

CALIFORNIA COASTAL COMMISSION

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REGULAR CALENDAR
STAFF REPORT AND PRELIMINARY RECOMMENDATION

Application No.: 6-00-102

Applicant: Jack Lampl

Agent: Matt Peterson

Description: Repairs to an existing unpermitted approximately 36 foot-high, 67 foot-long tiebacked seawall involving installation of ten additional, 40 foot-long tiebacks, placement of concrete gradebeams at new tieback locations, removal of unpermitted stairway, concrete landing and steps from face of seawall and coloring of a portion of the seawall.

Site: On public beach fronting 676-678 Neptune Avenue, Encinitas, San Diego County. APN(s) 256-051-07

Summary of Staff's Preliminary Recommendation:

Staff is recommending approval of the proposed seawall repair and removal of the unpermitted stairway, landing and steps with several special conditions. While the existing seawall is unpermitted, it has been documented that it cannot be removed without threatening the stability of the existing blufftop residential structure. In addition, it has been documented that repairs are necessary to maintain the structural integrity of the seawall. With the proposed conditions, staff has found that the proposed repairs are consistent with Coastal Act policies. In addition, the proposal to remove the existing private access stair on the face of the seawall will reduce the visual impacts associated with the seawall structure and the proposal to remove the concrete stairway and landing that extends out from base of the seawall will enhance lateral public access in front of the seawall. Because the proposed repairs will result in the existing seawall remaining in place on the public beach for a longer period of time (estimated at an additional 20 years), payment of a beach sand mitigation fee to mitigate the direct and long-term impacts on shoreline sand supply resulting from the extended life of the seawall is required.

STAFF NOTES:

On August 12, 1999, the Commission denied the applicant's request for an after-the-fact permit for an approximately 36 foot-high, 67 foot-long seawall, repairs to the seawall and after-the-fact private access stairway located at the base of the subject bluff because the applicant had failed to demonstrate that; the structures were necessary to protect the existing residences and because there were feasible design alternatives that would protect the structures with fewer adverse impacts to coastal resources. Because the seawall was found to be inconsistent with the Coastal Act, the Commission also denied the requested repairs and left disposition of the unpermitted structures and repair of the structure to future Commission enforcement action. The applicant subsequently initiated litigation against the Commission. The parties have entered into a settlement agreement in which, among other things, the applicant has agreed to apply for a new coastal development permit for repairs to the seawall structure and the removal of the stairway and its concrete landing and steps.

Substantive File Documents: Certified City of Encinitas Local Coastal Program (LCP); Extended Initial Study 95-106 MUP/EIA dated June 8, 1999; Geotechnical Exploration for 678 Neptune Avenue by Converse Consultants dated April 19, 1985; Geologic Reconnaissance, File No. 183-95 by Michael W. Hart dated February 6, 1995; Limited Geotechnical Assessment Update by Soil Engineering Construction 678 Neptune Avenue, dated December 18, 1998; Design Report for Seawall & Bluff Stabilization for 656, 658 & 660 Neptune Avenue by First Phase Engineering dated May 9, 1992; CDP Nos. 6-92-254, 6-85-396, 6-87-678, 6-89-297-G, 6-92-86-G, 6-92-167-G, 6-93-131, 6-95-66, 6-96-6-G, 6-96-122-G, 6-98-39, 6-98-131, 6-99-8, 6-99-8-R, A-6-ENC-99-115 and A-6-ENC-99-115R; "Landslide Hazards in the Encinitas Quadrangle, San Diego County, California", Open File Report, dated 1986 by the California Division of Mines and Geology; U.S. Army Corps of Engineers, Los Angeles District (September 1991) State of the Coast Report, San Diego Region (CCSTWS), and all Technical Support Documents prepared for this study; San Diego Association of Governments (July 1993) Shoreline Preservation Strategy (including technical report appendices, The Planners Handbook, Beachfill Guidelines, and Seacliffs, Setbacks and Seawalls Report); Stone, Katherine E. and Benjamin Kaufman (July 1988) "Sand Rights: A Legal System to Protect the 'Shores of the Sea'", Journal of the American Shore and Beach Preservation Association, Vol. 56, No. 3, pp. 8 - 14; Tait, J.F. and Gary B. Griggs (1990) "Beach Response to the Presence of a Seawall," Journal of the American Shore and Beach Preservation Association, Vol. 58, No. 2, pp. 11 - 28; Group Delta Consultants, Inc. (November 3, 1993) "Shoreline Erosion Evaluation Encinitas Coastline, San Diego County, California" prepared for Mr. and Mrs. Richard Cramer (Project No. 1404-EC01); Everts, Craig (1991) "Seacliff Retreat and Coarse Sediment Yields in Southern California," Proceedings of Coastal Sediments '91, Specialty Conference/WR Div./ASCE, Seattle WA; Sunamura, T. (1983) "Processes of Sea Cliff and Platform Erosion," in CRC Handbook of Coastal Processes and Erosion, P.D. Komar (ed), CRC Press, Boca Raton, FL; Beach Bluff

