PILE REPAIR (1 S-1)

SCALE: 3/16"=1'-0"



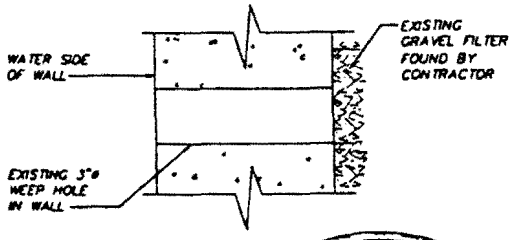
SECTION AT WALE: CASE I (2 S-1)

SCALE: 1/2"=1'-0" (FOUNDATION UNDERMINED)



SECTION AT SHEET PILE (WITHOUT WALE) (4 S-1)

SCALE: 1/2"=1'-0"



WEEP HOLE DETAIL (5 S-1)

SCALE: 1 1/2"=1'-0"

COASTAL COMMISSION

EXHIBIT # 3

PAGE 7 OF 31

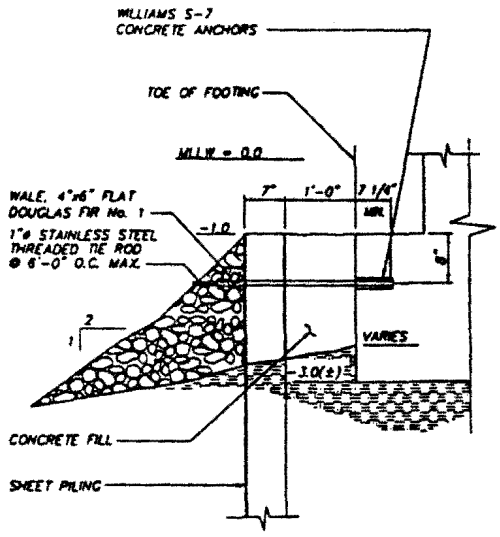
REGISTERED PROFESSIONAL ENGINEER RANDY HOWARD MASON C 30661 CIVIL STATE OF CALIFORNIA

CASH & ASSOCIATES ENGINEERING AND ARCHITECTURE
5772 BOLSA AVENUE, SUITE 100
HUNTINGTON BEACH, CA. 92649
(213) 426-6145
(714) 895-2072

PURPOSE: Repair Existing Seawall Datum: MLLW = 0 Adj. Property Owners: 1. See Attached List 2. 3.	PLAN VIEW John O. Anderson 16682 Wanderer Lane Huntington Beach, CA 92649	Proposed Repair of Existing Seawall 3.31.00 IN: Huntington Harbor AT: Huntington Beach County of O.C. State: CA. Application By: John O. Anderson Sheet 2 of 5 Date: 5/1/98

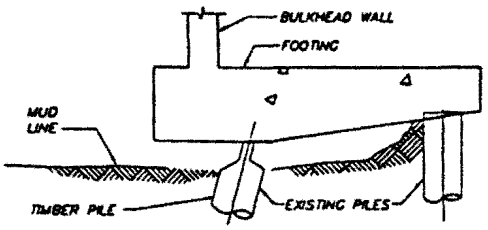
EXHIBIT # 3

PAGE 8 OF 31



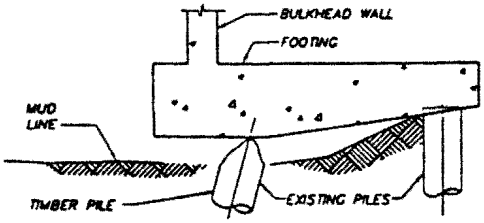
SECTION AT WALE: CASE II (3 / S-1)

SCALE: 1/2"=1'-0" (FOUNDATION NOT UNDERMINED)



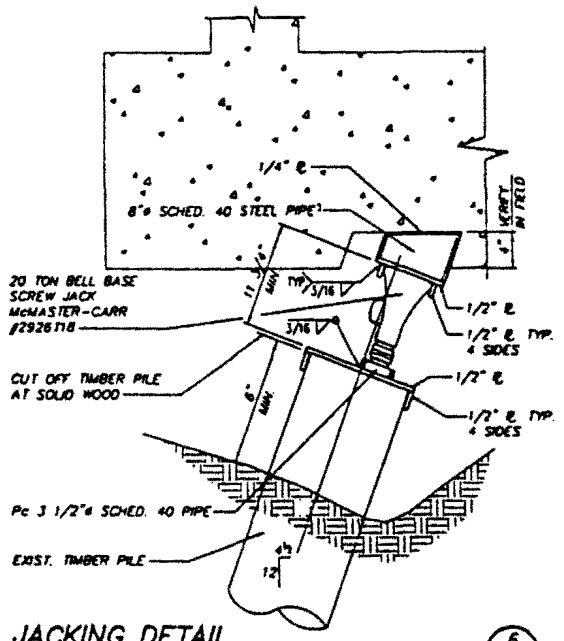
SECTION CASE III: 60% PILE TOP DETERIORATION (7 / S-1)

SCALE: NTS



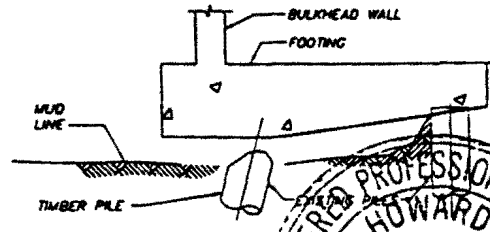
SECTION CASE II: 90% PILE TOP DETERIORATION (8 / S-1)

SCALE: NTS



JACKING DETAIL (6 / S-1)

SCALE: 3/4"=1'-0"



SECTION CASE I: 100% PILE TOP DETERIORATION

SCALE: NTS

REGISTERED PROFESSIONAL ENGINEER
RANDY HOWARD MASON
C 30661
CIVIL
STATE OF CALIFORNIA

3.31.00

CASH & ASSOCIATES ENGINEERING AND ARCHITECTURE
5772 POLSA AVENUE, SUITE 100
HUNTINGTON BEACH, CA. 92649
(213) 426-6145
(714) 895-2072

PURPOSE: Repair Existing Seawall	SECTION VIEW	Proposed Repair of Existing Seawall
Datum: MLLW = 0 Adj. Property Owners: 1. See Attached List 2. 3.	John O. Anderson 16682 Wanderer Lane Huntington Beach, CA 92649	IN: Huntington Harbor AT: Huntington Beach County of O.C. State: CA. Application By: John O. Anderson Sheet 3 of 5 Date: 5/1/98

A. GENERAL CONDITIONS & SPECIFICATIONS

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS BEFORE STARTING WORK. THE OWNER OR ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCY.
2. OWNER SHALL BEAR NO RESPONSIBILITY FOR EXPENSES INCURRED AS A RESULT OF FAILURE ON THE PART OF THE CONTRACTOR TO VERIFY DIMENSIONS AND/OR VERIFIABLE SITE CONDITIONS PRIOR TO BEGINNING WORK. THE OWNER SHALL BEAR NO RESPONSIBILITY FOR FAILURE ON THE PART OF THE CONTRACTOR TO COORDINATE ACTIVITIES OF CONTRACTOR'S EMPLOYEES OR SUBCONTRACTORS.
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B. NOTES.

1. DIMENSIONS TAKE PRECEDENCE OVER SCALE.
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3. IF CONFLICTS APPEAR BETWEEN PLANS AND SPECIFICATIONS, THE CONTRACTOR(S) SHALL ASSUME THE MORE EXPENSIVE SOLUTION UNLESS DIRECTED OTHERWISE BY THE OWNER.
4. ALL PERMITS SHALL BE OBTAINED AND PAID BY THE CONTRACTOR. PRIOR TO BEGINNING ANY WORK.
5. THE CONTRACTOR SHALL, AT ALL TIMES, COMPLY WITH ALL OSHA AND STATE SAFETY ORDERS.
6. ALL MATERIALS AND WORK SHALL CONFORM TO THE UNIFORM BUILDING CODE, (UBC), 1994 EDITION.
7. INSTALL - SHALL MEAN TO FURNISH THE ITEM SPECIFIED, TRANSPORT TO THE SITE AND INSTALL IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND THESE DRAWINGS.

C. REPAIR EXISTING TIMBER PILES

1. JACKS SHALL BE MCMASTER-CARR NO. 2926T18 BELL BASE SCREW JACKS NO. 2926T18, OR EQUAL, WITH A CAPACITY OF 20 TONS.
2. STEEL PLATES SHALL BE ASTM A36.
3. STEEL PIPE SHALL BE ASTM A53, GRADE B.
4. WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1-94.
5. AFTER PLACING JACKS AND SHIMS, JACKS SHALL BE ADJUSTED TO THE HIGHEST CAPACITY POSSIBLE, BUT NOT EXCEEDING 20 TONS, AT HIGH TIDE.
6. ALL WELDING TO BE PERFORMED BY AN L.A. CERTIFIED WELDER. PROVIDE EVIDENCE OF WELDERS CERTIFICATIONS.

D. SHEET PILE CUT-OFF WALL

1. SHEET PILING SHALL BE SHORE GUARD RIGID VINYL SHEET PILING BY MATERIALS INTERNATIONAL, ATLANTA, GEORGIA, (800) 256-8857, SIZE AND LENGTH AS SHOWN ON THE DRAWINGS. SHEET PILING SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. WHEN THE FIRST SHEET PILE IS READY TO BE INSTALLED, NOTIFY AT HUNTINGTON BEACH PUBLIC WORKS. @ (714)536-5431 JOHN VON HOLLEY.
2. TIE BACKS SHALL BE WILLIAMS S-7 CONCRETE ANCHORS INSTALLED IN THE EXISTING BULKHEAD WALL FOOTING WITH THREADED TIE RODS CONNECTED TO THE WALE AT THE SHEET PILE. TIE RODS AND WASHERS SHALL BE TYPE 316 STAINLESS STEEL, SIZES AS SHOWN ON THE DRAWINGS. TIE-BACKS SHALL BE LEFT IN PLACE AFTER GROUTING.
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4. VINYL SHEET PILING IS USED FOR FORM WORK ONLY. NO SPECIAL INSPECTION REQUIRED.

REGISTERED PROFESSIONAL ENGINEER
RANDY HOWARD MASON
C 30661
CIVIL
STATE OF CALIFORNIA

CASH & ASSOCIATES ENGINEERING & PLANNING
5772 PACIFIC AVENUE, SUITE 100
HUNTINGTON BEACH, CA. 92649
(213) 426-6145
(714) 895-2072

EXHIBIT # 3
PAGE 9 OF 31

PURPOSE: Repair Existing Seawall

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

PLAN VIEW

John O. Anderson
16682 Wanderer Lane
Huntington Beach, CA 92649

Proposed Repair of Existing Seawall 331.00

IN: Huntington Harbor
AT: Huntington Beach
County of O.C. State: CA.
Application By: John O. Anderson
Sheet 4 of 5 Date: 5/1/98

GENERAL CONDITIONS (CONTINUED)

E. CONCRETE
1. READY MIX CONCRETE SHALL CONFORM TO ASTM C94, PORTLAND CEMENT ASTM C150 TYPE V. CONCRETE IS INTENDED TO FILL THE VOID UNDERWATER BENEATH THE BULKHEAD WALL FOOTING. CONCRETE MIX SHALL BE DESIGNED AND FURNISHED TO FLOW INTO THE VOID. DESIGN IS BASED ON 2000 PSI COMPRESSIVE STRENGTH AT 28 DAYS, MAXIMUM BUT CONTRACTOR SHALL PROVIDE CONCRETE WITH 3,000 PSI COMPRESSIVE STRENGTH AND SLUMP SHALL BE 7 INCHES. NO SPECIAL INSPECTION REQUIRED. MIX DESIGN SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW BEFORE THE CONCRETE IS FURNISHED. CONCRETE SHALL BE PLACED BY PUMPING AND CARE SHALL BE TAKEN TO MAINTAIN THE END OF THE PIPE OR HOSE IN THE CONCRETE MASS AT ALL TIMES AFTER THE PLACING IS STARTED TO PREVENT SEGREGATION OF THE CONCRETE MATERIALS. TREMLE CONCRETE PLACEMENT METHOD SHALL BE USED.
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3. CONTRACTOR TO HIRE A CERTIFIED CONCRETE TESTING LAB TO TAKE 3 CYLINDERS SAMPLES PER 10 CU AND TEST FOR COMPRESSION @ 7 DAYS, 14 DAYS, & 28 DAYS.

F. WEEP HOLES
1. CONTRACTOR SHALL LOCATE EXISTING WEEP HOLES IN BULKHEAD WALL AND REMOVE THE MARINE GROWTH IN AND AROUND THE WEEP HOLES. CONTRACTOR SHALL CLEANOUT THE WEEP HOLES FROM THE WATER SIDE TO THE EARTH SIDE OF THE BULKHEAD WALL.

G. PRESSURE GROUT
AFTER GROUT HAS SET, GROUT SHALL BE PUMPED UNDER PRESSURE THROUGH 1 1/2"ø PVC PIPE (ELECTRICAL CONDUIT, SCHED. 40) TO FILL ANY REMAINING VOIDS.

H. INSPECTION
1. C&A WILL REVIEW & EVALUATE THE COMPLETED CONSTRUCTION BASED ON PERIODIC SITE VISITS @ CRITICAL CONSTRUCTION STAGES & BASED ON DIVE REPORTS BY ENGINEERS CERTIFIED TO OPERATE IN THE STATE OF CALIFORNIA.

I. DIVER INSPECTION
1. DIVER WILL INSPECT WORK WHEN:
ONCE TIMBER PILES HAVE BEEN EXPOSED. FOR OBSERVATION.
ONCE STEEL JACKS & VINYL SHEET PILES HAVE BEEN INSTALLED, BUT PRIOR TO PUMPING GROUT.
AFTER GROUTING IS COMPLETE.
2. APPROVED DIVER
DIVE INSPECTOR: KIRK PYSHER, PYSHER ENGINEERING & ANALYSIS; 714-536-6900 RCE# C46118 OR
DIVE INSPECTOR: WILLIAM S. SWIGART, CASH & ASSOCIATES; 714-895-2072 RCE# C30918

J. MONITORING AND CONTINGENCY PLAN
CRACK CONTROL MONITORING DEVICES (MINIMUM 3) WILL BE INSTALLED BY THE CONTRACTOR @ LOCATIONS SELECTED BY THE ENGINEER. THESE DEVICES WILL BE MONITORED BY THE CONTRACTOR DAILY. IF MOVEMENT IS DETECTED, CONTRACTOR WILL IMMEDIATELY INFORM THE ENGINEER. AS A CONTINGENCY PLAN, THE CONTRACTOR SHALL HAVE TWO (2) CHANCE ANCHORS, MODEL #C110-0235 SS175 WITH ENOUGH ROD EXTENSIONS TO INSTALL A 30FT LONG EARTH ANCHOR. ALL EQUIPMENT NEEDED FOR "CHANCE" ANCHOR INSTALLATION SHALL BE ONSITE WITH ACCOMPANYING CERTIFICATIONS THAT EQUIPMENT GAGES HAVE BEEN PROPERLY CALIBRATED.

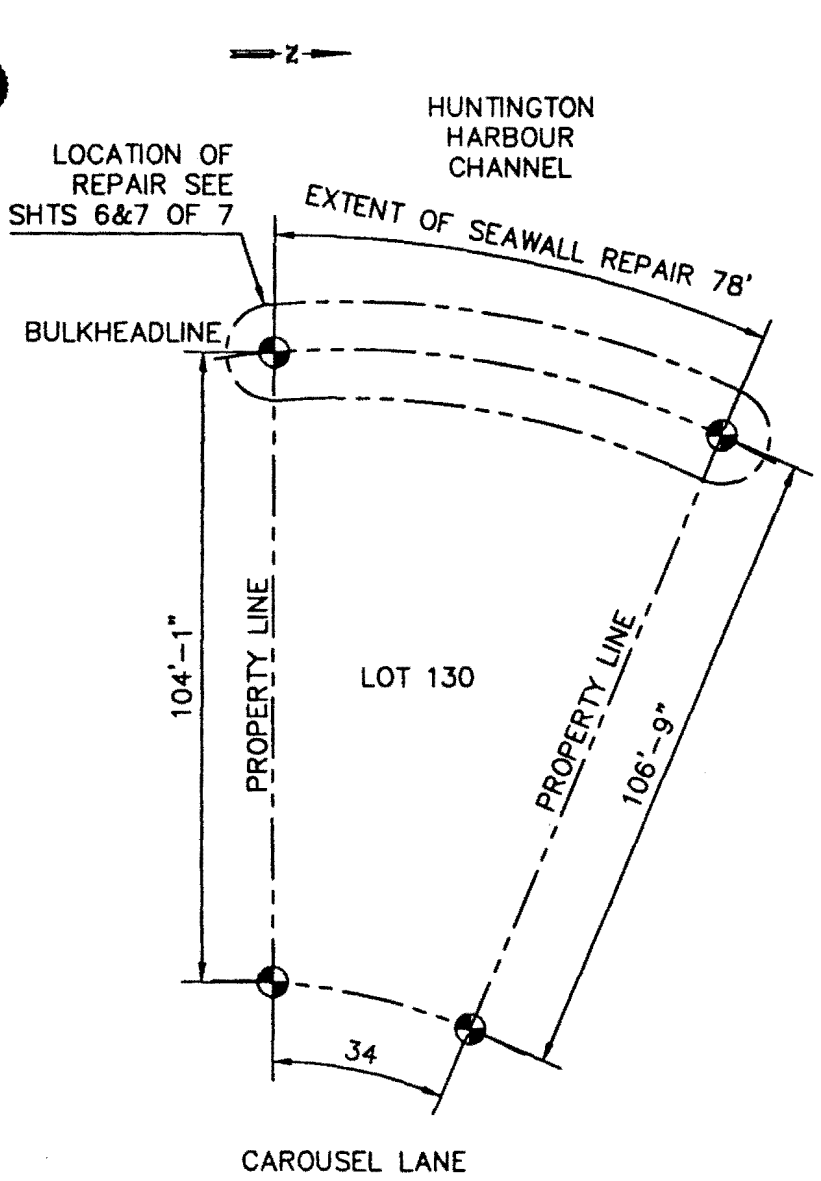
K. CONSTRUCTION SEQUENCING
1. DIVER TO INSPECT EXISTING PILES CONDITION AND RECOMMEND SEQUENCE OF REPAIR.
2. NO MORE THAN ONE PILE AT A TIME SHALL BE CUT AND REPAIRED BY INSTALLING STEEL JACKS BEFORE CONTINUING TO THE NEXT PILE.
3. VINYL SHEET PILES TO BE INSTALLED. ONCE ALL PILES WITHIN A GIVEN SEGMENT OF WALL HAVE BEEN REPAIRED.
4. WALES AND TIE BACK ANCHORS TO BE INSTALLED.
5. INSTALL GROUTING TUBES.
6. INSTALL ALL PUMP GROUT.