Erosion Technical Report for the City of Encinitas by Zeiser Kling Consultants, Inc. dated January 24, 1994; Sterrett, E.H. and R.E. Flick. "Shoreline Erosion Atlas." Shoreline Erosion Assessment and Atlas of the San Diego Region, vol. II. Sacramento, California: California Department of Boating and Waterways, 1994; "Encinitas Beach Survey" by Centennial Engineering, Inc. dated September 1994; Reconnaissance Report for the Encinitas Shoreline by the U.S. Army Corps of Engineers, dated March 1996; Final Draft Technical Report for the City of Encinitas Comprehensive Coastal Bluff and Shoreline Plan by Moffatt and Nichol Engineers, dated February 1996

I. PRELIMINARY STAFF RECOMMENDATION:

The staff recommends the Commission adopt the following resolution:

MOTION: *I move that the Commission approve Coastal Development Permit No. 6-00-102 pursuant to the staff recommendation.*

STAFF RECOMMENDATION OF APPROVAL:

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

RESOLUTION TO APPROVE THE PERMIT:

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

II. Standard Conditions.

See attached page.

III. Special Conditions.

The permit is subject to the following conditions:

1. Mitigation for Impacts to Sand Supply. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicants shall provide evidence, in a form and content acceptable to the Executive Director, that a total fee of \$10,524.80 has been deposited in an interest bearing account designated by the Executive Director, in-lieu of providing sand to replace the sand and beach area that would be lost due to impacts resulting from the extend life of the existing protective structure. The methodology used to determine the appropriate mitigation fee for the subject site(s) is that described in the staff report dated 9/26/00 prepared for Coastal Development Permit #6-00-102. All interest earned shall be payable to the account for the purposes stated below.

The purpose of the account shall be to establish a beach sand replenishment fund to aid SANDAG, or a Commission-approved alternate entity, in the restoration of the beaches within San Diego County. The funds shall solely be used to implement projects which provide sand to the region's beaches, not to fund operations, maintenance or planning studies. The funds shall be released only upon approval of an appropriate project by the Executive Director of the Coastal Commission. The funds shall be released as provided for in a MOA between SANDAG, or a Commission-approved alternate entity, and the Commission, setting forth terms and conditions to assure that the in-lieu fee will be expended in the manner intended by the Commission. In the event the MOA is terminated, the Commission can appoint an alternative entity to administer the fund.

2. Monitoring Program. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit to the Executive Director for review and written approval, a plan prepared by a licensed engineer for a seawall monitoring program which includes the following:

- a. An evaluation of the condition and performance of the seawall and drainage system, addressing whether any significant weathering or damage has occurred that would adversely impact the future performance of the seawall or drains.
- b. Within 120 days of completion of the repairs authorized by the subject permit, the applicant shall submit a report to the Executive Director of the Commission of the evaluation described in Subsection a. above.
- c. The applicant shall conduct the evaluation described in Subsection a. above annually in April of each year for three years beginning with April 2001 and for submittal of a report to the Executive Director of the Coastal Commission on May 1 of each year for three years beginning May 1, 2001. Each report shall be prepared by a licensed engineer and contain recommendations, if any, for necessary changes or modifications to the seawall.

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

3. Future Maintenance/Debris Removal. Within 10 days of completion of construction of repairs to the protective device and within 10 days of completion of the removal of the stairway and stairway landing, the permittee shall remove all debris deposited on the beach or in the water as a result of the subject construction activities. The permittee shall maintain the permitted seawall in its approved state except to the extent necessary to comply with the requirements set forth below. Any change in the design of the seawall or future additions/reinforcement of the seawall beyond minor regrouting or other exempt maintenance, as defined by Section 13252 of the California Code of Regulations, will require a coastal development permit. However, in all cases after inspection, if it is apparent that repair and maintenance is necessary, the permittee shall contact the Commission office to determine whether permits are necessary.

4. Staging Areas/Access Corridors/Timing of Construction. PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit to the Executive Director for review and written approval, final plans indicating the location of access corridors to the construction site and staging areas. The final plans shall indicate that:

- a. No staging of equipment or materials shall occur on sandy beach or public parking areas. The permittee shall not store any construction materials or waste where it will be or could potentially be subject to wave erosion and dispersion. In addition, no machinery shall be placed, stored or otherwise located in the intertidal zone at any time.
- b. Access corridors shall be located in a manner that has the least impact on public access to and along the shoreline.
- c. No work shall occur on the beach on weekends and holidays during the summer months (Memorial Day to Labor Day) of any year.
- d. The applicant shall submit evidence that the approved plans/notes have been incorporated into construction bid documents. The staging site shall be removed and/or restored immediately following completion of the development.

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

5. Other Permits. PRIOR TO COMMENCEMENT OF CONSTRUCTION, the applicant shall submit copies of all other required local, state or federal discretionary permits for the development herein approved. Any mitigation measures or other changes to the project required through said permits shall be reported to the Executive Director

and shall become part of the project. Such modifications, if any, may require an amendment to this permit or a separate coastal development permit.

6. Final Plans. PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit to the Executive Director for review and written approval, final repair plans, that have been stamped and approved by the City of Encinitas. Said plans shall be in substantial conformance with the submitted building plans dated 12/11/00 and received by the Commission on 8/21/00 and shall include the following:

- a. Sufficient detail regarding the technology or other indication of the materials and color scheme (including provision of a color board) to be utilized in covering the existing 12 ft. high concrete wall that is attached to the top of the southern half of the seawall to assure the color closely matches the adjacent natural bluffs.

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

7. Assumption of Risk. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall execute and record a deed restriction, in a form and content acceptable to the Executive Director, which shall provide: (a) that the applicant understands that the site may be subject to extraordinary hazard from storm waves, erosion and bluff collapse, and the applicant assumes the liability from such hazards; and (b) the applicant unconditionally waives any claim of liability on the part of the Commission or its successors in interest for damage from such hazards and agrees to indemnify and hold harmless the Commission, its officers, agents, and employees relative to the Commission's approval of the project for any damage due to natural hazards. The document shall run with the land, binding all successors and assigns, and shall be recorded free of prior liens that the Executive Director determines may affect the enforceability of the restriction. This deed restriction shall not be removed or changed without a Coastal Commission-approved amendment to this coastal development permit unless the Executive Director determines that no amendment is required.

IV. Findings and Declarations.

The Commission finds and declares as follows:

1. Detailed Project Description/History. The proposed development involves repairs to an unpermitted approximately 36 foot- high, 11 foot-wide, 67 foot-long tie-back seawall which is located on the public beach at the base of a coastal bluff, the removal of an unpermitted stairway attached to the seawall and removal of a concrete stairway landing and steps from the face of the seawall's concrete footing. The repairs consist of

installation of ten additional 40 foot-long tiebacks and placement of concrete gradebeams at the new tieback locations, rust protection treatment of existing exposed metal, and concrete patching and grouting of spalled and crack areas of the existing seawall. The stairway and landing removal involves the cutting off of the metal contacts to the seawall and the concrete landing and steps will be cut off flush with the existing foundation. All exposed rebar or other metallic materials exposed after cutting of the stairway and landing will be coated with epoxy or grouted. The applicant also proposes to color the existing 12 ft. high concrete wall that is attached to the top of the southern half of the seawall to reduce its visibility.