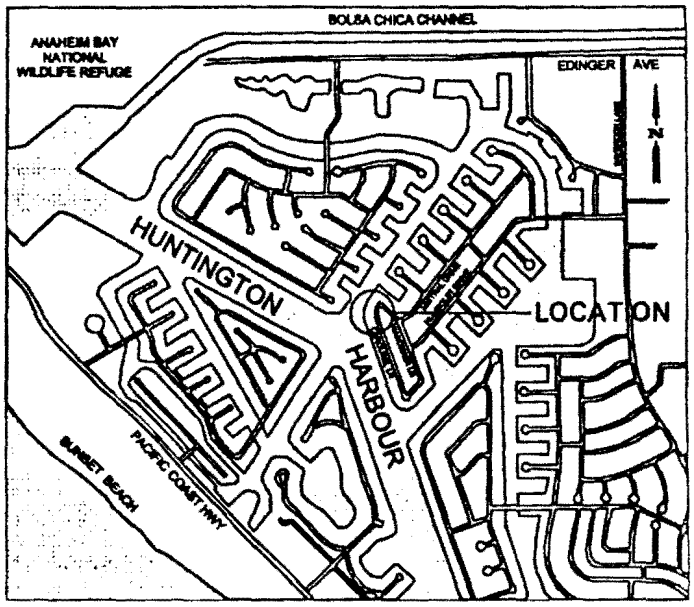
REGISTERED PROFESSIONAL ENGINEER
RANDY HOWARD MASON
C 30661
CIVIL
STATE OF CALIFORNIA

CASH ASSOCIATES ENGINEERING AND ARCHITECTURE
5772 ROLSA AVENUE, SUITE 100
& HUNTINGTON BEACH, CA. 92649
(213) 426-6145
(714) 896-2072

COASTAL COMMISSION

PURPOSE: Repair Existing Seawall Datum: MLLW = 0 Adj. Property Owners: 1. See Attached List 2. 3.	PLAN VIEW EXHIBIT # 3 PAGE 10 OF 31 John O. Anderson 16682 Wanderer Lane Huntington Beach, CA 92649	Proposed Repair of Existing Seawall 3.31.00 IN: Huntington Harbor AT: Huntington Beach County of O.C. State: CA. Application By: John O. Anderson Sheet 5 of 5 Date: 5/1/98





VICINITY MAP

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

NOTE:
ALL DEPTHS BASED ON MLLW = 0.00 FT.

COASTAL COMMISSION

EXHIBIT # 3

PAGE 11 OF 31

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

PURPOSE: Repair Existing Seawall

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

PLAN VIEW

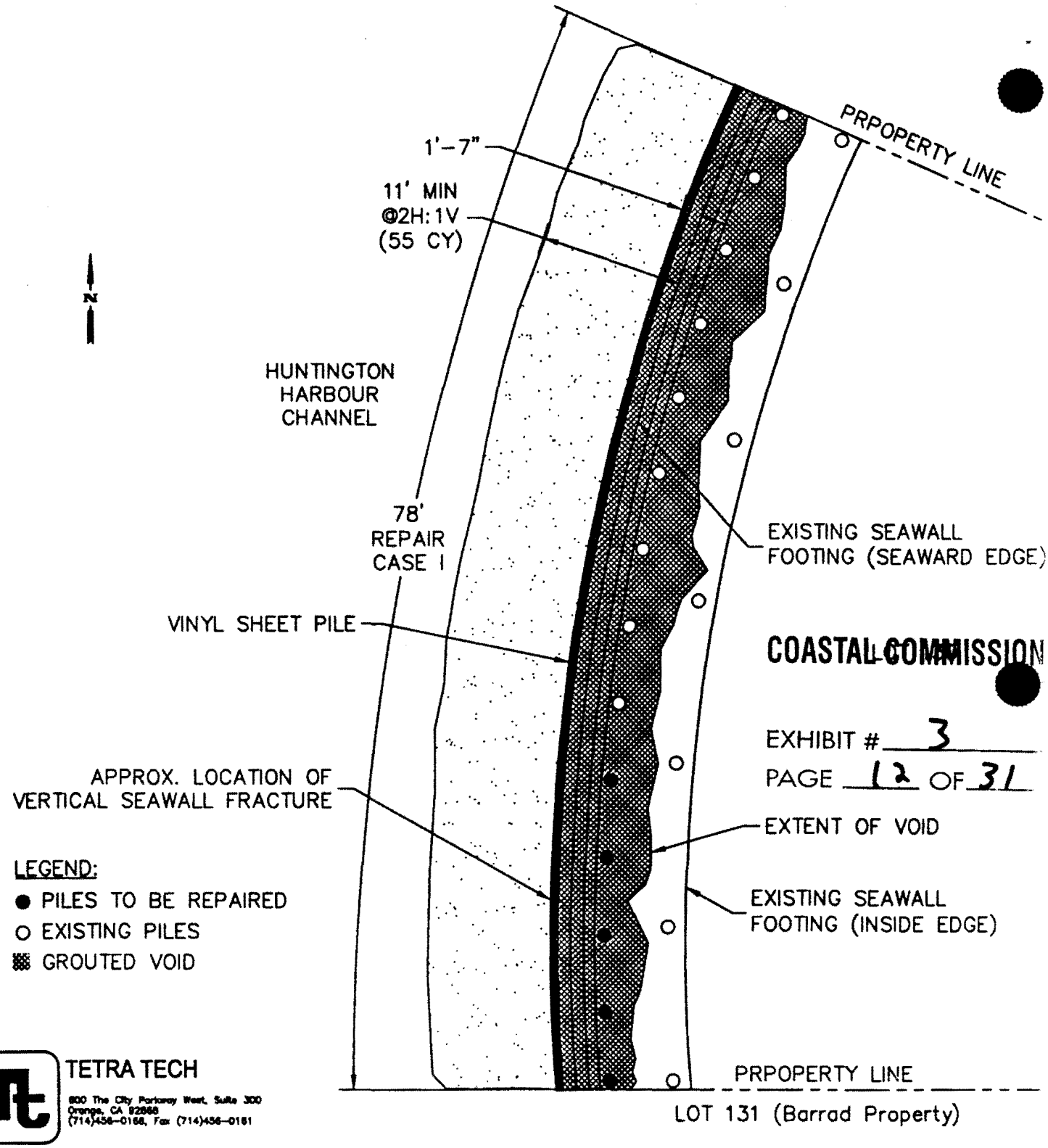
0 32 64

1" = 32'

William & Elizabeth Whyte
16541 Carousel Lane
Huntington Beach, CA 92649

Proposed Repair of Existing Seawall

IN: Huntington Harbour
AT: Huntington Beach
County of Orange State: CA
Application By: William Whyte
Sheet 1 of 7 Date: 2/25/99



COASTAL COMMISSION

EXHIBIT # 3

PAGE 12 OF 31

LEGEND:

- ● PILES TO BE REPAIRED
- O EXISTING PILES
- ▩ GROUTED VOID

TETRA TECH
800 The City Parkway West, Suite 300
Orange, CA 92868
(714)456-0168, 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

3/32" = 1'- 0"

William & Elizabeth Whyte
16541 Carousel Lane
Huntington Beach, CA 92649

Proposed Repair of Existing Seawall

IN: Huntington Harbour
AT: Huntington Beach
County of O.C. State: CA
Application By: William Whyte
Sheet 2 of 7 Date: 2/25/99

1. GENERAL CONDITIONS & EXISTING CONSTRUCTION: Contractor shall verify the existing conditions hown 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. MONITORING & CONTINGENCY PLAN: Prior to start of construction the contractor shall establish monuments at locations selected by the Engineer and Contractor for the purpose of monitoring wall movements during the construction period. These monuments shall be surveyed at least three times per day by the Contractor, and if any wall movement is detected, the Contractor shall immediately inform the Engineer.

t shall be the Contractors responsibility to ensure workers safety and to make every reasonable effort to prevent wall movements during construction of the repairs. After completion of an initial inspection to determine the extent of required repairs, the Contractor shall submit a brief written plan at each property, which details the required repairs and specific precautions to be taken to allow safe completion of the work. For cases where more than one adjacent pile requires repair by jack installation, or in the case where the wall exhibits fracture across its section and where displacement is evident, the Contractor shall provide temporary shoring, bracing, etc. as he deems necessary, to allow safe access to the repair area.

As a contingency plan, the Contractor shall have two helical anchors, Chance model #C110-0235-SS175, on site with enough rod extensions to install a 30 foot long earth anchor which can be installed in the event significant wall movement is noted during the daily monitoring. All equipment needed for CHANCE anchor installation shall also be onsite with accompanying certifications that equipment gauges have properly calibrated.

3. MISCELLANEOUS MATERIALS: Expansion anchors shall be Kwik Bolt II by Hilti Corporation or approved equal. Provide anchors made of Type 316 stainless steel with rod couplings.

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

PURPOSE: Repair Existing Seawall	SPECIFICATIONS	Proposed Repair of Existing Seawall
Datum: MLLW = 0 Adj. Property Owners: 1. See Attached List 2. 3.	William & Elizabeth Whyte 16541 Carousel Lane Huntington Beach, CA 92649	IN: Huntington Harbour AT: Huntington Beach County of O.C. State: CA Application By: William Whyte Sheet 3 of 7 Date: 2/25/99

Threaded rod shall be Type 316 stainless steel threaded rod. Provide rod with thread spacing and of diameter to match rod coupling provided with expansion anchors and with nut and washer at one end.

Provide continuous wales of size indicated on the drawings and fabricated from number 1 grade Douglas fir. Wales shall be cut and drilled and then coated with polyurethane base coat Elasto-Deck 5001 and top coated with Elasto-Glaze 6001 AL, by Pacific Polymers. Apply and touch up damaged areas of wood coatings in accordance with the manufacturers written instructions.

Jacks shall be McMaster-Carr bell base screw jack model no. 2926T18 or approved equal. Jack capacity shall be 20 tons or greater.

4. HIGH PRESSURE GROUT: Provide MasterBuilder EMACO S77 CI grout, mixed and placed in accordance with manufacturer's written instructions. After concrete has hardened, place grout at recommended pressure through 1 ½" diameter schedule 40 PVC grout tubes to fill remaining voids. Grout tubes shall be placed as shown on the drawings where the foundation base slab has been undermined and pile repair is required. Placement of grout shall continue at one location until grout exits grout tubes at adjacent pile repair locations. If adjacent pile locations do not require pile repair, two grout tubes shall be installed and grout shall be placed through one tube until it begins exiting the second tube. Elevation of feed ends of grout tubes shall be maintained above maximum high water level and grout shall be placed to the top of the tube, until grout has hardened.

5. PORTLAND CEMENT CONCRETE: Provide normal weight concrete to fill beneath the foundation base slab with the following properties:

Minimum ultimate compressive strength of 3,000 psi at 28 days.
Portland Cement: ASTM C150, Type V
Aggregate : ASTM C33 (Coarse Aggregate shall conform to requirements of Size #8, Table 2)
Water: Potable
Slump: 7 inches

Materials shall be mixed, transported, fabricated, placed, consolidated, and finished in accordance with the requirements of the current edition of the American Concrete Institute Building Code Requirements for Reinforced Concrete (ACI 318) and (ACI 304R). Specifically, concrete placement shall conform to the requirements of Chapter 8 "Concrete Placed Under Water", utilizing either the direct pumping or tremie methods. Contractor shall take care to maintain the end of the pipe or tremie in the concrete mass at all times during concrete placement.

6. STEEL PLATES & PIPE: Structural steel plates shall conform to the requirements of ASTM A36. Steel pipe shall conform to the requirements of ASTM A53 Type B. All welding shall be performed by welders certified to perform the indicated types of welding and shall be in accordance with the current edition of the American Welding Society (AWS) Structural Welding Code for steel. L.A. welding certificates shall be provided.

7. SHEET PILING: Shall be Shore Guard Rigid Vinyl Sheet piling by Materials International, Atlanta, Georgia 800-256-8857, or equal. Provide size shown on drawings and install in accordance with manufacturer's written instructions.

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.	William & Elizabeth Whyte 16541 Carousel Lane Huntington Beach, CA 92649	IN: Huntington Harbour AT: Huntington Beach County of O.C. State: CA Application By: William Whyte Sheet 4 of 7 Date: 2/25/99

8. SLOPE PROTECTION: Slope protection shall be 8 inch minus quarry waste placed 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.

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

10. 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. Screw jacks shall be installed if batter pile deterioration exceeds 25% of its original net diameter, or as directed by Engineer.

2. When pile repair is required, no more than one pile shall be cut and the jack assembly installed prior to beginning work on the next pile. Upon completion of jack assembly installation, grout tubes shall be hung from the bottom of the base slab. After placement of jack assembly, jack shall be adjusted to its maximum capacity, but not greater than 20 tons. Jack adjustment shall be completed during high tide. Prior to concrete placement, pile repair work and jack assembly installation shall be inspected and approved.

3. Upon completion of all pile repair and jack assembly installation work at a given property, vinyl sheet piling, tie-backs, and wales shall be installed. Engineer shall be notified prior to installation of first sheet pile.

4. After installation of sheet piling, tie-backs, and wales is completed at a given property, placement of concrete fill shall be completed in accordance with the drawings and these notes.

5. After concrete has cured for a minimum of 48 hours, all remaining voids shall be filled with grout in accordance with these notes and the grout manufacturer's written instructions. After completion of concrete and grout placement, work shall be inspected and certified by the contractor.

6. Contractor shall place the appropriate width of geotextile for 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.

7. 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.

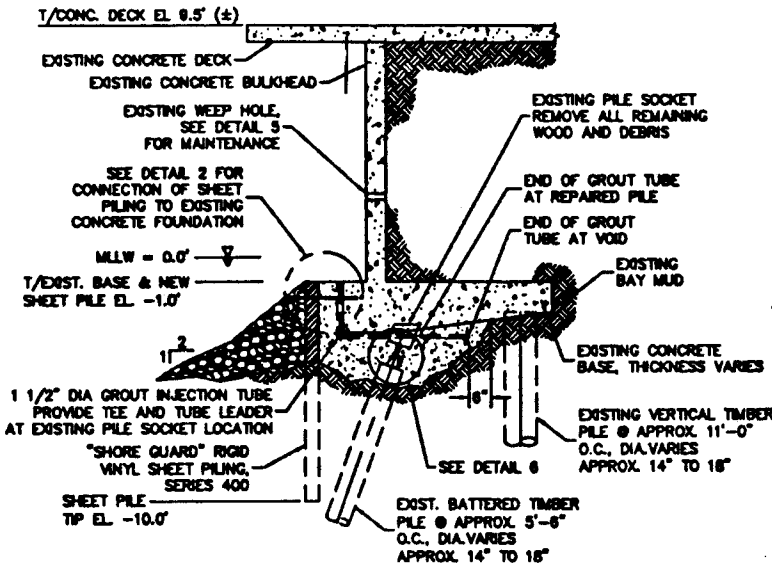
COASTAL COMMISSION

EXHIBIT # 3

PAGE 15 OF 31

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

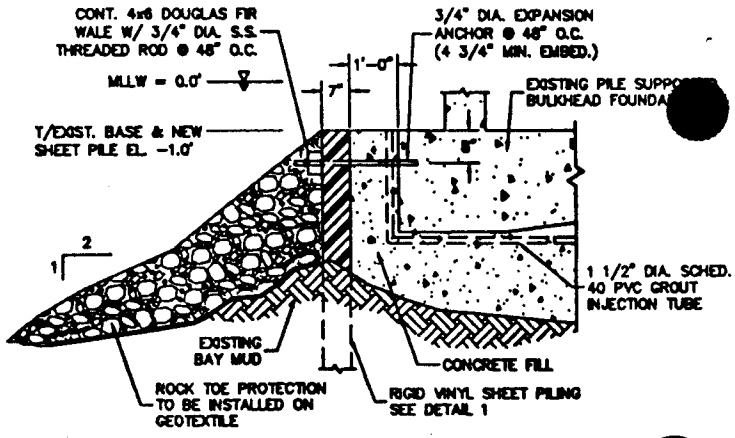
PURPOSE: Repair Existing Seawall	SPECIFICATIONS	Proposed Repair of Existing Seawall
Datum: MLLW = 0 Adj. Property Owners: 1. See Attached List 2. 3.	William & Elizabeth Whyte 16541 Carousel Lane Huntington Beach, CA 92649	IN: Huntington Harbour AT: Huntington Beach County of O.C. State: CA Application By: William Whyte Sheet 5 of 7 Date: 2/25/99



SECTION AT TIMBER PILE REPAIR

SCALE: 1/8" = 1'- 0"

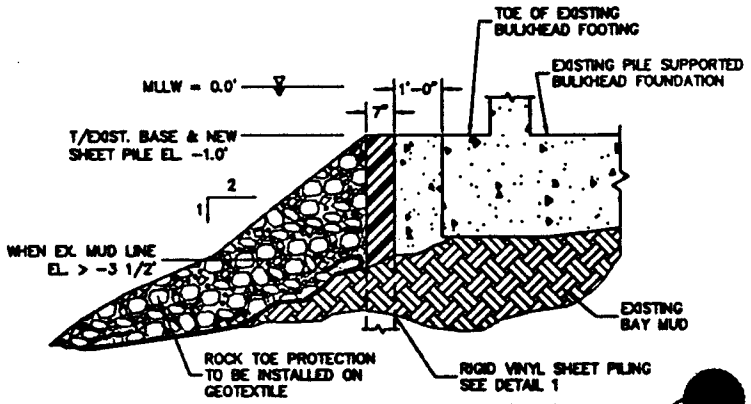
1



SECTION AT WALE: CASE I

SCALE: 1/4" = 1'- 0" (FOUNDATION UNDERMINED)

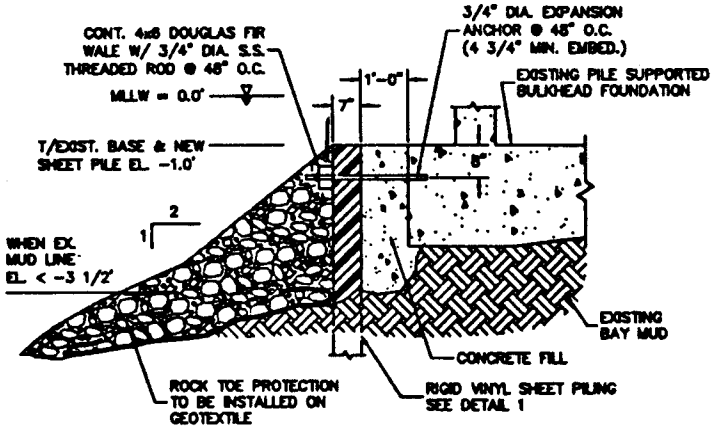
2



SECTION AT SHEET PILE: CASE III

SCALE: 1/4" = 1'- 0" (FOR CANTILEVERED SPANS OF 30" OR LESS SUPPORT WALE NOT REQUIRED)

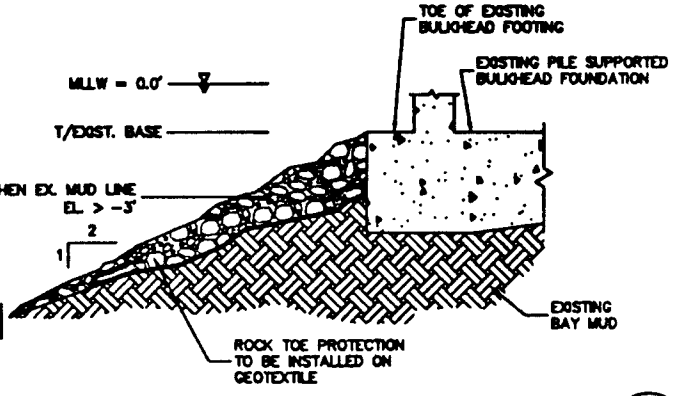
4



SECTION AT WALE: CASE II

SCALE: 1/4" = 1'- 0" (FOR CANTILEVERED SPANS OF 30" OR MORE SUPPORT WALE REQUIRED)

3



SECTION AT SHEET PILE: CASE IV

SCALE: 1/4" = 1'- 0" (RIP-RAP TOE PROTECTION ONLY)

5

COASTAL COMMISSION

TETRA TECH
800 The City Parkway West, Suite 300
Orange, CA 92868
(714)456-0168, Fax (714)456-0181

EXHIBIT # 3

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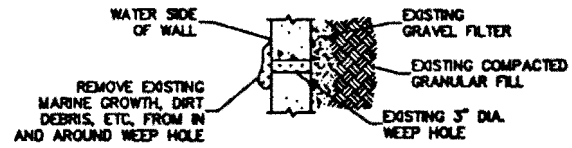
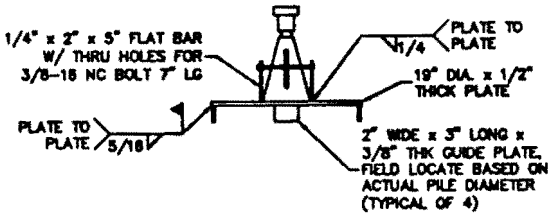
PURPOSE: Repair Existing Seawall **Datum: MLLW = 0** **Adj. Property Owners:** **1. See Attached List** **2.** **3.**	**SECTION VIEW** William & Elizabeth Whyte 16541 Carousel Lane Huntington Beach, CA 92649	Proposed Repair of Existing Seawall IN: Huntington Harbour AT: Huntington Beach County of O.C. State: CA Application By: William Whyte Sheet 6 of 7 Date: 2/25/99



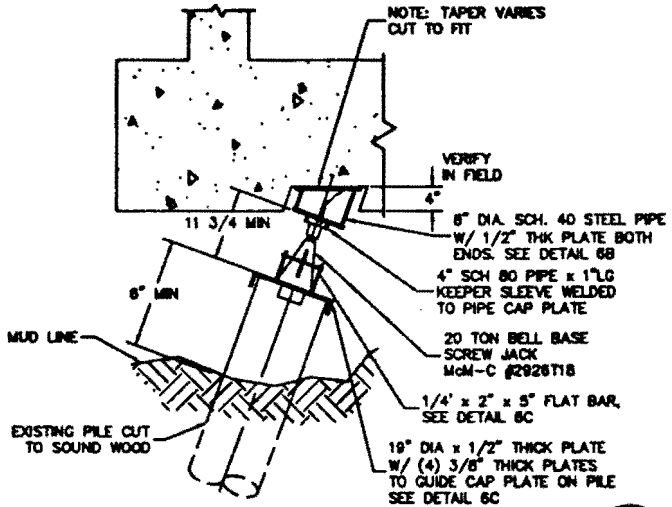
WEEP HOLE DETAIL

SCALE: 1/4" = 1'-0" — 6



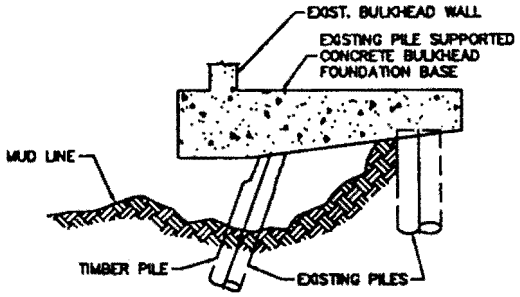
PILE CAP PLATE DETAIL

SCALE: N.T.S. — 7C



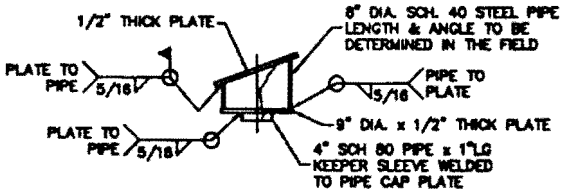
JACKING DETAIL

SCALE: 3/4" = 1'-0" — 7



SECTION — 25% OR LESS PILE DETERIORATION

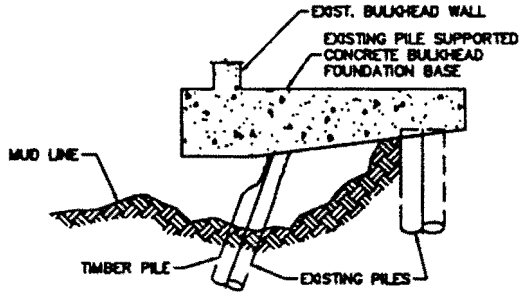
SCALE: N.T.S. — PILE REPAIR NOT REQUIRED — SEE DETAIL 2 — 8



JACKING ASSEMBLY DETAIL

SCALE: N.T.S. — 7B

NOTES: FIELD MEASURE EXISTING PILE SOCKET IN CONCRETE BASE SLAB AND CUT TOP PLATE TO FIT SOCKET.
CENTERLINE TOP PLATE = CENTERLINE PIPE
CENTERLINE PIPE = CENTERLINE JACK



SECTION — 25% OR MORE PILE DETERIORATION

SCALE: N.T.S. — PILE REPAIR REQUIRED — SEE DETAILS: 1 & 2 — 9

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

PURPOSE: Repair Existing Seawall

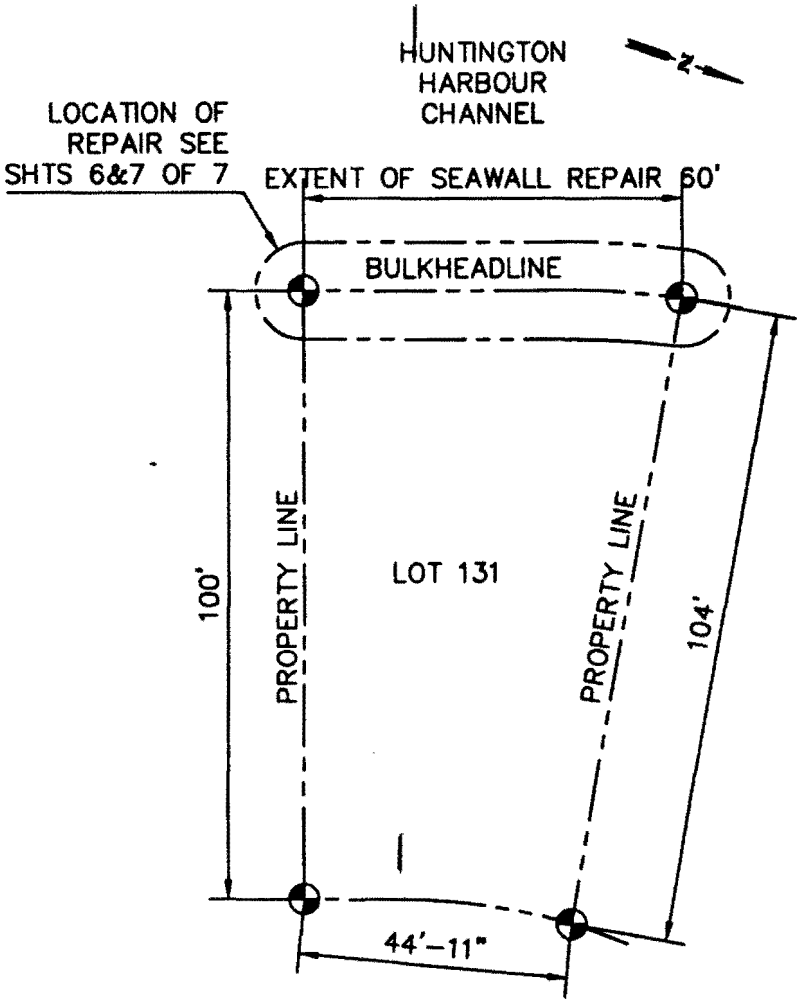
Datum: MLLW = 0
Adj. Property Owners:
1. See Attached List
2.
3.

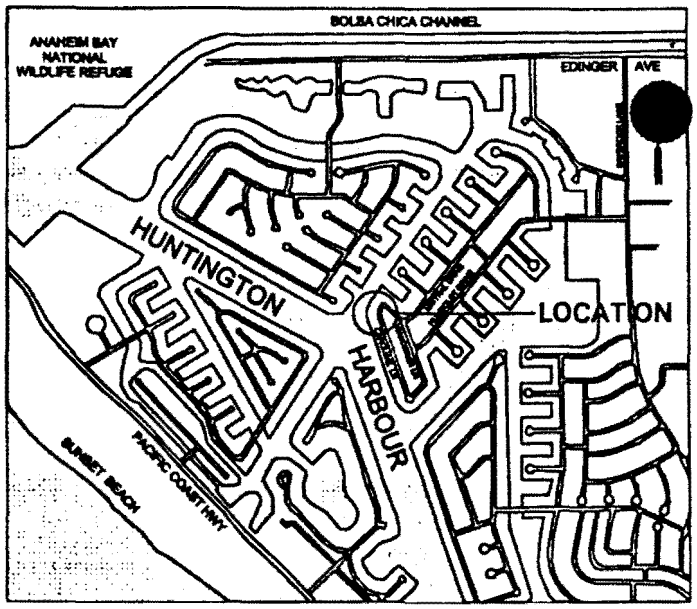
SECTION VIEW

William & Elizabeth Whyte
16541 Carousel Lane
Huntington Beach, CA 92649

Proposed Repair of Existing Seawall

IN: Huntington Harbour
AT: Huntington Beach
County of O.C. State: CA
Application By: William Whyte
Sheet 7 of 7 Date: 2/25/99





VICINITY MAP

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

NOTE:
ALL DEPTHS BASED ON
MLLW = 0.00 FT.

COASTAL COMMISSION

EXHIBIT # 3
PAGE 18 OF 31

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

PURPOSE: Repair Existing Seawall

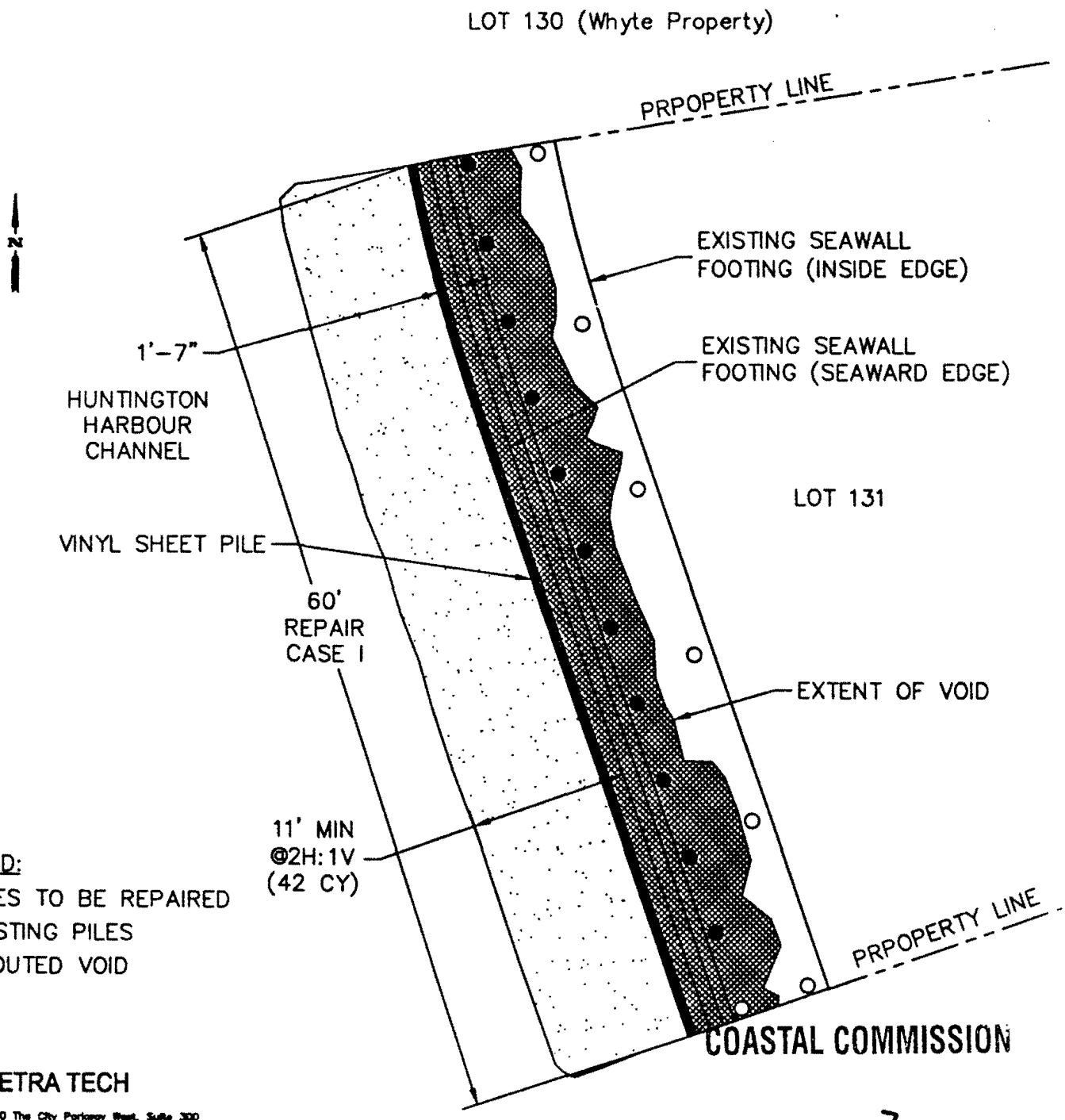
Datum: MLLW = 0
Adj. Property Owners:
1. See Attached List
2.
3.

PLAN VIEW
0 32 64
1" = 32'

Bernie Barrad
16551 Carousel Lane
Huntington Beach, CA 92649

Proposed Repair of Existing Seawall

IN: Huntington Harbour
AT: Huntington Beach
County of Orange State: CA
Application By: Bernie Barrad
Sheet 1 of 7 Date: 2/25/99



LEGEND:

- ● PILES TO BE REPAIRED
- ○ EXISTING PILES
- ▩ GROUTED VOID

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

COASTAL COMMISSION

EXHIBIT # 3

PAGE 19 OF 31

PURPOSE: Repair Existing Seawall

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

PLAN VIEW

0 10 20

3/32" = 1'- 0"

Bernie Barrad
16551 Carousel Lane
Huntington Beach, CA 92649

Proposed Repair of Existing Seawall

IN: Huntington Harbour
AT: Huntington Beach
County of O.C. State: CA
Application By: Bernie Barrad
Sheet 2 of 7 Date: 2/25/99

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.

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3. MISCELLANEOUS MATERIALS: Expansion anchors shall be Kwik Bolt II by Hilti Corporation or approved equal. Provide anchors made of Type 316 stainless steel with rod couplings.

COASTAL COMMISSION

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

EXHIBIT # 3
PAGE 20 OF 31

PURPOSE: Repair Existing Seawall	SPECIFICATIONS	Proposed Repair of Existing Seawall
Datum: MLLW = 0 Adj. Property Owners: 1. See Attached List 2. 3.	Bernie Barrad 16551 Carousel Lane Huntington Beach, CA 92649	IN: Huntington Harbour AT: Huntington Beach County of O.C. State: CA Application By: Bernie Barrad Sheet 3 of 7 Date: 2/25/99

Threaded rod shall be Type 316 stainless steel threaded rod. Provide rod with thread spacing and of diameter to match rod coupling provided with expansion anchors and with nut and washer at one end.

Provide continuous wales of size indicated on the drawings and fabricated from number 1 grade Douglas fir. Wales shall be cut and drilled and then coated with polyurethane base coat Elasto-Deck 5001 and top coated with Elasto-Glaze 6001 AL, by Pacific Polymers. Apply and touch up damaged areas of wood coatings in accordance with the manufacturers written instructions.

Jacks shall be McMaster-Carr bell base screw jack model no. 2926T18 or approved equal. Jack capacity shall be 20 tons or greater.

4. HIGH PRESSURE GROUT: Provide MasterBuilder EMACO S77 CI grout, mixed and placed in accordance with manufacturer's written instructions. After concrete has hardened, place grout at recommended pressure through 1 ½" diameter schedule 40 PVC grout tubes to fill remaining voids. Grout tubes shall be placed as shown on the drawings where the foundation base slab has been undermined and pile repair is required. Placement of grout shall continue at one location until grout exits grout tubes at adjacent pile repair locations. If adjacent pile locations do not require pile repair, two grout tubes shall be installed and grout shall be placed through one tube until it begins exiting the second tube. Elevation of feed ends of grout tubes shall be maintained above maximum high water level and grout shall be placed to the top of the tube, until grout has hardened.

5. PORTLAND CEMENT CONCRETE: Provide normal weight concrete to fill beneath the foundation base slab with the following properties:

Minimum ultimate compressive strength of 3,000 psi at 28 days.
Portland Cement: ASTM C150, Type V
Aggregate : ASTM C33 (Coarse Aggregate shall conform to requirements of Size #8, Table 2)
Water: Potable
Slump: 7 inches

Materials shall be mixed, transported, fabricated, placed, consolidated, and finished in accordance with the requirements of the current edition of the American Concrete Institute Building Code Requirements for Reinforced Concrete (ACI 318) and (ACI 304R). Specifically, concrete placement shall conform to the requirements of Chapter 8 "Concrete Placed Under Water", utilizing either the direct pumping or tremie methods. Contractor shall take care to maintain the end of the pipe or tremie in the concrete mass at all times during concrete placement.

6. STEEL PLATES & PIPE: Structural steel plates shall conform to the requirements of ASTM A36. Steel pipe shall conform to the requirements of ASTM A53 Type B. All welding shall be performed by welders certified to perform the indicated types of welding and shall be in accordance with the current edition of the American Welding Society (AWS) Structural Welding Code for steel. L.A. welding certificates shall be provided.

7. SHEET PILING: Shall be Shore Guard Rigid Vinyl Sheet piling by Materials International, Atlanta, Georgia 800-256-8857, or equal. Provide size shown on drawings and install in accordance with manufacturer's written instructions.

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.	Bernie Barrad 16551 Carousel Lane Huntington Beach, CA 92649	IN: Huntington Harbour AT: Huntington Beach County of O.C. State: CA Application By: Bernie Barrad Sheet 4 of 7 Date: 2/25/99

8. SLOPE PROTECTION: Slope protection shall be 8 inch minus quarry waste placed 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.

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

10. 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. Screw jacks shall be installed if batter pile deterioration exceeds 25% of its original net diameter, or as directed by Engineer.

2. When pile repair is required, no more than one pile shall be cut and the jack assembly installed prior to beginning work on the next pile. Upon completion of jack assembly installation, grout tubes shall be hung from the bottom of the base slab. After placement of jack assembly, jack shall be adjusted to its maximum capacity, but not greater than 20 tons. Jack adjustment shall be completed during high tide. Prior to concrete placement, pile repair work and jack assembly installation shall be inspected and approved.

3. Upon completion of all pile repair and jack assembly installation work at a given property, vinyl sheet piling, tie-backs, and wales shall be installed. Engineer shall be notified prior to installation of first sheet pile.

4. After installation of sheet piling, tie-backs, and wales is completed at a given property, placement of concrete fill shall be completed in accordance with the drawings and these notes.

5. After concrete has cured for a minimum of 48 hours, all remaining voids shall be filled with grout in accordance with these notes and the grout manufacturer's written instructions. After completion of concrete and grout placement, work shall be inspected and certified by the contractor.