The subject development is located at the base of an approximately 95 ft. high coastal bluff on the west side of Neptune Avenue in Encinitas fronting a single lot containing a 3,482 sq. ft. duplex that is located approximately 17 feet from the edge of the bluff. The existing duplex was constructed in 1972 prior to the enactment of the Coastal Act. In addition, two approximately 20 foot-high upper bluff retaining walls have been constructed beneath the edge of the upper bluff and a wooden retaining wall exists on the south half of the bluff between the upper bluff retaining walls and the lower seawall.

On August 12, 1999, the Commission denied the applicant's request for an after-the-fact permit for an approximately 36 foot-high, 67 foot-long seawall, repairs to the seawall and after-the-fact private access stairway located at the base of the subject bluff because the applicant had failed to demonstrate that the structures were necessary to protect the existing residences; the design was adequate; and, there were feasible alternatives that would protect the structures with fewer adverse impacts to coastal resources as required by Sections 30235 and 30253 of the Coastal Act. Because the seawall was found to be inconsistent with the Coastal Act, the Commission also denied the requested repairs and left disposition of the unpermitted structures and repair of the structure to future Commission enforcement action. In February 2000, the Commission denied the applicant's request for after-the-fact approval of the upper bluff retention system, stairway and addition to the residence, but approved repairs to the existing unpermitted retaining structures.

Similarly designed seawall structures abut the existing subject seawall on its north and south sides. The Commission approved the follow-up to an emergency permit for the adjacent 36 foot-high seawall located to the south on July 13, 1999 (ref. CDP #6-99-9/Ash, Bourgault & Mahoney). The 25 foot-high seawall (that included a stairway and deck) located on the adjacent northern property was constructed without a required coastal development permit and the Commission denied the after-the-fact request for its approval in September of 1993 (ref. CDP #6-92-254/Coleman).

The western boundary of the subject lot is a surveyed line, although any portion of the lot that is seaward of the mean high tide line is excluded from the lot. That surveyed line is at or west of the toe of the bluff, such that the bluff face is in private ownership. The subject seawall development lies seaward of the mean high tide line (MHTL). In September 1994, State Lands Commission surveyed the MHTL in Encinitas and concluded that the MHTL follows the toe of the bluff in the City of Encinitas ("Encinitas

Beach Survey by Centennial Engineering, Inc. dated September 1994). The City of Encinitas has a certified LCP and has been issuing coastal development permits since May of 1995. However, because the proposed development lies seaward of the MHTL, it is located within the Commission's area of original jurisdiction, where permit jurisdiction is not delegated to the local government. As such, the standard of review is Chapter 3 policies of the Coastal Act, with the certified LCP used as guidance.

2. Geologic Conditions and Hazards. Section 30235 of the Coastal Act states, in part:

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.

In addition, Section 30253 of the Coastal Act states, in part:

New development shall:

(1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.

(2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs...

Coastal Act Section 30235 acknowledges that seawalls, revetments, cliff retaining walls, groins and other such structural or "hard" solutions alter natural shoreline processes. Thus, such devices are required to be approved only when necessary to protect existing structures in danger from erosion. The Coastal Act does not require the Commission to approve shoreline altering devices to protect vacant land or in connection with construction of new development. A shoreline protective device proposed in those situations is likely to be inconsistent with various other Coastal Act policies. For example, Section 30253 addresses new development and requires that it be sited and designed to avoid the need for protective devices that would substantially alter natural landforms along bluffs and cliffs.

In addition, the Commission has generally interpreted Section 30235 to require the Commission to approve shoreline protection only for existing principal structures. The Commission must always consider the specifics of each individual project, but has found in many instances that accessory structures such as patios, decks and stairways are not required to be protected under Section 30235 or can be protected from erosion by relocation or other means that does not involve shoreline protection. The Commission has historically permitted at grade structures within the geologic setback area recognizing

they are expendable and capable of being removed rather than requiring a protective device that alters natural landforms along bluffs and cliffs.