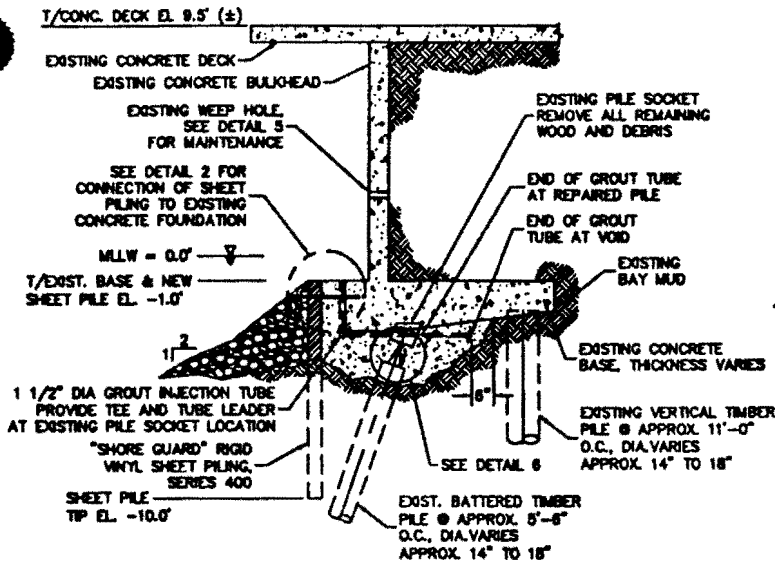
6. Contractor shall place the appropriate width of geotextile for slope protection at a 2:1 slope with an additional 2 ft. min overhang at each side. Overhang to be folded back over first layer of rock and covered by subsequent layers of rock until specified slope is achieved. All sheet splices shall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

7. 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

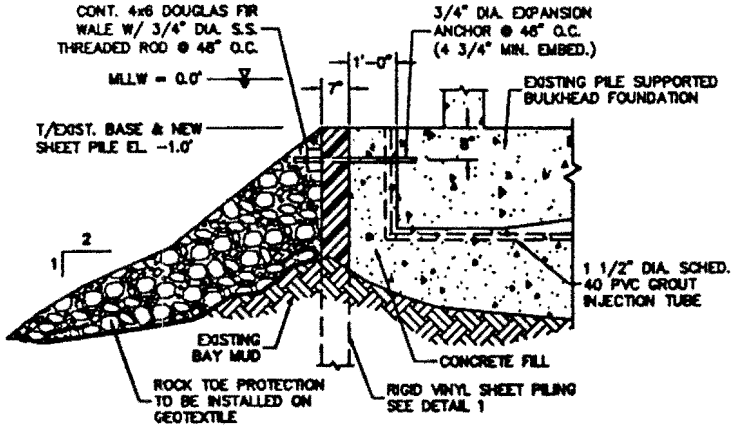
PURPOSE: Repair Existing Seawall	SPECIFICATIONS	Proposed Repair of Existing Seawall
Datum: MLLW = 0 Adj. Property Owners: 1. See Attached List 2. 3.	Bernie Barrad 16551 Carousel Lane Huntington Beach, CA 92649	IN: Huntington Harbour AT: Huntington Beach County of O.C. State: C Application By: Bernie Barrad Sheet 5 of 7 Date: 2/25/99



SECTION AT TIMBER PILE REPAIR

SCALE: 1/8" = 1'- 0"

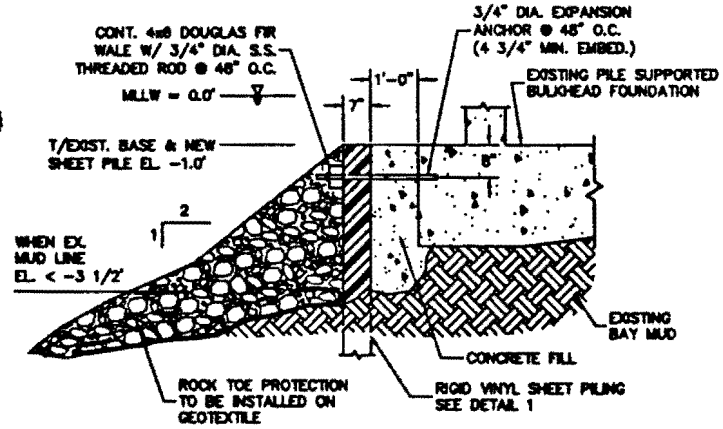
1



SECTION AT WALE: CASE I

SCALE: 1/4" = 1'- 0" (FOUNDATION UNDERMINED)

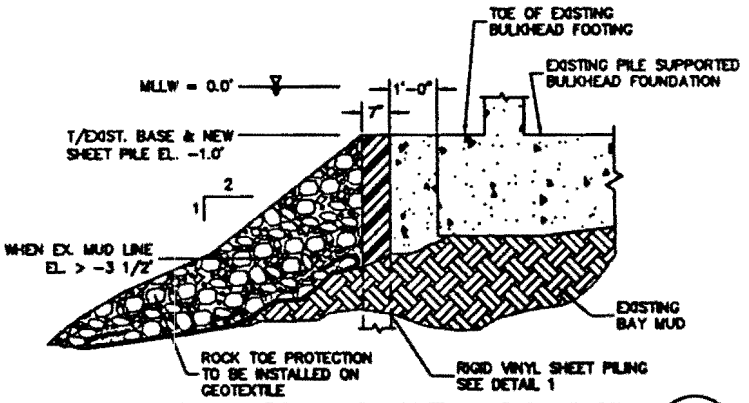
2



SECTION AT WALE: CASE II

SCALE: 1/4" = 1'- 0" (FOR CANTILEVERED SPANS OF 30" OR MORE SUPPORT WALE REQUIRED)

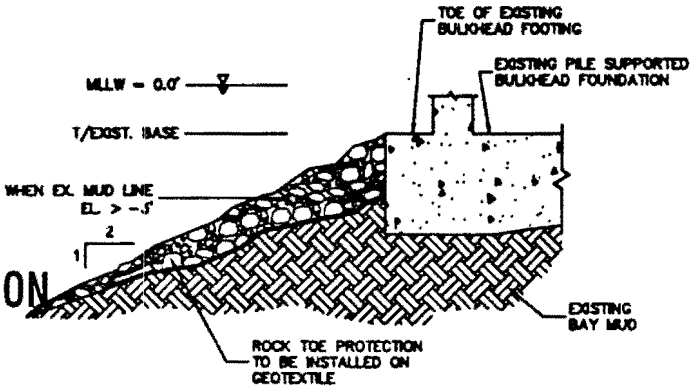
3



SECTION AT SHEET PILE: CASE III

SCALE: 1/4" = 1'- 0" (FOR CANTILEVERED SPANS OF 30" OR LESS SUPPORT WALE NOT REQUIRED)

4



SECTION AT SHEET PILE: CASE IV

SCALE: 1/4" = 1'- 0" (RIP-RAP TOE PROTECTION ONLY)

5

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

PURPOSE: Repair Existing Seawall

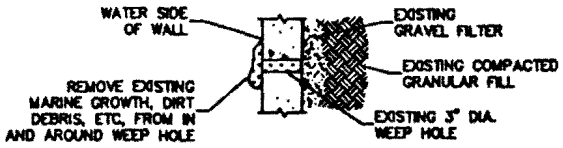
Datum: MLLW = 0
Adj. Property Owners:
1. See Attached List
2.
3.

SECTION VIEW

Bernie Barrad
16551 Carousel Lane
Huntington Beach, CA 92649

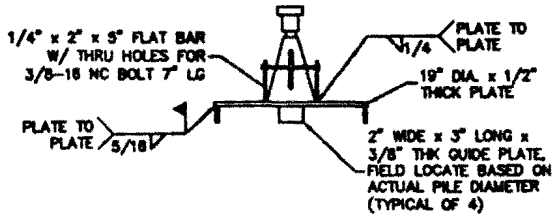
Proposed Repair of Existing Seawall

IN: Huntington Harbour
AT: Huntington Beach
County of O.C. State: CA
Application By: Bernie Barrad
Sheet 6 of 7 Date: 2/25/99



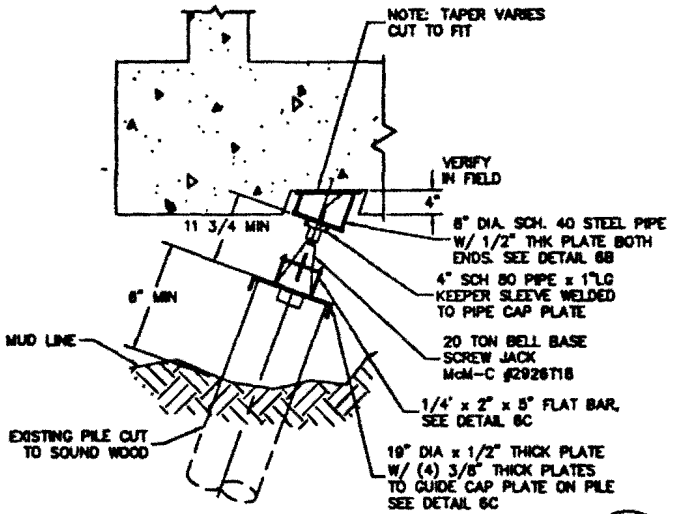
WEEP HOLE DETAIL

SCALE: 1/4" = 1'- 0" — 6



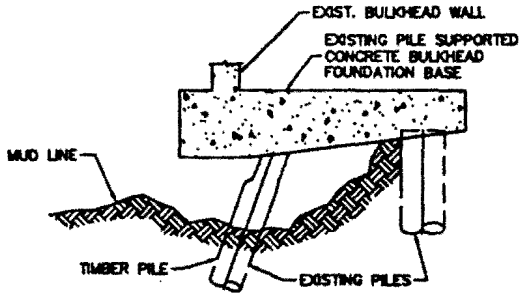
PILE CAP PLATE DETAIL

SCALE: N.T.S. — 7C



JACKING DETAIL

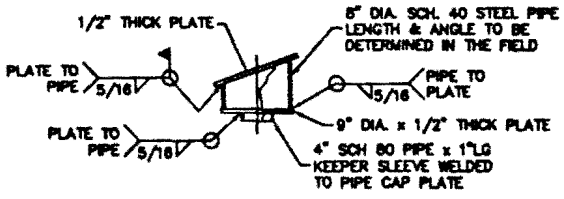
SCALE: 3/4" = 1'- 0" — 7



SECTION — 25% OR LESS PILE DETERIORATION

SCALE: N.T.S. — 8

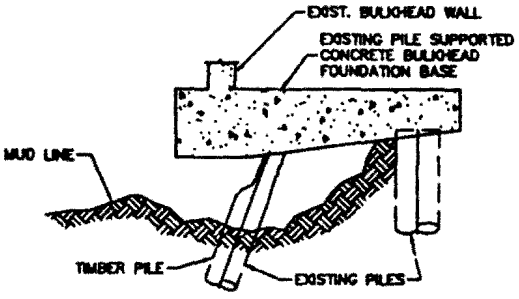
PILE REPAIR NOT REQUIRED
SEE DETAIL 2



JACKING ASSEMBLY DETAIL

SCALE: N.T.S. — 7B

NOTES: FIELD MEASURE EXISTING PILE SOCKET IN CONCRETE BASE SLAB AND CUT TOP PLATE TO FIT SOCKET.
CENTERLINE TOP PLATE = CENTERLINE PIPE
CENTERLINE PIPE = CENTERLINE JACK



SECTION — 25% OR MORE PILE DETERIORATION

SCALE: N.T.S. — 9

PILE REPAIR REQUIRED
SEE DETAILS: 1 & 2

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.

SECTION VIEW

Bernie Barrad
16551 Carousel Lane
Huntington Beach, CA 92649

Proposed Repair of Existing Seawall

IN: Huntington Harbour
AT: Huntington Beach
County of O.C. State: CA
Application By: Bernie Barrad
Sheet 7 of 7 Date: 2/25/99

HUNTINGTON HARBOUR CHANNEL

EXTENT OF SEAWALL REPAIR 50'

BULKHEADLINE

LOCATION OF REPAIR SEE SHT 6 & 7 OF 7

100'-0"

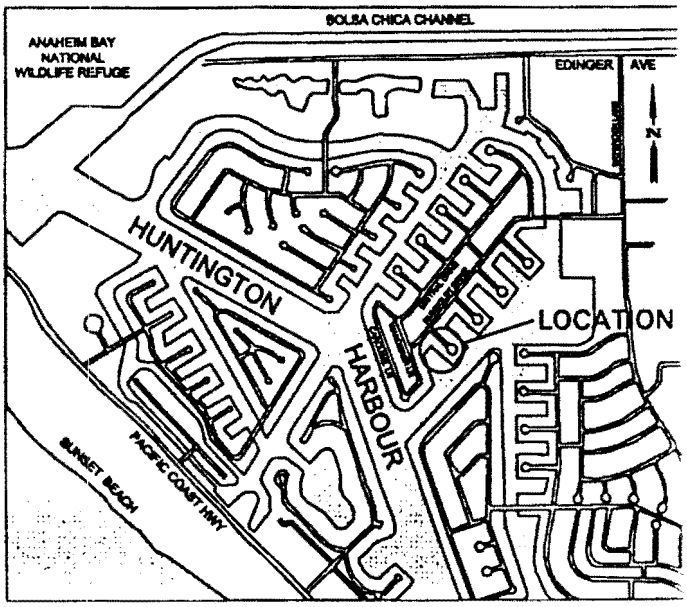
PROPERTY LINE

LOT 170

PROPERTY LINE

100'-0"

ENSIGN CIRCLE



VICINITY MAP

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

RECEIVED
South Coast Region
DEC 24 1999
CALIFORNIA COASTAL COMMISSION

South Coast District Office

5-99-478

NOTE:
ALL DEPTHS BASED ON MLLW = 0.00 FT.

COASTAL COMMISSION

EXHIBIT # 3
PAGE 25 OF 31

APPROVED IN CONCEPT
11/1/99

REGISTERED PROFESSIONAL ENGINEER

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

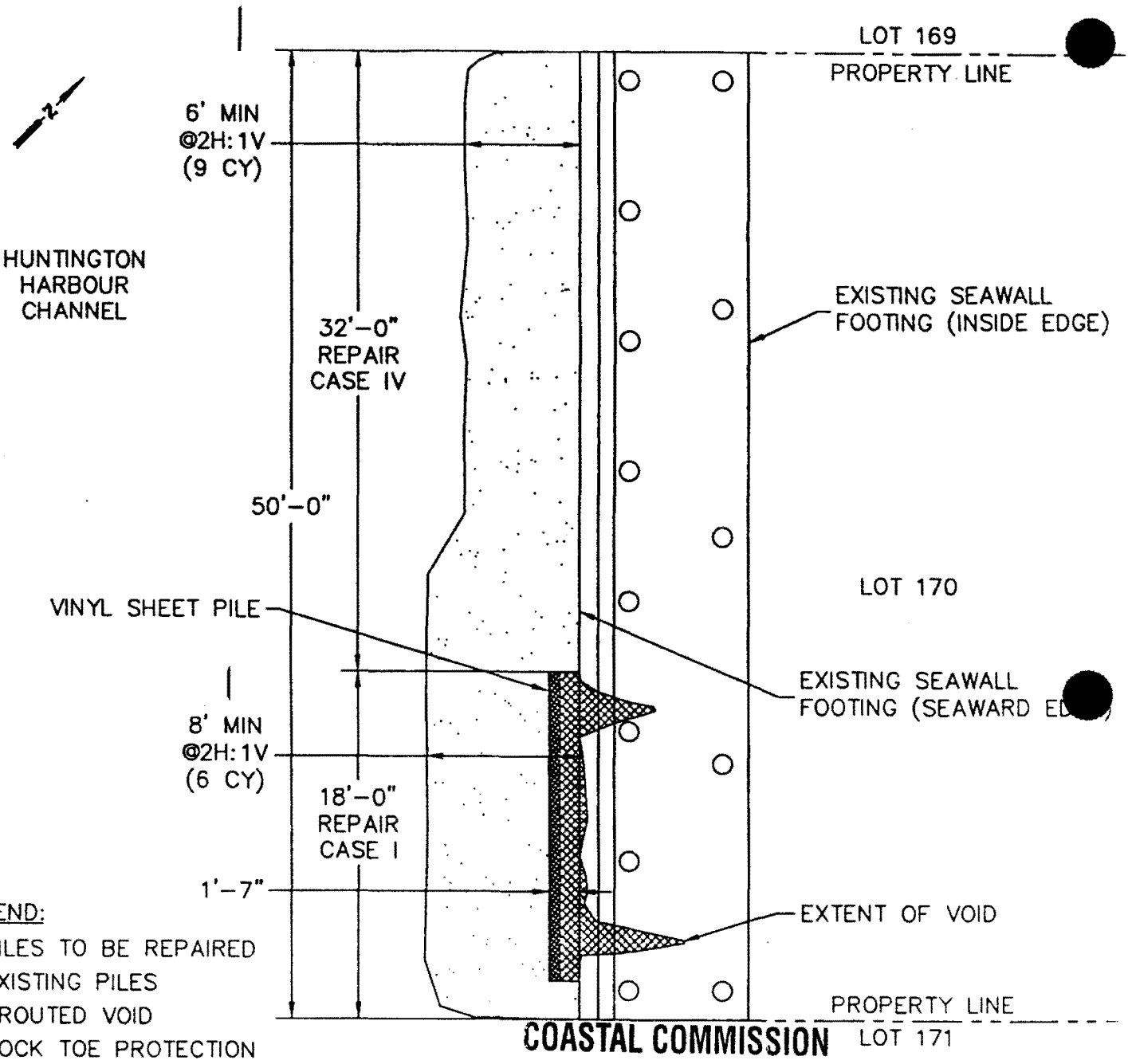
0 32 64

1" = 32'

Alex Gelbard
16575 Ensign Circle
Huntington Beach, CA 92649

Proposed Repair of Existing Seawall

IN: Huntington Harbour
AT: Huntington Beach
County of Orange State: CA
Application By: Alex Gelbard
Sheet 1 of 7 Date: 4/13/99



LEGEND:

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

COASTAL COMMISSION

EXHIBIT # 3

PAGE 26 OF 31

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 8 16

1/8" = 1'-0"

Alex Gelbard
16575 Ensign Circle
Huntington Beach, CA 92649

Proposed Repair of Existing Seawall

IN: Huntington Harbour
AT: Huntington Beach
County of O.C. State: CA
Application By: Alex Gelbard
Sheet 2 of 7 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. MONITORING & CONTINGENCY PLAN: Prior to start of construction the contractor shall establish monuments at locations selected by the Engineer and Contractor for the purpose of monitoring wall movements during the construction period. These monuments shall be surveyed at least three times per day by the Contractor, and if any wall movement is detected, the Contractor shall immediately inform the Engineer.

It shall be the Contractors responsibility to ensure workers safety and to make every reasonable effort to prevent wall movements during construction of the repairs. After completion of an initial inspection to determine the extent of required repairs, the Contractor shall submit a brief written plan at each property, which details the required repairs and specific precautions to be taken to allow safe completion of the work. For cases where more than one adjacent pile requires repair by jack installation, or in the case where the wall exhibits fracture across its section and where displacement is evident, the Contractor shall provide temporary shoring, bracing, etc. as he deems necessary, to allow safe access to the repair area.

As a contingency plan, the Contractor shall have two helical anchors, Chance model #C110-0235-SS175, on site with enough rod extensions to install a 30 foot long earth anchor which can be installed in the event significant wall movement is noted during the daily monitoring. All equipment needed for CHANCE anchor installation shall also be onsite with accompanying certifications that equipment gauges have properly calibrated.