The proposed development is located at the base of a coastal bluff in the City of Encinitas. The site consists of Pleistocene marine terrace deposits that are underlain with Eocene Torrey Sandstone. The Torrey Sandstone covers the lower portion of the bluff. Continual bluff retreat and the formation and collapse of seacaves have been documented in northern San Diego County, including the Cities of Solana Beach and Encinitas. Bluffs in this area are subject to a variety of erosive forces and conditions (e.g., wave action, reduction in beach sand, seacave development). As a result of these erosive forces, the bluffs and blufftop lots in the Encinitas area are considered a hazard area.

Furthermore, in 1986 the Division of Mines and Geology mapped the entire Encinitas shoreline as an area susceptible to landslides, i.e., mapped as either "Generally Susceptible" or "Most Susceptible Areas" for landslide susceptibility (ref. Open File Report, "Landslide Hazards in the Encinitas Quadrangle, San Diego County, California", dated 1986). Documentation has been presented in past Commission actions concerning the unstable nature of the bluffs in these communities and nearby communities (ref. CDP Nos. 6-93-181/Steinberg, 6-92-212/Wood, 6-92-82/Victor, 6-89-297-G/Englekirk, 6-89-136-G/Adams, and 6-85-396/Swift). In addition, a number of significant bluff failures have occurred along the northern Solana Beach/Encinitas coastline which have led to emergency permit requests for shoreline protection (ref. CDP Nos. 6-87-86-G and 6-87-167-G/Bourgault, Mallen & White; 6-93-181/Steinberg, 6-93-131/Richards et al, 6-93-36-G/Clayton, 6-93-024-G/Wood, 6-92-212/Wood, 6-92-73-G/Robinson, 6-91-312-G/Bradley, 6-98-029/Bennet, 6-98-157-G/Colton and 6-99-41-G/Bradley).

The seawall that is proposed for repairs fronts a residential lot containing a duplex that was constructed prior to enactment of the Coastal Act. The existing unpermitted seawall was apparently constructed in stages, by prior owners, from approximately 1985 through 1995. In the case of the subject proposal, there is an existing seawall on the public beach. While the Commission has previously denied the seawall (ref. CDP #6-99-8) as inconsistent with Coastal Act policies, the applicant has demonstrated that the seawall cannot be removed without threatening the stability of the blufftop residence. In addition, the applicant has demonstrated that without repairs to the seawall, it could fail. A failure of the seawall could result in bluff failure, which would threaten the residential structure. As such, the applicant is requesting repairs to the unpermitted seawall to assure continued protection to the residential structure.

According to the applicant's engineer, the existing seawall consists of nine vertical concrete columns that are anchored into the bluff by two rows of steel tiebacks. Between the vertical columns, there is wood lagging. The engineer notes that the tiebacks provide the majority of the anchoring for the seawall and based on inspection of the seawall, there is spalling and cracking in the concrete column and the tiebacks appear to have significantly deteriorated. In addition, the engineer notes:

Presently, the tiebacks for the lower seawall are severely affected by corrosion. It is our opinion, based on our experience designing and constructing these types of tied-back structures, that the load transfer from the tiebacks to the columns is greatly reduced and may be next to nothing. Therefore, the stability of this portion of the seawall is severely compromised and a catastrophic failure could occur.

The applicant's engineer further states that the tiebacks need to be replaced or reinforced as soon as possible. The Commission staff engineer has reviewed the applicant's request and concurs with the conclusions and recommendations of the applicant's engineer. Thus, the proposed repairs are necessary to assure continued protection to the existing residential structure on the blufftop. Again, the repairs will consist of placing 10 concrete gradebeams between the existing concrete columns and then drilling 10 new tiebacks to support the seawall. The work will occur from the beach and will not result in further bluff instability. Thus, the Commission finds that the proposed repairs will occur in a manner that will minimize the risk of geologic instability.

The Commission also finds that the proposed repairs will prolong the existence of the unpermitted seawall. There are a number of adverse impacts to public resources associated with the construction of shoreline protection, such as the subject seawall. The natural shoreline processes referenced in Section 30235, such as the formation and retention of sandy beaches, can be significantly altered by construction of a seawall, since bluff retreat is one of several ways that beach area and beach quality sand is added to the shoreline. This retreat is a natural process resulting from many different factors such as erosion by wave action causing cave formation, enlargement and eventual collapse, saturation of the bluff soil from ground water causing the bluff to slough off and natural bluff deterioration. When a seawall is constructed on the beach at the toe of the bluff, it directly impedes these natural processes.

Many of the effects of a structure on the beach are temporary or difficult to distinguish from all the other actions which modify the shoreline. Nevertheless, some of the effects which a structure may have on natural shoreline processes can be quantified. Three of the effects from a shoreline protective device which can be quantified are: 1) loss of the beach area on which the structure is located; 2) the long-term loss of beach which will result when the back beach location is fixed on an eroding shoreline; and 3) the amount of material which would have been supplied to the beach if the back beach or bluff were to erode naturally.

The proposed repairs will result in a continuation of the existing shoreline altering device and its resultant impacts on beach sand supply. The seawall proposed for repair has been in place on the public beach for 15 years and, based on the information submitted by the applicant's engineer, the life expectancy of the repaired wall will be another 20 years. In other words, after the proposed repairs are completed, the applicant's engineer estimates the seawall will remain for another 20 years. Based on review of the existing seawall, the Commission finds that the following impacts on beach sand supply will continue after the seawall is repaired. The seawall, which is approximately 67 ft. long by 11.5 feet thick, will continue to encroach onto and permanently displace an estimated 770 sq. ft. of

public beach area. Based on a rough approximation of current and future bluff profiles, it is estimated that the beach will be deprived of approximately 1,196 cubic yards of beach quality sand over the extended life of the seawall due to the seawall's effect on the natural processes of the bluff. It should be noted that the seawall has been in place already for 15 years and the applicant will pay (through the settlement agreement) an in-lieu mitigation fee \$12,357.75 of for the time the seawall has been in place.

Special Condition #1 addresses the additional mitigation required for extension of the life of the seawall. The methodology used to derive the fee utilizes a number of factors, one being the expected life of the structure, to determine the fee amount. The condition requires the applicant to deposit an in-lieu fee to fund beach sand replenishment projects as mitigation for continued impacts of the repaired shoreline protective device on beach sand supply and shoreline processes. The following is the methodology used by Commission staff to develop the in-lieu fee amount. The methodology uses site-specific information provided by the applicant as well as estimates, derived from region-specific criteria, of both the loss of beach material and beach area which could occur over the life the structure, and of the cost to purchase an equivalent amount of beach quality material and to deliver this material to beaches in the project vicinity.

The following is a description of the methodology. The actual calculations which utilize values that are applicable to the subject sites, and were used as the basis for calculating the estimated range of the mitigation fee, are attached as Exhibit 7 to this report.

Fee = (Volume of sand for mitigation) x (unit cost to buy and deliver sand)

$$M = V_t \times C$$

where

M = Mitigation Fee

V_t = Total volume of sand required to replace losses due to the structure, through reduction in material from the bluff, reduction in nearshore area and loss of available beach area (cubic yards).
Derived from calculations provided below.

C = Cost, per cubic yard of sand, of purchasing and transporting beach quality material to the project vicinity (\$ per cubic yard). Derived from the average of three written estimates from sand supply companies within the project vicinity that would be capable of transporting beach quality material to the subject beach, and placing it on the beach or in the near shore area.

$$V_t = V_b + V_w + V_e$$

where

V_b = Volume of beach material that would have been supplied to the beach if natural erosion continued, based on the long-term regional bluff retreat rate, design life of the structure, percent of beach quality material in the bluff, and bluff geometry (cubic yards). This is equivalent to the long-term reduction in the supply of bluff material to the beach resulting from the structure.

V_w = Volume of sand necessary to replace the beach area that would have been created by the natural landward migration of the beach profile without the seawall, based on the long-term regional bluff retreat rate, and beach and nearshore profiles (cubic yards)

V_e = Volume of sand necessary to replace the area of beach lost due to encroachment by the seawall; based on the seawall design and beach and nearshore profiles (cubic yards)

$$V_b = (S \times W \times L/27) \times [(R h_g) + (h_u/2 \times (R + (R_{cu} - R_{cs})))]$$

where

R = Long-term regional bluff retreat rate (ft./yr.), based on historic erosion, erosion trends, aerial photographs, land surveys, or other accepted techniques. For the Solana Beach area, this regional retreat has been estimated to be 0.2 ft./year. This value may be used without further documentation. Alternative retreat rates must be documented by the applicant and should be the same as the predicted retreat rate used to estimate the need for shoreline armoring.