3. MISCELLANEOUS MATERIALS: Expansion anchors shall be Kwik Bolt II by Hilti Corporation or approved equal. Provide anchors made of Type 316 stainless steel with rod couplings.

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	SPECIFICATIONS Alex Gelbard 16575 Ensign Circle Huntington Beach, CA 92649	Proposed Repair of Existing Seawall IN: Huntington Harbour AT: Huntington Beach County of O.C. State: CA Application By: Alex Gelbard Sheet 3 of 7 Date: 4/13/9

Threaded rod shall be Type 316 stainless steel threaded rod. Provide rod with thread spacing and of diameter to match rod coupling provided with expansion anchors and with nut and washer at one end.

Provide continuous wales of size indicated on the drawings and fabricated from number 1 grade Douglas fir. Wales shall be cut and drilled and then coated with polyurethane base coat Elasto-Deck 5001 and top coated with Elasto-Glaze 6001 AL, by Pacific Polymers. Apply and touch up damaged areas of wood coatings in accordance with the manufacturers written instructions.

Jacks shall be McMaster-Carr bell base screw jack model no. 2926T18 or approved equal. Jack capacity shall be 20 tons or greater.

4. HIGH PRESSURE GROUT: Provide MasterBuilder EMACO S77 CI grout, mixed and placed in accordance with manufacturer's written instructions. After concrete has hardened, place grout at recommended pressure through 1 ½" diameter schedule 40 PVC grout tubes to fill remaining voids. Grout tubes shall be placed as shown on the drawings where the foundation base slab has been undermined and pile repair is required. Placement of grout shall continue at one location until grout exits grout tubes at adjacent pile repair locations. If adjacent pile locations do not require pile repair, two grout tubes shall be installed and grout shall be placed through one tube until it begins exiting the second tube. Elevation of feed ends of grout tubes shall be maintained above maximum high water level and grout shall be placed to the top of the tube, until grout has hardened.

5. PORTLAND CEMENT CONCRETE: Provide normal weight concrete to fill beneath the foundation base slab with the following properties:

Minimum ultimate compressive strength of 3,000 psi at 28 days.
Portland Cement: ASTM C150, Type V
Aggregate : ASTM C33 (Coarse Aggregate shall conform to requirements of Size #8, Table 2)
Water: Potable
Slump: 7 inches

Materials shall be mixed, transported, fabricated, placed, consolidated, and finished in accordance with the requirements of the current edition of the American Concrete Institute Building Code Requirements for Reinforced Concrete (ACI 318) and (ACI 304R). Specifically, concrete placement shall conform the requirements of Chapter 8 "Concrete Placed Under Water", utilizing either the direct pumping tremie methods. Contractor shall take care to maintain the end of the pipe or tremie in the concrete mass at all times during concrete placement.

6. STEEL PLATES & PIPE: Structural steel plates shall conform to the requirements of ASTM A36. Steel pipe shall conform to the requirements of ASTM A53 Type B. All welding shall be performed by welders certified to perform the indicated types of welding and shall be in accordance with the current edition of the American Welding Society (AWS) Structural Welding Code for steel. L.A. welding certificates shall be provided.

7. SHEET PILING: Shall be Shore Guard Rigid Vinyl Sheet piling by Materials International, Atlanta, Georgia 800-256-8857, or equal. Provide size shown on drawings and install in accordance with manufacturer's written instructions.

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.	Alex Gelbord 16575 Ensign Circle Huntington Beach, CA 92649	IN: Huntington Harbour AT: Huntington Beach County of O.C. State: Application By: Alex Gelbo Sheet 4 of 7 Date: 4/13/9

8. SLOPE PROTECTION: Slope protection shall be 8 inch minus quarry waste placed 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.

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

10. 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. Screw jacks shall be installed if batter pile deterioration exceeds 25% of its original net diameter, or as directed by Engineer.

2. When pile repair is required, no more than one pile shall be cut and the jack assembly installed prior to beginning work on the next pile. Upon completion of jack assembly installation, grout tubes shall be hung from the bottom of the base slab. After placement of jack assembly, jack shall be adjusted to its maximum capacity, but not greater than 20 tons. Jack adjustment shall be completed during high tide. Prior to concrete placement, pile repair work and jack assembly installation shall be inspected and approved.

3. Upon completion of all pile repair and jack assembly installation work at a given property, vinyl sheet piling, tie-backs, and wales shall be installed. Engineer shall be notified prior to installation of first sheet pile.

4. After installation of sheet piling, tie-backs, and wales is completed at a given property, placement of concrete fill shall be completed in accordance with the drawings and these notes.

5. After concrete has cured for a minimum of 48 hours, all remaining voids shall be filled with grout in accordance with these notes and the grout manufacturer's written instructions. After completion of concrete and grout placement, work shall be inspected and certified by the contractor.

6. Contractor shall place the appropriate width of geotextile for 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.

7. 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.

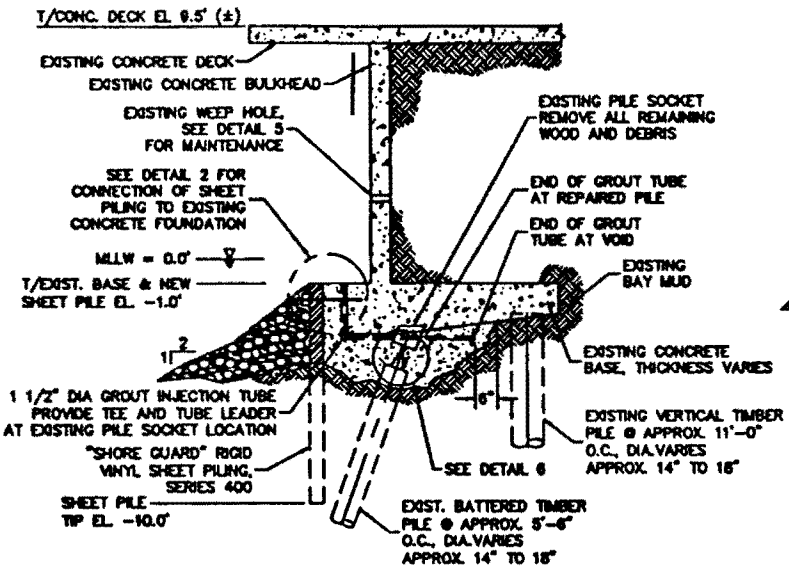
COASTAL COMMISSION

EXHIBIT # 3

PAGE 21 OF 31

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

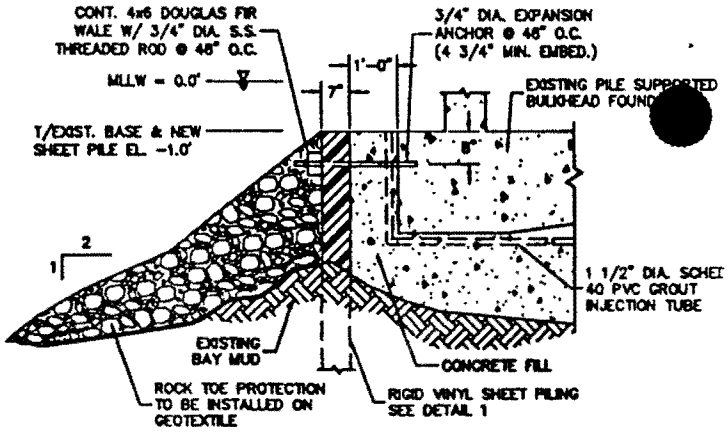
PURPOSE: Repair Existing Seawall	SPECIFICATIONS	Proposed Repair of Existing Seawall
Datum: MLLW = 0 Adj. Property Owners: 1. See Attached List 2. 3.	Alex Gelbard 16575 Ensign Circle Huntington Beach, CA 92649	IN: Huntington Harbour AT: Huntington Beach County of O.C. State: CA Application By: Alex Gelbard Sheet 5 of 7 Date: 4/13/99



SECTION AT TIMBER PILE REPAIR

SCALE: 1/8" = 1'- 0"

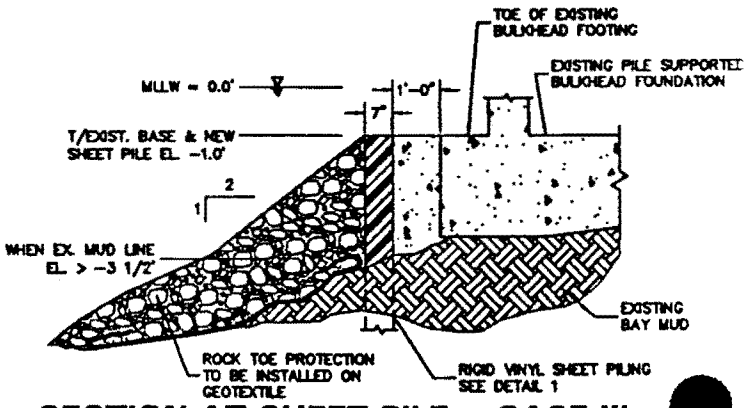
1



SECTION AT WALE: CASE I

SCALE: 1/4" = 1'- 0" (FOUNDATION UNDERMINED)

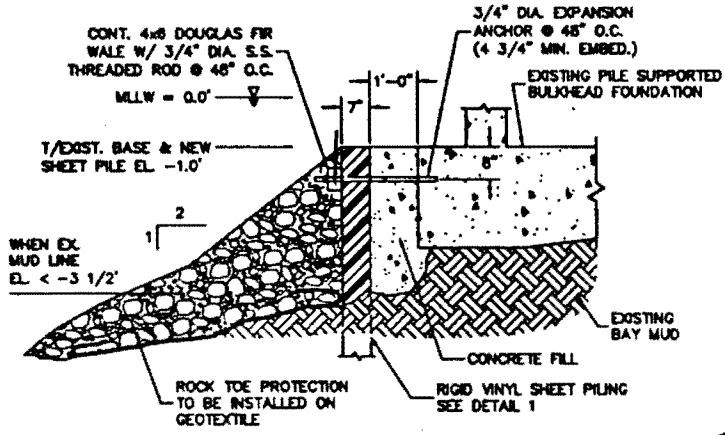
2



SECTION AT SHEET PILE: CASE III

SCALE: 1/4" = 1'- 0" (FOR CANTILEVERED SPANS OF 30" OR LESS SUPPORT WALE NOT REQUIRED)

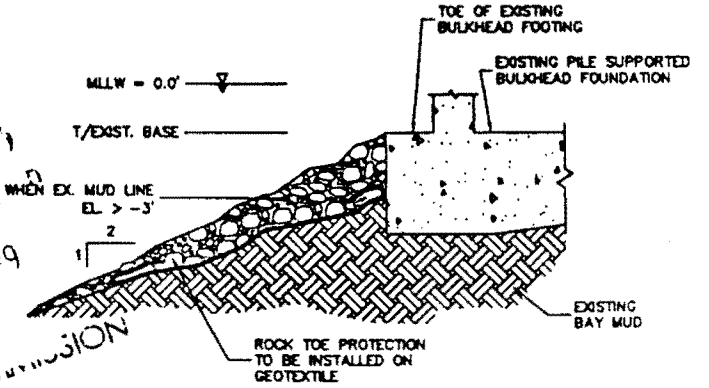
4



SECTION AT WALE: CASE II

SCALE: 1/4" = 1'- 0" (FOR CANTILEVERED SPANS OF 30" OR MORE SUPPORT WALE REQUIRED)

3



SECTION AT SHEET PILE: CASE IV

SCALE: 1/4" = 1'- 0" (RIP-RAP TOE PROTECTION ONLY)

5

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.

SECTION VIEW

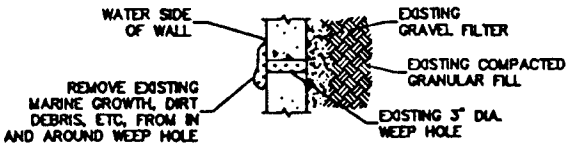
EXHIBIT # 3

PAGE 30 OF 31

Alex Gelbard
16575 Ensign Circle
Huntington Beach, CA 92649

Proposed Repair of Existing Seawall

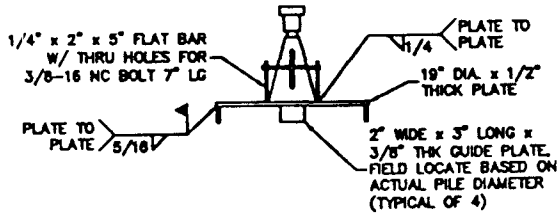
IN: Huntington Harbour
AT: Huntington Beach
County of O.C. State: CA
Application By: Alex Gelbard
Sheet 6 of 7 Date: 4/13/99



WEEP HOLE DETAIL

SCALE: 1/4" = 1'-0"

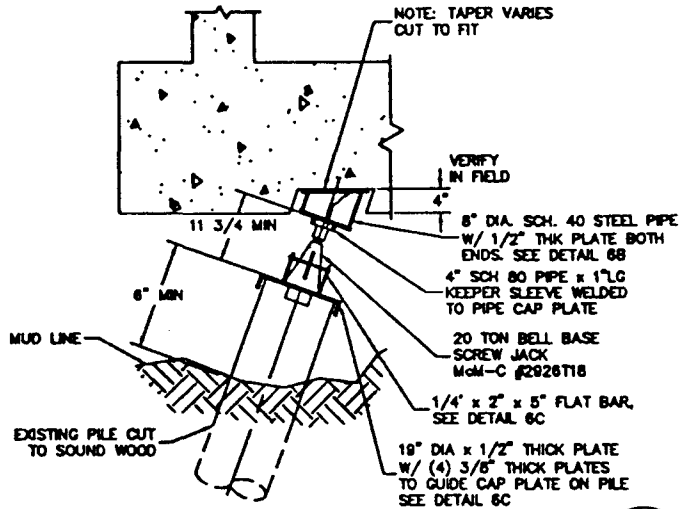
6



PILE CAP PLATE DETAIL

SCALE: N.T.S.

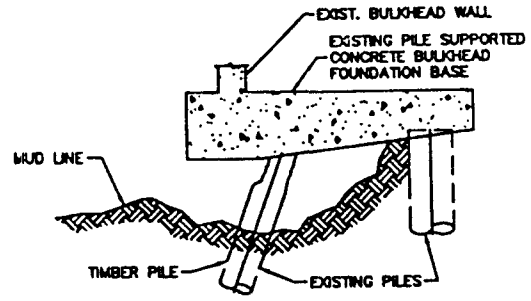
7C



JACKING DETAIL

SCALE: 3/4" = 1'-0"

7

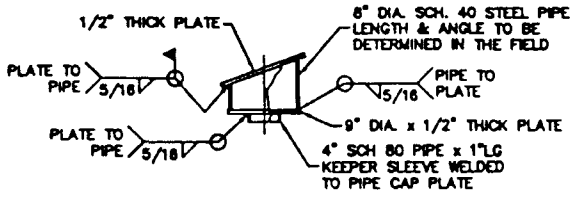


SECTION

SCALE: N.T.S.

25% OR LESS PILE DETERIORATION
PILE REPAIR NOT REQUIRED
SEE DETAIL 2

8

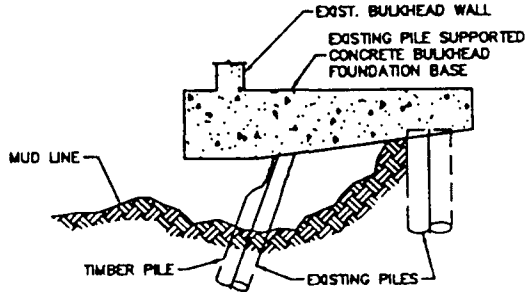


JACKING ASSEMBLY DETAIL

SCALE: N.T.S.

7B

NOTES: FIELD MEASURE EXISTING PILE SOCKET IN CONCRETE BASE SLAB AND CUT TOP PLATE TO FIT SOCKET.
CENTERLINE TOP PLATE = CENTERLINE PIPE
CENTERLINE PIPE = CENTERLINE JACK



SECTION

SCALE: N.T.S.

25% OR MORE PILE DETERIORATION
PILE REPAIR REQUIRED
SEE DETAILS: 1 & 2

9

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.

SECTION VIEW

Alex Gelbard
16575 Ensign Circle
Huntington Beach, CA 92649

Proposed Repair of Existing Seawall

IN: Huntington Harbour
AT: Huntington Beach
County of O.C. State: CA
Application By: Alex Gelbard
Sheet 7 of 7 Date: 4/13/99

COASTAL RESOURCES MANAGEMENT
Marine Biological & Wetland Environmental Consulting Services

November 16, 1998

Mr. Randy Mason/Mr. Chris Mansour
Cash & Associates Engineers
5772 Bolsa Avenue, Suite 100
Huntington Beach, CA 92649

Subject: Marine Biological Survey Results
16851 Carousel Lane, Residence of Mr. and Mrs. Peter Kompaniez
Huntington Beach, CA (Huntington Harbour, Humboldt Island)

The following report presents the results of Coastal Resources Management's marine biological survey at 16851 Carousel Lane, Huntington Beach, California. I am also forwarding a copy of the results to the property owners, Mr. and Mr. Kompaniez.

The results of the study indicate that no significant impacts to water quality and marine biological resources will occur as a result of the proposed construction of a new seawall in front of the property. No eelgrass (*Zostera marina*) or other sensitive or unique resources were found at the site at depths between -2.8 and -7 feet (MLLW).

Please give me a call if you have any questions.

Sincerely,

COASTAL RESOURCES MANAGEMENT

Rick Ware
Principal/Marine Biologist

cc: Mr. and Mrs. Peter Kompaniez

Office Address: ~~2855 E. Coast Highway, Suite 228~~ 319 Larkspur Ave • Corona del Mar, California 92625 • Telephone ~~714~~ 949/673-3076 • Fax ~~714~~ 949/673-8652
Mailing Address: 3334 E. Coast Highway, #434 • Corona del Mar, California 92625

COASTAL RESOURCES MANAGEMENT
Marine Biological & Wetland Environmental Consulting Services

December 1, 1998

Mr. Randy Mason
Cash & Associates Engineers
5772 Bolsa Avenue
Huntington Beach, CA 92649

Subject: Marine Biological Survey Results
16682 Wanderer Lane, Residence of Mr. John Anderson
Huntington Beach, CA (Huntington Harbour, Humbolt Island)

The following report presents the results of Coastal Resources Management's marine biological survey of marine habitats seaward of 16882 Wanderer Lane, Huntington Beach, California. I am also forwarding a copy of the results to the property owner, Mr. John Anderson.

The results of the study indicate that two patches of eelgrass (*Zostera marina*), totaling 45.3 square meters (493 square feet) are present at opposite ends of Mr. Anderson's property lines. The patches of eelgrass begin about five feet from the bulkhead. Mitigation measures to avoid impacts to these patches of eelgrass, as described in the following report, will prevent any adverse impacts to the seagrass vegetation. Therefore, no significant impacts to marine biological resources will occur as a result of the proposed construction of a new bulkhead in front of the property if these mitigation measures are fully implemented.

The eelgrass habitat must be re-surveyed following the completion of the construction to ensure that no eelgrass was disturbed during the construction process. Costs associated with pre-construction, construction, and post-construction monitoring are listed below (Tasks 1-4).