L = Design life of armoring without maintenance (yr.) If maintenance is proposed and extends the life of the seawall beyond the initial estimated design life, a revised fee shall be determined through the coastal development permit process.

W = Width of property to be armored (ft.)

h = Total height of armored bluff (ft.)

S = Fraction of beach quality material in the bluff material, based on analysis of bluff material to be provided by the applicant

h_s = Height of the seawall from the base to the top (ft)

h_u = Height of the unprotected upper bluff, from the top of the seawall to the crest of the bluff (ft)

R_{cu} = Predicted rate of retreat of the crest of the bluff, during the period that the seawall would be in place, assuming no seawall were installed (ft/yr). This value can be assumed to be the same as R unless the applicant provides site-specific geotechnical information supporting a different value.

R_{cs} = Predicted rate of retreat of the crest of the bluff, during the period that the seawall would be in place, assuming the seawall has been installed (ft/yr). This value will be assumed to be zero unless the applicant provides site-specific geotechnical information supporting a different value.

NOTE: For conditions where the upper bluff retreat will closely follow the lower bluff, this volume will approach a volume of material equal to the height of the total bluff, the width of the property and a thickness equal to the total bluff retreat that would have occurred if the seawall had not been constructed. For conditions where the upper bluff has retreated significantly and would not be expected to retreat further during the time that the seawall is in place, this volume would approach the volume of material immediately behind the seawall, with a thickness equal to the total bluff retreat that would have occurred if the seawall had not been constructed.

$$V_w = R \times L \times v \times W$$

where

R = Long-term regional bluff retreat rate (ft./yr.), based on historic erosion, erosion trends, aerial photographs, land surveys, or other accepted techniques. For the Encinitas area, this regional retreat has been estimated to be 0.2 ft./year. This value may be used without further documentation. Alternative retreat rates must be documented by the applicant and should be the same as the predicted retreat rate used to estimate the need for shoreline armoring.

L = Design life of armoring without maintenance (yr.) If maintenance is proposed and extends the life of the seawall beyond the initial estimated design life, a revised fee shall be determined through the coastal development permit process.

v = Volume of material required, per unit width of beach, to replace or reestablish one foot of beach seaward of the seawall; based on the vertical distance from the top of the beach berm to the seaward limit of reversible sediment movement (cubic yards/ft of width and ft. of retreat). The value of v is often taken to be 1 cubic yard per square foot of beach. In the report, "Oceanside Littoral Cell Preliminary Sediment Budget Report" (December 1987, part of the Coast of California Storm and Tide Wave Study, Document #87-4), a value for v of 0.9 cubic yards/square foot was suggested. If a vertical distance of 40 feet is used for the range of reversible sediment movement, v would have a value of 1.5 cubic yards/square foot (40 feet x 1 foot x 1 foot / 27 cubic feet per cubic yard). These different approaches yield a range of values for v from 0.9 to 1.5 cubic yards per square foot. The value for v would be valid for a region, and would not vary from one property to the adjoining one. Until further technical information is available for a more exact value of v, any value within the range of 0.9 to 1.5 cubic yards per square foot could be used by the applicant without additional documentation. Values below or above this range would require additional technical support.

W = Width of property to be armored (ft.)

$$V_e = E \times W \times v$$

where

E = Encroachment by seawall, measured from the toe of the bluff or back beach (ft.)

W = Width of property to be armored (ft.)

v = Volume of material required, per unit width of beach, to replace or reestablish one foot of beach seaward of the seawall, as described above;

The San Diego Association of Governments (SANDAG) has adopted the Shoreline Preservation Strategy for the San Diego region and is currently working on techniques toward its implementation. The Strategy considers a full range of shoreline management tactics, but emphasizes beach replenishment to preserve and enhance the environmental quality, recreational capacity, and property protection benefits of the region's shoreline. Funding from a variety of sources will be required to implement the beach replenishment and maintenance programs identified in the SANDAG Strategy. In this particular case, SANDAG has agreed to administer a program which would identify projects which may be appropriate for support from the beach sand replenishment fund, through input from the Shoreline Erosion Committee which is made up of representatives from all the coastal jurisdictions in San Diego County. The Shoreline Erosion Committee is currently monitoring several large scale projects, both in and out of the coastal zone, they term "opportunistic sand projects", that will generate large quantities of beach quality material suitable for replenishing the region's beaches. The purpose of the account is to aid in the restoration of the beaches within San Diego County. One means to do this would be to provide funds necessary to get such "opportunistic" sources of sand to the shoreline.