If losses accidentally occur, then eelgrass must be transplanted back into the area. Fees for the work should be borne by the contractor causing the accident. The amount of eelgrass to be transplanted back to the site will be at a 1:1 mitigation ratio rather than a 1.2 : 1 as required in the *Southern California Eelgrass Mitigation Policy Guidelines* (National Marine Fisheries Service 1991 as amended) since the amount of eelgrass affected is likely to be minimal and preventative measures will be taken beforehand to avoid all impacts to eelgrass (Bob Hoffman, National Marine Fisheries Service, pers. comm., November 7, 1998 with R.. Ware). Estimated fees are:

- Task 1: Pre-construction monitoring $500.00
- Task 2: Construction monitoring $500.00
- Task 3: Post-construction monitoring $750.00
- Task 4: Monitoring Reports (3) $200.00
- Task 5: Eelgrass Transplant/Monitoring (If required) (to be determined and paid for by the contractor)

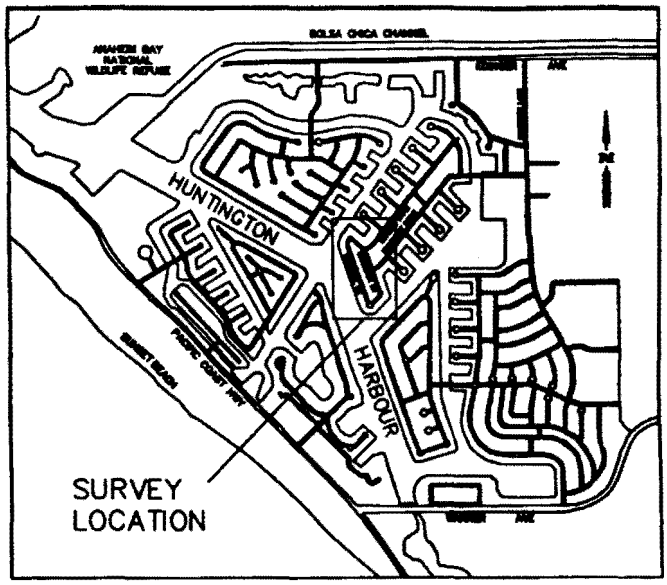
Please give me a call if you have any questions.

Sincerely,

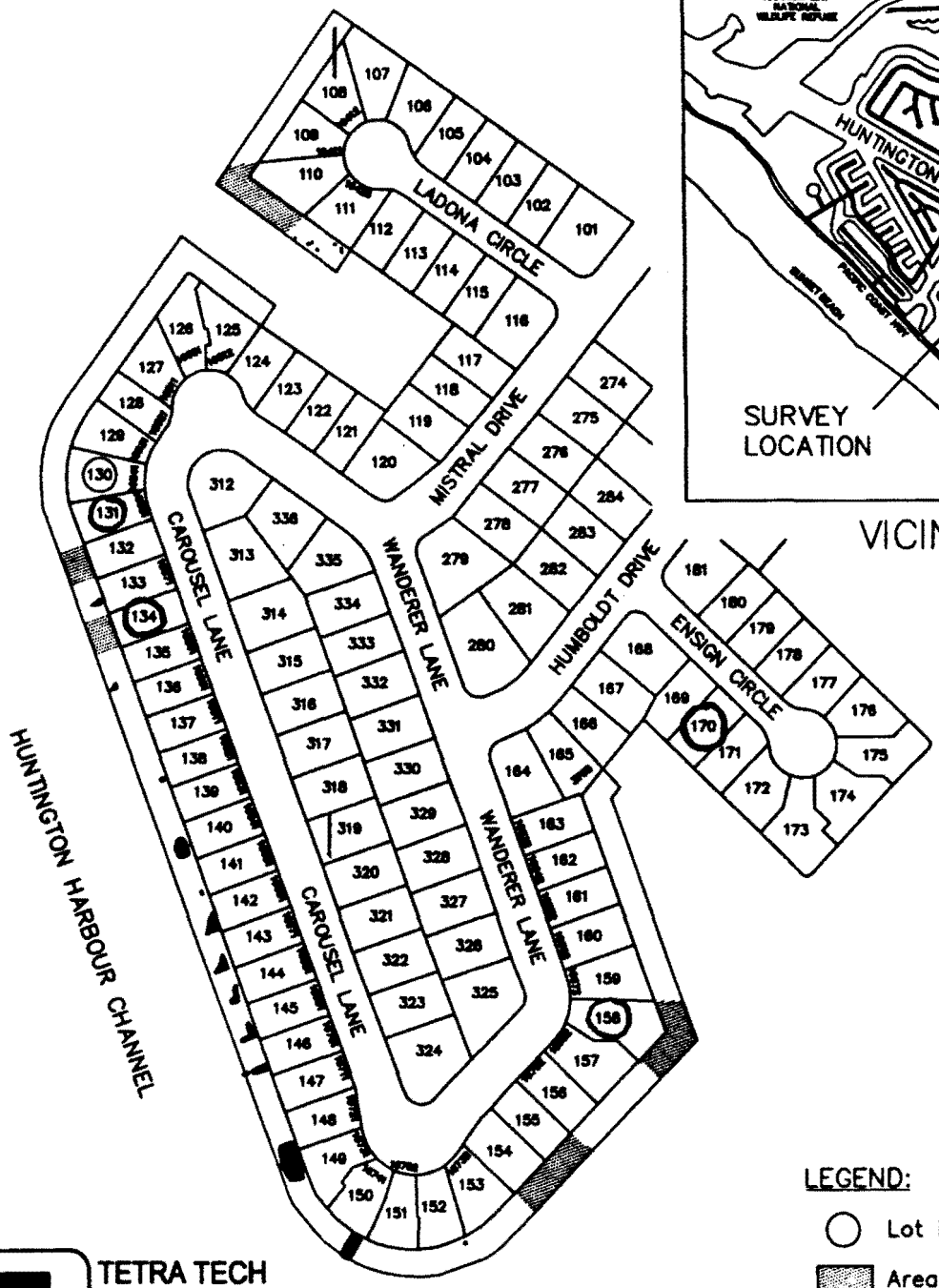
COASTAL RESOURCES MANAGEMENT
Rick Ware
Rick Ware
Principal/Marine Biologist

cc: Mr. John Anderson

Office Address: ~~2855 E. Coast Highway, Suite 228~~ 314 Larkspur Ave • Corona del Mar, California 92625 • Telephone ~~714~~/673-3076 • Fax ~~714~~/673-8652
Mailing Address: 3334 E. Coast Highway, #434 • Corona del Mar, California 92625



VICINITY MAP



COASTAL COMMISSION

EXHIBIT # 4

PAGE 3 OF 6

N

LEGEND:

- Lot in CCC Permit?
- Area not surveyed
- Eelgrass (Zostera marina)

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

ANCHOR MANAGEMENT PLAN

Coastal Commission
Permit # 5-98-443-G

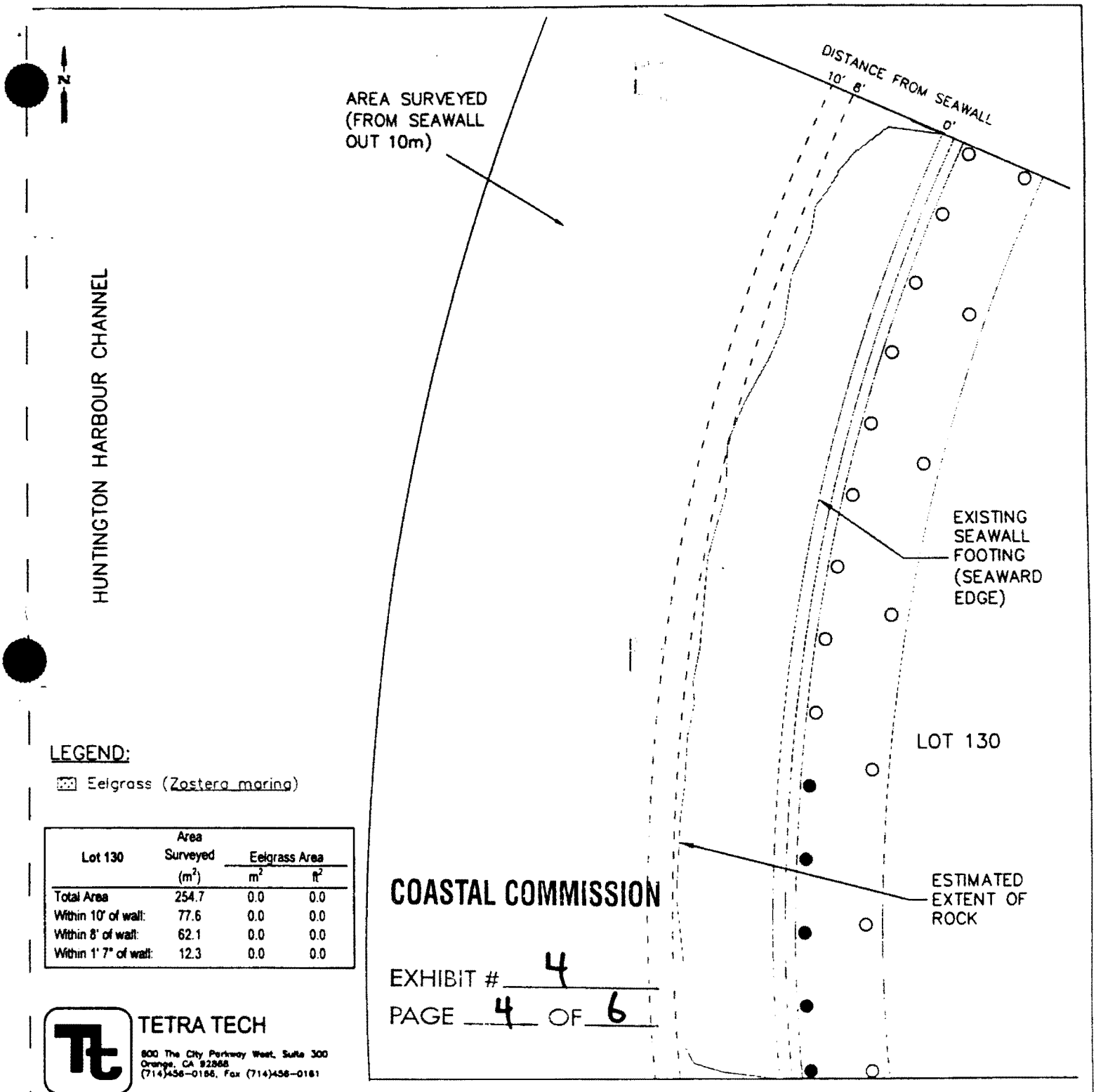
PLAN VIEW

0 100 200 300

feet

Humboldt Island
Huntington Harbour
Huntington Beach, CA 92649

Figure 1
Eelgrass Survey Results
Survey Conducted:
10/22/98
IN: Huntington Harbour
AT: Huntington Beach
County of Orange State: CA
Application By: Homeowners



LEGEND:

Eelgrass (Zostera marina)

Lot 130	Area Surveyed (m^2)	Eelgrass Area m^2	Eelgrass Area ft^2
Total Area	254.7	0.0	0.0
Within 10' of wall:	77.6	0.0	0.0
Within 8' of wall:	62.1	0.0	0.0
Within 1' 7" of wall:	12.3	0.0	0.0

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.

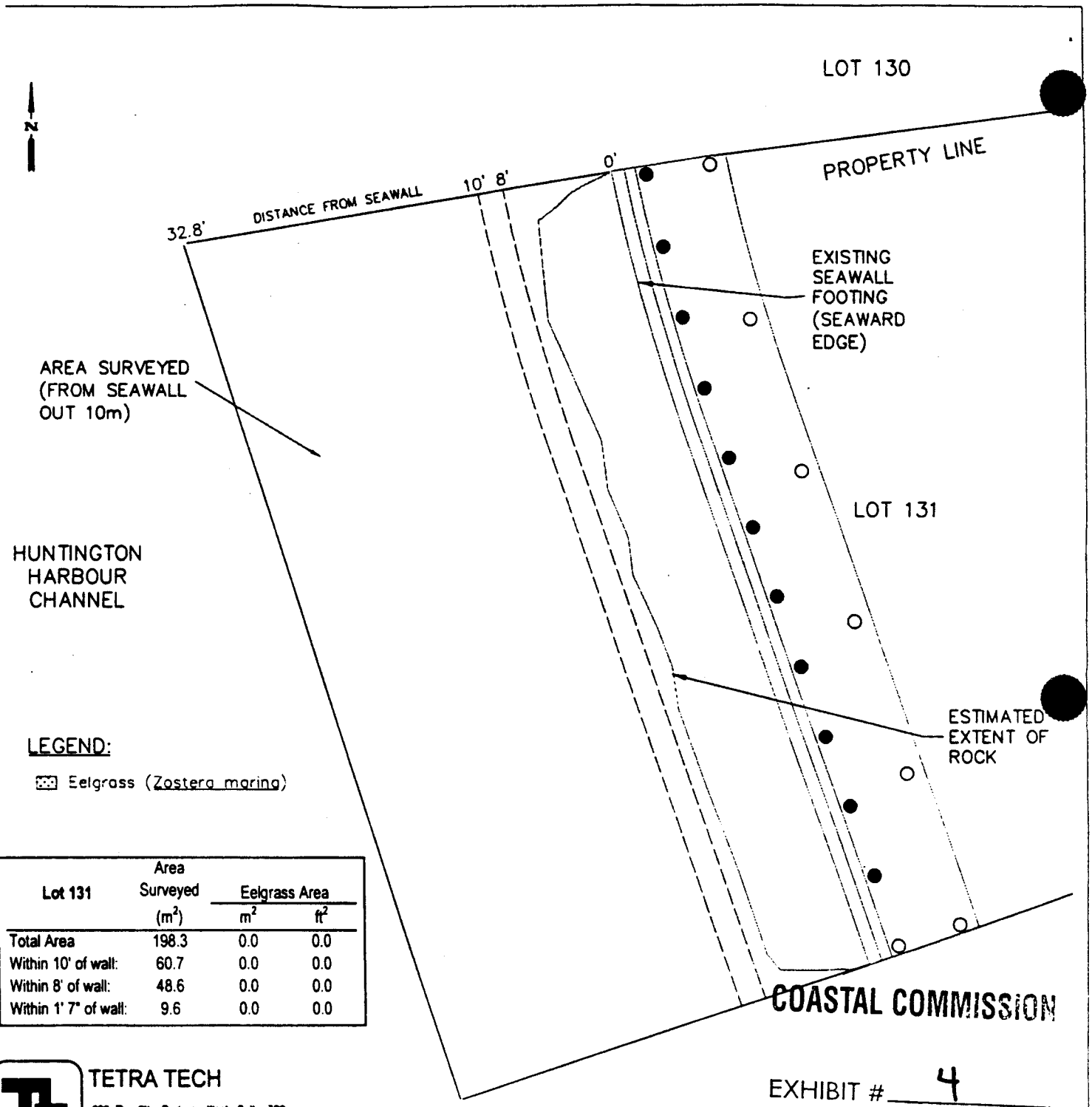
PLAN VIEW

0 10 20

3/32" = 1'- 0"

William & Elizabeth Whyte
16541 Carousel Lane
Huntington Beach, CA 92649

Eelgrass Survey Results
Survey Conducted: 10/22/98
IN: Huntington Harbour
AT: Huntington Beach
County of O.C. State: CA
Application By: William Whyte
Sheet 1 of 1 Date: 11/7/98



Lot 131	Area Surveyed (m^2)	Eelgrass Area m^2	Eelgrass Area ft^2
Total Area	198.3	0.0	0.0
Within 10' of wall:	60.7	0.0	0.0
Within 8' of wall:	48.6	0.0	0.0
Within 1' 7" of wall:	9.6	0.0	0.0

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

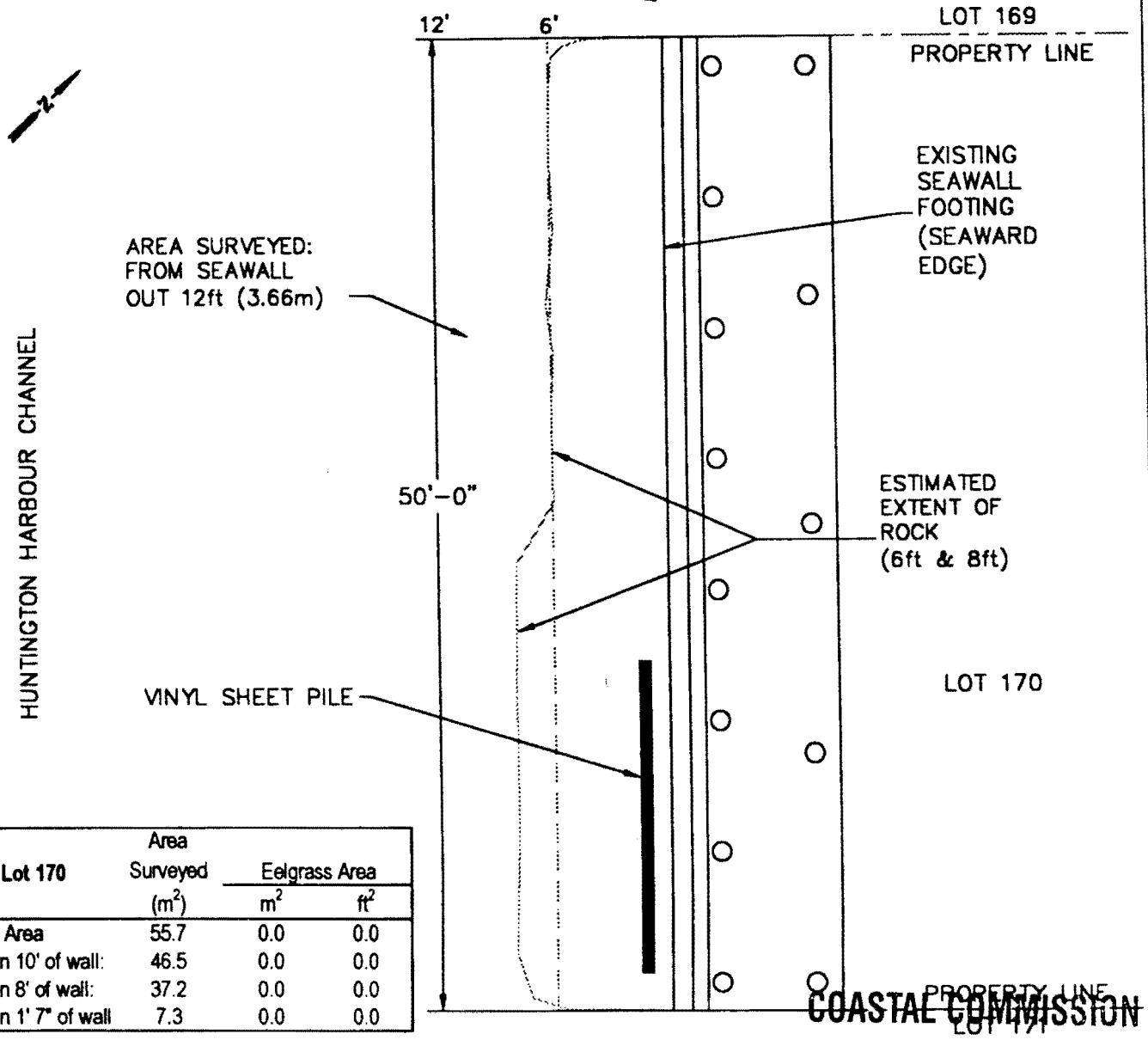
PURPOSE: Repair Existing Seawall

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

PLAN VIEW
0 10 20
3/32" = 1'- 0"

Bernie Barrad
16551 Carousel Lane
Huntington Beach, CA 92649

Eelgrass Survey Results
Survey Conducted: 10/22/98
IN: Huntington Harbour
AT: Huntington Beach
County of O.C. State: CA
Application By: Bernie Barrad
Sheet 1 of 1 Date: 11/7/98



Lot 170	Area Surveyed (m^2)	Eelgrass Area m^2	Eelgrass Area 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)456-0188, Fax (714)456-0181

LEGEND:
EELGRASS (Zostera marina)

EXHIBIT # 4
PAGE 6 OF 6

Figure 4. Tract 5481, Lot 170

Datum: MLLW = 0

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

Alex Gelbard
16575 Ensign 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: Alex Gelbard
Sheet 1 of 1 Date: 11/11/99

STATE OF CALIFORNIA—THE RESOURCES AGENCY GEORGE DEUKMEJIAN, Governor

DEPARTMENT OF FISH AND GAME
411 BURGESS DRIVE
MENLO PARK, CA 94025
(415) 688-6340

Memorandum

January 27, 1999

To: Mr. Robin Maloney-Rames
Coastal Program Analyst
California Coastal Commission
200 Oceangate Ave., Suite 1000
Long Beach, California 90802

From: **Department of Fish and Game**

Subject: Kompaniez and Anderson Bulkhead Projects in Huntington Harbor, Huntington Beach, Orange County

Department of Fish and Game (Department) personnel have reviewed the project descriptions and marine biological surveys for proposed construction at 16682 Carousel Lane (Anderson property) and 16581 Carousel Lane (Kompaniez property). Both properties are located in Huntington Harbor, Huntington Beach, Orange County. The applicants wish to place rock slope protection against the toe of newly constructed bulkheads to prevent undermining of the bulkhead by the flow of currents. The rock slope protection would extend 5 to 10 feet (averaging 8 feet) out from the new bulkheads and would cover the entire length of each bulkhead. The rock slope protection at the Anderson property would replace approximately 385 to 770 square feet (sf) of soft bottom habitat with hard substrate, while the Kompaniez project would replace approximately 500 sf of soft bottom with similar hard substrate. Eelgrass (*Zostera marina*) habitat (approximately 493 sf) has been found at opposite ends of the Anderson property line, approximately 5 feet from the bulkhead.

The Department acknowledges the importance of rock slope protection at the bulkhead toe in maintaining stability, and hopes that this action will prevent future bulkhead failure and subsequent repair. To avoid impacts to water quality, eelgrass, other marine resources, the Department recommends that the project applicants follow the mitigation measures suggested by Mr. Rick Ware, Coastal Resource Management, in Mr. Ware's marine biological surveys of the subject properties. Mr. Ware recommends utilizing best management practices such as the use of silt curtains, containment of floatable debris, and the removal of all construction generated debris at both project sites. At the Anderson property, it is further recommended that the applicant mark the boundaries of eelgrass habitat prior to construction to prevent project activities from encroaching on any eelgrass habitat. Construction activities should also be scheduled between October and March when eelgrass productivity is low, and those vessels associated with the project should avoid anchoring over the

eelgrass habitat. Construction activities need to be monitored to prevent any impacts to eelgrass. Finally, an eelgrass survey needs to be conducted after construction, and all identified adverse impacts to eelgrass mitigated in accordance with the Southern California Eelgrass Mitigation Policy, adopted July 31, 1991, as amended.

Although the rock slope protection will replace soft-bottom substrate with hard substrate, it is our view that the area will likely be re-colonized by algae and invertebrates once the projects are complete. With the inclusion of the above mentioned mitigation measures, the Department does not feel that the proposed projects would have a significant impact on marine resources. Therefore, we do not object to the issuance of a Coastal Development Permit from the Commission for the Kompaniez and Anderson projects. As always, DFG personnel are available to discuss our concerns, comments, 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 (619) 467-4231.

Sincerely,

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

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

Mr. Chris Mansour
Cash and Associates
5772 Bolsa Avenue
Huntington Beach, California 92649

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

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 -bottorn 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

DEPARTMENT OF FISH AND GAME
Marine Region
4949 Viewridge Avenue
San Diego, CA 92123
(858) 467-4231

Ms. Sarah McFadden
Environmental Scientist
Tetra Tech, Inc.
670 North Rosemead Blvd.
Pasadena, California 91107

May 16, 2000

Dear Ms. McFadden:

Department of Fish and Game (Department) personnel have reviewed the Soft Bottom Mitigation Plan for the Humboldt Island and Trinidad Island Bulkhead Repair Project, Huntington Beach, California, prepared by Tetra Tech, Inc.. The proposed mitigation plan has been developed to offset the unavoidable loss of 1,584 square feet of soft-bottom marine habitat from bulkhead repair projects at 39 residences in Huntington Harbor.

The mitigation plan is designed to restore and create tidal influence to existing wetland areas located in the Bolsa Chica Ecological Reserve, managed by the Department, in an area bordered by Pacific Coast Highway and Warner Avenue. The mitigation site is 0.5- to 1.2-miles southwest of the bulkhead projects. There are several elements of the mitigation plan. First, Tetra Tech will replace a corroded 12-inch conduit (the conduit connects the channel to a wetland area) with an 18-inch conduit, install rip-rap to protect it, and restore the eroded embankment to previous dimensions. The enlarged, restored conduit will inundate the adjacent wetland. Second, approximately 60 to 90 cubic yards of concrete and associated debris will be removed (offsite) from an area west of the conduit and the area will be re-graded to match elevations of the functioning wetland to the north. Pickleweed plants within the project area will be salvaged and transplanted when possible and any impacted pickleweed will be replaced with either adjacent pickleweed or with pickleweed purchased from a nursery.

Mitigation tasks will consist of: 1) obtaining required permits for the proposed work; 2) completing a contract with the Department to work on State managed land; 3) conducting the mitigation project; 4) conducting monitoring surveys to evaluate success; and 5) conducting remedial work if the project does not meet success criteria. The Department will be notified prior to any on-site work. Field survey reports will be submitted to the Department and other relevant agencies within 30 days of the surveys.

The Department believes that the proposed mitigation plan will adequately offset impacts to soft-bottom marine habitat from the bulkhead repair projects. If you have any questions please call either myself at (858) 467-4231, or Mr. Erick Burres, Associate Wildlife Biologist, Bolsa Chica Ecological Reserve Manager, at (714) 377-0684.

Sincerely,

Marilyn J. Fluharty

Marilyn J. Fluharty
Environmental Specialist
Marine Region

DEPARTMENT OF FISH AND GAME
MARINE REGION
BURGESS DRIVE
NLO PARK, CA 94025
) 688-6340

August 31, 2000

Ms. Mary Beth Broeren
Senior Planner
City of Huntington Beach
2000 Main Street
Huntington Beach, California 92648

Dear Ms. Broeren:

Department of Fish and Game (Department) personnel have reviewed the Draft Negative Declaration/ Environmental Assessment No. 00-05 for the Humboldt Island and Trinidad Island Seawall Repairs (No. 00-05). The proposed project will repair and renovate existing bulkheads at 40 properties on Humboldt Island and 64 properties on Trinidad Island, Huntington Harbor, Huntington Beach, Orange County, California. It is anticipated that 24 properties will require removal and/or repair of damaged piles. At 44 properties, vinyl sheet-pile will be installed 1-foot, 7-inches seaward of the bulkheads. At all 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. Sheet-pile installation will eliminate soft bottom habitat while slope protection will impact eelgrass (*Zostera marina*) habitat.

Tetra Tech, Inc., the property owners' authorized agents, have prepared two separate mitigation plans to compensate for loss of soft bottom habitat and impacts to eelgrass. The "Soft Bottom Mitigation Plan," describes procedures to restore and create tidal influence to existing wetland areas located in the Bolsa Chica Ecological Reserve, managed by the Department, in an area bordered by Pacific Coast Highway and Warner Avenue, approximately 0.5- to 1.2-miles southwest of the bulkhead projects. The "Eelgrass Mitigation and Eelgrass Transplant Report," describes procedures for eelgrass transplant at a site delineated for eelgrass mitigation by Orange County, approximately 1 mile northwest of the impact area. Tetra Tech, Inc., transplanted 3,600 square feet of eelgrass in June 2000.

The Department has reviewed the mitigation plans and finds them adequate compensation for project induced losses. Thus, we conclude that the project, as currently proposed, would not have a significant adverse impact upon the existing marine environment provided the described mitigation plans are carried out in full.

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. Marilyn Fluharty
Department of Fish and Game
San Diego, CA

Winston H. Hickox
Secretary for Environmental Protection

Santa Ana Region

Internet Address: http://www.swrcb.ca.gov
3737 Main Street, Suite 500, Riverside, California 92501-3339
Phone (909) 782-4130 • FAX (909) 781-6288

Gray Davis
Governor

April 5, 1999

Mr. & Mrs. Kompaniez
330 Blue Cavern Pt.
Long Beach, CA 90803

WAIVER OF WASTE DISCHARGE REQUIREMENTS AND WATER QUALITY CERTIFICATION FOR THE PROPOSED SEAWALL RESTORATION PROJECT, CITY OF HUNTINGTON BEACH, ORANGE COUNTY (NO ACOE REFERENCE NUMBER)

Dear Mr. & Mrs. Kompaniez:

On June 26, 1998, we received a transmittal dated June 25, 1998 from your agent, Cash & Associates, for the above-referenced project. Due to delays in procuring the biological report and CEQA document, your agent submitted a request for withdrawal on August 28, 1998. The requisite materials were submitted on March 16, 1999. We received all requested materials for a complete application as of March 16, 1999.

This letter responds to your request for certification, pursuant to Clean Water Act Section 401, that the proposed project described below will not violate State water quality standards:

1. Project description: You are proposing to reconstruct a failing seawall along your property at 16581 Carousel Lane in Huntington Beach to reinstate structural integrity to the seawall, which also provides support to the foundation of your residence. Proposed work includes removing and resupporting deteriorated sections of timber piles, grouting voids beneath the footing, and placing 7.5 cubic yards of rock slope protection against the toe of the seawall to prevent future undermining by the current. All of the work, except placement of the slope protection, has already been completed under an emergency Coastal Development Permit.

2. Receiving water: Huntington Harbour

3. Fill area: Ocean 0.01 acres of permanent impact. No wetlands will be impacted.

4. Dredge volume: None

5. Federal permit: The U.S. Army Corps of Engineers has not yet made a determination on your application.

6. Compensatory mitigation: None

A biological survey was conducted on October 14, 1998 and no sensitive mudflat flora or fauna was found. The proposed project is not expected to impact state- or federally-listed endangered or threatened species or their critical habitat. You are proposing to implement Best Management Practices during construction, including using silt curtains to minimize turbidity generation.

You have submitted an application for a nationwide permit to the U.S. Army Corps of Engineers in compliance with Section 404 of the Clean Water Act and have obtained Emergency Coastal Development Permit No. G5-98-179 from the California Coastal Commission for all tasks except the placement of rock slope protection. A separate Coastal Development Permit application has been made for the placement of the slope protection. The proposed construction activities are exempt from the requirements of CEQA under Section 15301.

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 Stream Channel Alterations specified on page 3 (of Attachment "A" to the Resolution) and the general conditions specified on page 4 are met, waste discharge requirements are waived for this project.

Pursuant to California Code of Regulations Section 3857, we will take no further action on your application. This is equivalent to waiver of water quality certification. Although we anticipate no further regulatory involvement, 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 Waste Discharge Requirements.

Should there be any questions, please contact Hope Smythe at (909) 782-4493 or Linda Garcia at (909) 782-4469.

Sincerely,

GERARD J. THIBEAULT
Executive Officer

Attachment

cc (with attachment):
Cash & Associates - Randy H. Mason

COASTAL COMMISSION

EXHIBIT # 6
PAGE 2 OF 14

California Regional Water Quality Control Board
Santa Ana Region

Winston H. Hickox
Secretary for Environmental Protection

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3737 Main Street, Suite 500, Riverside, California 92501-3339
Phone (909) 782-4130 • FAX (909) 781-6288

Gray Davis
Governor

April 5, 1999

Mr. John O. Anderson
16682 Wanderer Lane
Huntington Beach, CA 90803

WAIVER OF WASTE DISCHARGE REQUIREMENTS AND WATER QUALITY CERTIFICATION FOR THE PROPOSED RESUPPORT OF EXISTING SEAWALL, CITY OF HUNTINGTON BEACH, ORANGE COUNTY (NO ACOE REFERENCE NUMBER)

Dear Mr. Anderson:

On July 1, 1998, we received a transmittal dated June 30, 1998 from your agent, Cash & Associates, for the above-referenced project. Due to delays in procuring the biological report and CEQA document, your agent submitted a request for withdrawal on August 28, 1998. The requisite materials were submitted on March 16, 1999. We received all requested materials for a complete application as of March 16, 1999.

This letter responds to your request for certification, pursuant to Clean Water Act Section 401, that the proposed project described below will not violate State water quality standards:

1. Project description: You are proposing to resupport a failing seawall along your property at 16882 Wanderer Lane in Huntington Beach to reinstate structural integrity to the seawall, which also provides support to the foundation of your residence. Proposed work includes removing and resupporting deteriorated sections of timber piles, grouting voids beneath the footing, and placing 14 cubic yards of rock slope protection against the toe of the seawall to prevent future undermining by the current. All of the work, except placement of the slope protection, has already been completed under an emergency Coastal Development Permit.

2. Receiving water: Huntington Harbour

3. Fill area: Ocean 0.17 acres of permanent impact. The work is being conducted within the footprint of the existing seawall. No wetlands will be impacted.

4. Dredge volume: None

5. Federal permit: The U.S. Army Corps of Engineers has not yet made a determination on your application.

5-98-201

6.	Compensatory mitigation:	Eelgrass will be avoided to the extent practicable. If eelgrass is impacted, it will be replaced by at least a 1:1 ratio.

A biological survey was conducted on October 14, 1998 to look for sensitive mudflat flora and fauna and found eelgrass, an important habitat for the young of game fish. The proposed project is not expected to impact state- or federally-listed endangered or threatened species or their critical habitat. You propose to implement Best Management Practices during project construction, including using silt curtains to minimize turbidity generation and performing work outside of the eelgrass growing season.

You have submitted an application for a nationwide permit to the U.S. Army Corps of Engineers in compliance with Section 404 of the Clean Water Act and have obtained Emergency Coastal Development Permit No. G5-98-201 from the California Coastal Commission for all tasks except the placement of rock slope protection. A separate Coastal Development Permit application has been made for the placement of the slope protection. The proposed construction activities are exempt from the requirements of CEQA under Section 15301.

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 Stream Channel Alterations specified on page 3 (of Attachment "A" to the Resolution) and the general conditions specified on page 4 are met, waste discharge requirements are waived for this project.

Pursuant to California Code of Regulations Section 3857, we will take no further action on your application. This is equivalent to waiver of water quality certification. Although we anticipate no further regulatory involvement, 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 Waste Discharge Requirements.

Should there be any questions, please contact Hope Smythe at (909) 782-4493 or Linda Garcia at (909) 782-4469.

Sincerely,

GERARD J. THIBEAULT
Executive Officer

Attachment

cc (with attachment):
Cash & Associates - Randy H. Mason

California Regional Water Quality Control Board
Santa Ana Region

Winston H. Hickox
Secretary for Environmental Protection

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Phone (909) 782-4130 - FAX (909) 781-6288

Gray Davis
Governor

November 3, 2000

Albert & Sharon Appel
16651 Carousel Land
Huntington Beach, CA 92649

Robert F. Baron
16611 Carousel Lane
Huntington Beach, CA 92649

Bernie Barrad
16551 Carousel Lane
Huntington Beach, CA 92649

John D. Brady Jr.
16681 Carousel Lane
Huntington Beach, CA 92649

Jack & Margaret Kao
16641 Carousel Lane
Huntington Beach, CA 92649

Mark McGwire
16631 Carousel Lane
Huntington Beach, CA 92649

Richard & Iris Schuster
16661 Carousel Lane
Huntington Beach, CA 92649

Henry Woods Jr.
16681 Carousel Lane
Huntington Beach, CA 92649

Oliver & Jean Clark
16601 Carousel Lane
Huntington Beach, CA 92649

Hary & Mary Dawson
16512 Wanderer Lane
Huntington Beach, CA 92649

Gerson DeAlmeida
16711 Carousel Lane
Huntington Beach, CA 92649

Bob & Sarah Faber
16671 Carousel Lane
Huntington Beach, CA 92649

Lloyd Leonard Lady Jr.
16741 Carousel Lane
Huntington Beach, CA 92649

Lovena G. Mettler
16621 Carousel Lane
Huntington Beach, CA 92649

Yung H. Sun
16721 Carousel Lane
Huntington Beach, CA 92649

Michelle & Claude Yacoel
16501 Carousel Lane
Huntington Beach, CA 92649

Joseph & Janice Goss
16691 Carousel Lane
Huntington Beach, CA 92649

Jack M. Grossman
16731 Carousel Lane
Huntington Beach, CA 92649

Thomas & Victoria Hutton
16701 Carousel Lane
Huntington Beach, CA 92649

Henry G. Johnson
16425 Carousel Lane
Huntington Beach, CA 92649

Robert M. McClory
16531 Carousel Lane
Huntington Beach, CA 92649

Anselmo Pineda
16571 Carousel Lane
Huntington Beach, CA 92649

William & Elizabeth Whyte
16541 Carousel Lane
Huntington Beach, CA 92649

Zlatko Zadro
16742 Wanderer Lane
Huntington Beach, CA 92649

CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION FOR THE PROPOSED HUMBOLDT ISLAND BULKHEAD REPAIR ON PROPERTIES CONTAINING EELGRASS AND SOFT BOTTOM HABITAT, CITY OF HUNTINGTON BEACH (WDID # 8 303270001) (ACOE#199915697-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:

Twenty-four 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 proposed construction activities may significantly impact eelgrass, a sensitive plant species, and/or may also result in the loss of soft bottom habitat. Thirteen properties will impact eelgrass habitat, and 19 properties will impact soft bottom habitat (Table1).

2. Receiving water: Huntington Harbour, Orange County

3. Fill area: Ocean: 0.41 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 # 199915697-YJC

6. Compensatory mitigation:

Eelgrass Habitat Mitigation

The proposed bulkhead repair at Humboldt Island will impact 779.7 square feet of eelgrass habitat. The mitigation for this site will require transplanting eelgrass at a 1.2:1 ratio. On October 16, 2000, Regional Board staff received an *Eelgrass Mitigation Report and Eel grass Transplant Report* from Tetra Tech, Inc. The report indicated that a Memorandum of Understanding between the City of Huntington Beach and the County of Orange stipulates that Humboldt Island residents will adhere to the *Eelgrass Mitigation Report and Eel grass Transplant Report*. The mitigation project, including monitoring and evaluation, must also be consistent with the Southern California Eelgrass Mitigation Policy developed by the National Marine Fisheries Service, U.S. Fish and Wildlife Service, and the California Department of Fish and game (February 2, 1999).

Compensatory

The residents conducted the eelgrass transplant program in June of 2000,

mitigation (cont.):

compensating for the 779.7 square feet of Humboldt Island eelgrass impacts. The eelgrass transplant occurred in Huntington Harbour approximately one mile northwest of the impacted properties. The transplant was conducted under the guidance of the California Department of Fish and Game.

Currently the mitigation program is in the monitoring and evaluation phase. The Regional Board requires monitoring of the mitigation site for a minimum of five years. In addition, during bulkhead repair, the permittee must identify the eelgrass areas to be avoided and mark those areas for avoidance during construction.

Soft Bottom Habitat 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*, purposes to compensate for the 1243.1 square feet of soft bottom impacted by requiring repair of an existing conduit, removing concrete debris, regrading the mitigation area to elevations similar to adjacent wetland area, 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 2486.2 square feet to be regraded at the Bolsa Chica Wetlands, resulting in a 2.1:1ratio.

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 303270001			
Applicants Name	**Project Street Address**	**Lot Number**	**Habitat Impact**
Albert & Sharon Appel	16651 Carousel Lane	141	E, SB
Robert F. Baron	16611 Carousel Lane	137	SB
Bernie Barrad	16551 Carousel Lane	131	SB
John D. Brady Jr.	16681 Carousel Lane	144	E, SB
Oliver & Jean Clark	16601 Carousel Lane	136	SB
Hary & Mary Dawson	16512 Wanderer Lane	125	
Gerson DeAlmeida	16711 Carousel Lane	147	SB
Bob & Sarah Faber	16671 Carousel Lane	143	SB
Joseph & Janice Goss	16691 Carousel Lane	145	E, SB
Jack M. Grossman	16731 Carousel Lane	149	E, SB
Thomas &Victoria Hutton	16701 Carousel Lane	146	E
Henry G. Johnson	16425 Ladona Lane	111	E
Jack & Margaret Kao	16641 Carousel Lane	140	E, SB
Lloyd Leonard Lady Jr.	16741 Carousel Lane	150	E, SB
Robert M. McClory	16531 Carousel Lane	129	SB
Mark McGwire	16631 Carousel Lane	139	SB
Lovena G. Mettler	16621 Carousel Lane	138	E, SB
Anselmo Pineda	16571 Carousel Lane	133	E, SB
Richard & Iris Schuster	16661 Carousel Lane	142	E, SB
Yung H. Sun	16721 Carousel Lane	148	E
William & Elizabeth Whyte	16541 Carousel Lane	130	SB
Henry Wood Jr.	16752 Wanderer Lane	151	SB
Michelle & Claude Yacoel	16501 Carousel Lane	126	SB
Zlatko Zadro	16742 Wanderer Lane	152	E

E = Eelgrass 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 Regional Water Quality Control Board
Santa Ana Region

Winston H. Hickox
Secretary for Environmental Protection

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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**

July 30, 1999 File Ref: W 25508

Carl Schwinn
California Coastal Commission
200 Oceangate, Suite 1000
Long Beach, CA 90802-4302

Dear Mr. Schwinn:

SUBJECT: Application for Protective Structure Lease for Bulkhead Repair at 16851 Carousel Lane, Huntington Beach

This will acknowledge that the California State Lands Commission (CSLC) has received the subject application on behalf of Peter and Valerie Kompaniez, as Trustees of the Kompaniez 1998 Family Trust dated February 10, 1998, for bulkhead repair adjacent to their property in Huntington Harbour. CSLC staff is processing the application and intends to recommend that the CSLC issue a Protective Structure Lease at its next available meeting. Prior to that, we have no objection to California Coastal Commission (CCC) staff processing and scheduling the coastal development permit application for consideration by the CCC at its earliest convenience.

As soon as the project receives CCC approval, please provide us with a copy of the Notice of Intent to Issue Permit.

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

Sincerely,

Jane E. Smith
Public Land Management Specialist
Southern California Region

cc: Chris Mansour, Cash & Associates

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

ROBERT C. HIGHT, *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
E-Mail Address: smithj@slc.ca.gov

November 2, 1998

RECEIVED
NOV 10 1998
CASH & ASSOCIATES

File Ref: SD 98-09-22.7

Christopher Mansour, P.E.
Cash & Associates
P.O. Box 2715
Huntington Beach, CA 92647-0715

Dear Mr. Mansour:

SUBJECT: Coastal Development Project Review for Bulkhead Repair at 16682 Wanderer Lane, Huntington Beach

This is in response to your request on behalf of your client, John Anderson, for a determination by the California State Lands Commission (CSLC) whether it asserts a sovereign title interest in the property that the subject project will occupy and whether it asserts that the project will intrude into an area that is subject to the public easement in navigable waters.

The facts pertaining to your client's project, as we understand them, are these:

Your client is proposing to repair an existing bulkhead located adjacent to his residence at 16682 Wanderer Lane in Huntington Harbour. The repairs will involve further waterward reinforcement of the existing bulkhead. Pursuant to two agreements entered into in 1961 and 1962, BLA 16 and SLL 34, the CSLC settled certain property (boundary and title) ownership issues with the Huntington Harbour Corporation involving Huntington Harbour. 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 of Huntington Harbour. Your client's bulkhead does not appear to be located in an area of state ownership. Therefore, a lease from the CSLC is not required. If you have any questions, please contact Jane E. Smith, Public Land Management Specialist, at (916) 574-1892.

This letter is not intended, nor shall it be construed as, a waiver or limitation of any right, title, or interest of the state in any lands under the jurisdiction of the CSLC.

Sincerely,

Robert Lynch, Chief
Division of Land Management

cc: Curtis L. Fossum
Alan Scott
Jane E. Smith

COASTAL COMMISSION

EXHIBIT # 7
PAGE 2 OF 7

CALIFORNIA STATE LANDS COMMISSION
100 Howe Avenue, Suite 100-South
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February 17, 1999

File Ref: SD 98-11-24.5

Sarah E. McFadden
Tetra Tech, Inc.
670 North Rosemead Blvd.
Pasadena, CA 91107

Dear Ms. McFadden:

SUBJECT: Coastal Development Project Review for Bulkhead Repairs Adjacent to 38 Residences in Huntington Harbour, Orange County

I apologize for the delay in responding to your request on behalf of your clients for a determination by the California State Lands Commission (CSLC) whether it asserts a sovereign title interest in the property that the subject project will occupy and whether it asserts that the project will intrude into an area that is subject to the public easement in navigable waters.

The facts pertaining to your clients' project, as we understand them, are these:

Your clients propose the repair of an existing concrete bulkhead in Huntington Harbour, adjacent to 38 residences located on Carousel and Wanderer Lanes, Ladona Circle and Humboldt Drive. The timber piles have been damaged and can no longer support the bulkhead. The repair project will involve cutting the piles and installing jacks to transfer the load back onto the pile footings. A plastic sheetpile wall will be installed in front of the footings and concrete will be pumped under the footings to fill the void and seal the piles. The repair project will also involve rebuilding the slope waterward of the bulkhead with rock.

As you may be aware, pursuant to two agreements entered into in 1961 and 1962 (BLA 18 and SLL 34), the CSLC settled certain property (boundary and title) ownership issues with the Huntington Harbour Corporation involving Huntington Harbour. 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. The state retains a Public Trust easement over all the water-covered areas within Huntington Harbour. The bulkhead is considered to be the boundary between the private upland and the state's fee ownership.

Based on our review of the information you provided, the project will involve sovereign land waterward of the existing bulkhead and, therefore, requires CSLC authorization. An application will need to be submitted for the repair to the bulkhead adjacent to Lots 131-149 located on Carousel Lane. One application may be submitted for all 19 lots, along with a filing fee of $25 per lot and a processing deposit of $1500, for a total of $1975. The homeowners may wish to consider having one individual represent them during the application process. However, all of the homeowners will need to be signatories to the lease documents.

I have enclosed an application package for your use. Please have the application completed and returned to me, along with the necessary fees, as soon as possible. In addition, the project is subject to environmental review by the CLSC's staff. Standards for this review are set forth in the California environmental Quality Act (CEQA), the State CEQA Guidelines, and the Public Resources Code.

Upon receipt of the application and fees, your clients or their designated representative will be provided a reimbursement agreement. An executed reimbursement agreement to cover the CSLC's cost to process this transaction is required as part of a complete application. If the actual staff costs of processing this transaction are less than the deposited amount, the difference will be refunded.

As to the remaining water-covered area not subject to the CSLC's leasing jurisdiction, we do not believe that the repair work will interfere with the Public Trust Easement and interpose no objection to the project proceeding at those locations.

If you have any questions, please feel free to give me a call.

Sincerely,

Jane E. Smith

Jane E. Smith
Public Land Management Specialist
Southern California Region

Enclosure

cc: Meg Vaughn, CCC/Long Beach

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

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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

Jane E. Smith
Public Land Management Specialist
Southern California Region

cc: Molly Mell, Tetra Tech

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

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Contact FAX: (916) 574-192

March 10, 1999

File Ref: W 25524

Karl Schwing
California Coastal Commission
200 Oceangate, 10th Floor
Long Beach, CA 90802

Dear Karl:

SUBJECT: Proposed Bulkhead Repairs – Humboldt Island in Huntington Harbour, Orange County

Pursuant to our telephone conversation yesterday, enclosed is a copy of my February 17, 1999 letter to Tetra Tech that outlines the jurisdiction of the California State Lands Commission (CSLC) with regard to the subject project. Tetra Tech has submitted an application for bulkhead repairs adjacent to Lots 130-149, excluding Lots 132 and 134 (Carousel Lane.) CSLC staff is currently processing the application and expects to recommend that the CSLC issue Protective Structure Leases for bulkhead repair adjacent to those lots. I do not know at this time when the CSLC will consider the issuance of these leases.

Therefore, we do not object to the California Coastal Commission proceeding with the processing and consideration of their application for a Coastal Development Permit.

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

Sincerely,

Jane E. Smith
Public Land Management Specialist
Southern California Region

Enclosure
cc: Marie Marston, Tetra Tech
Betty Silva

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

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May 23, 2000

File Ref: PRC 4734

Sarah E. McFadden
Tetra Tech, Inc.
670 North Rosemead Blvd.
Pasadena, CA 91107

Dear Ms. McFadden:

SUBJECT: Soft Bottom Mitigation Plan for Humboldt Island and Trinidad Island Bulkhead Repair Projects, Huntington Harbour, Orange County

Staff of the California State Lands Commission (CSLC) has reviewed the subject plan. The plan was prepared at the request of the State Department of Fish and Game (DFG) to compensate for the loss of soft bottom habitat in Huntington Harbour. As we understand it, the State Department of Fish and Game (DFG) has identified an existing wetland area adjacent to the southeast corner of Pacific Coast Highway and Warner Avenue within the Bolsa Chica Ecological Reserve as a proposed mitigation site. As you are aware, we are processing numerous applications for those bulkhead repair projects that will involve sovereign lands under the jurisdiction of the CSLC.

The proposed mitigation project will involve conduit restoration to create a tidal influence in the existing and proposed wetland area, concrete debris removal, and regrading of the mitigation area to elevations matching the functioning wetland area immediately to the north. The mitigation site is within the area leased by the CSLC to DFG for management of the ecological reserve. Therefore, no further authorization from the CSLC is required. We would, however, appreciate receiving copies of the field survey reports when they become available.

Sincerely,

Jane E. Smith

Jane E. Smith
Public Land Management Specialist
Southern California Region

cc: Terri Stewart, DFG
Erick Burres, DFG
Marilyn Fluharty, DFG
Karl Schwing, CCC/Long Beach

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.

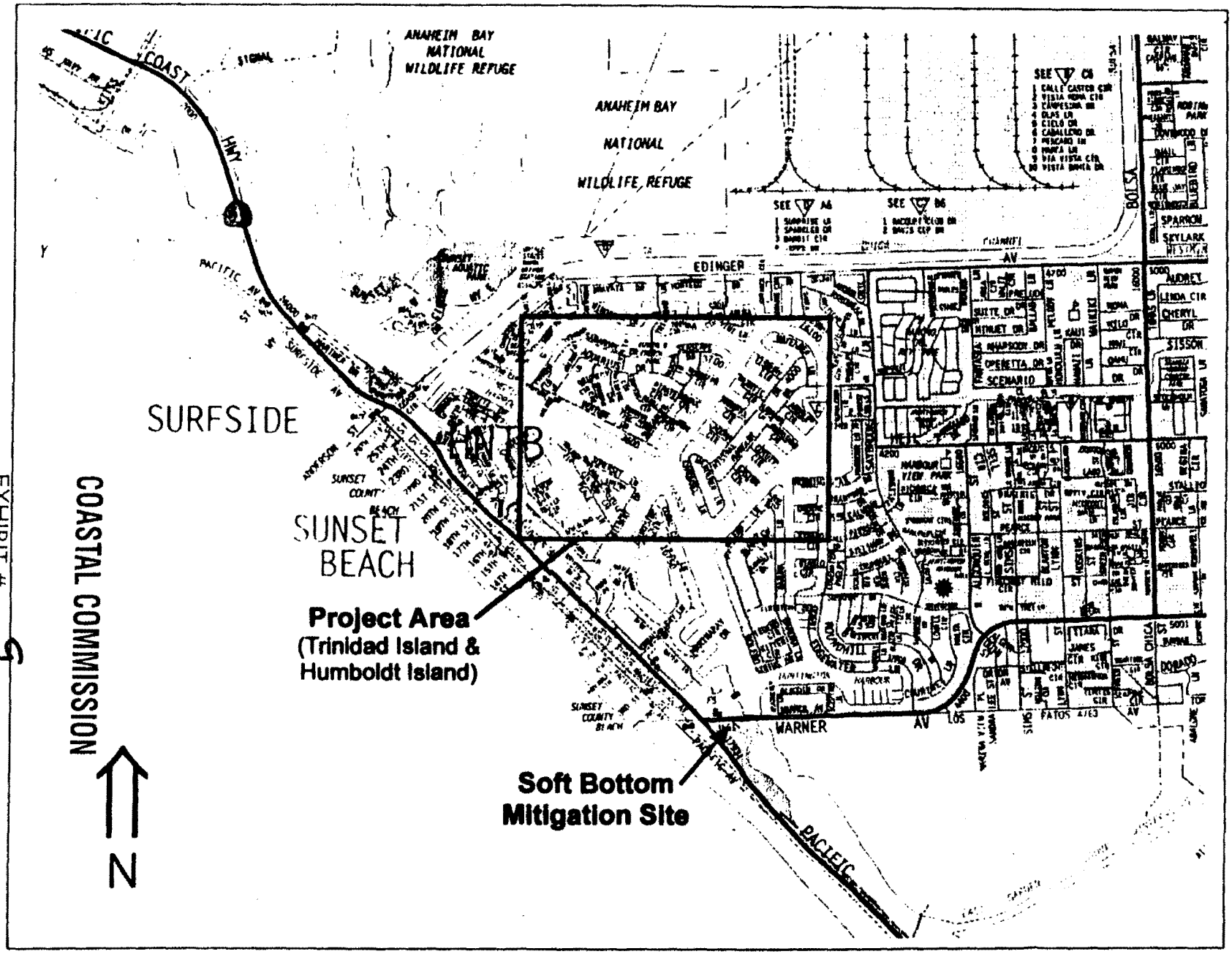
2) Projects impacting less than 10 square meters. For these projects, an exemption may be requested by a project applicant from the mitigation requirements as stated in this policy, provided suitable out-of-kind mitigation is proposed. A case-by-case evaluation and determination regarding the applicability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

(last revised 2/2/99)

Policies
Habitat Conservation
Division
Southwest Region Home
Page

COASTAL COMMISSION

EXHIBIT # 8
PAGE 4 OF 4

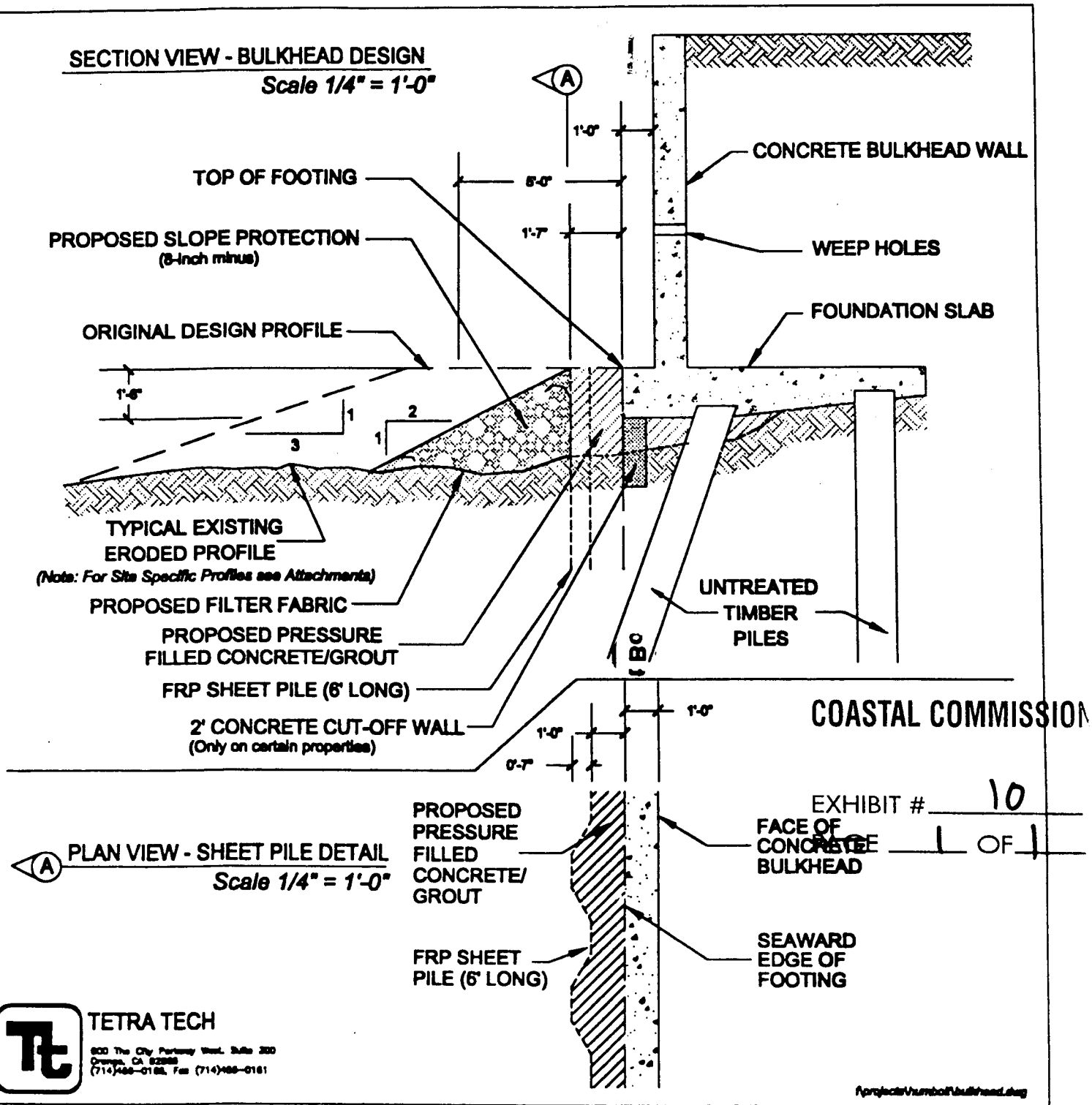


Source: Thomas Bros. Maps

Tetra Tech
INCORPORATED

Site Vicinity Map
Huntington Harbour Bulkhead Repair
Soft Bottom Mitigation

TC 10200
FIGURE 1



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