Seawalls can threaten the stability of a site if the wall should become damaged in the future (e.g. as a result of wave action, storms, etc.) which could lead to the need for more substantial shoreline or bluff stabilization devices. Damaged seawall structures could also adversely affect the shoreline by resulting in debris on the beach and/or creating a hazard to the beach going public. As such, seawalls need to be designed to withstand the effects of wave action and major storms and need to have their structural condition monitored on an annual basis to ensure proper maintenance and repair. Therefore, in order to find the proposed seawall repairs consistent with the Coastal Act, the Commission finds that the seawall must be maintained for the estimated life of the seawall. Further, in order to ensure that the permittee and the Commission know when repairs or maintenance are required, the permittee must monitor the condition of the seawall annually, for three years and at three year intervals after that, unless a major storm event occurs. The monitoring will ensure that the permittee and the Commission are aware of any damage to or weathering of the seawall and can determine whether repairs or other actions are necessary to maintain the seawall in its approved state.

Accordingly, Special Condition #3 requires the permittee to maintain the seawall in the future. In addition, Special Condition #3 advises the applicants that ongoing maintenance and repair activities which may be necessary in the future could require permits. Section 30610(d) exempts repair and maintenance activities from coastal development permit requirements unless such activities enlarge or expand a structure or the method of repair and maintenance presents a risk of substantial adverse environmental impact. The Commission's regulations identify those methods of repair and maintenance of seawalls that are not exempt (see California Code of Regulations Section 13252). Special Condition #3 requires the permittee to consult with the Commission to determine whether

proposed repair and maintenance requires a permit. In addition, Special Condition #2 requires that the applicants monitor the wall annually for the first three years and submit monitoring reports each year.

The applicant is proposing to repair an existing seawall that is located in an area subject to wave and storm hazards. Although the applicants' geotechnical report asserts that the seawall, once repaired, can withstand such hazards and protect existing development from such hazards, the risk of damage to the structure and the existing development cannot be eliminated entirely. The Commission finds that in order for the proposed development to be consistent with the Coastal Act, the applicants must assume the risks of damage from flooding and wave action. As such, Special Condition #7 requires the applicants to execute assumption of risk documents, waiving any liability on the part of the Commission for approving the proposed development. In addition, this condition requires the applicants to indemnify the Commission in the event that third parties bring an action against the Commission as a result of failure of the proposed development to withstand and protect against the hazards.

There may also be other local, state or federal agencies having jurisdiction over this project. Conditions of approval and/or mitigation measures may be required from these agencies. As such, Special Condition #5 has been imposed. This condition requires the applicant to submit copies of any discretionary permits obtained from other local, state or federal entities before the commencement of the proposed repairs. Should any project modifications be required as a result of any of these permits, the applicant is further advised that an amendment to this permit may be necessary to incorporate such mitigation measures into the project. This condition ensures that if other required permits are not obtained, the project will not be initiated until necessary amendments, if any, to this permit are obtained. In addition, to ensure consistency with local approvals, Special Condition #6 requires the applicant to submit to the Executive Director for review and written approval final repair plans that have been approved by the City of Encinitas.

Also proposed as part of this application is the removal of the existing unpermitted private stairway, landing and steps. The applicant's engineer has submitted information on how the existing stairs on the face of the seawall and concrete landing and steps will be removed. The engineer indicates that after the seawall repairs are complete, a crane will be brought in and attached to the stairs. Then the stairs, which are bolted to the seawall, will be cut from the seawall with a cutting torch, lowered to the beach and hauled away. The concrete landing will be cut from the seawall base and removed with a backhoe and hauled away. Any exposed rebar will be cut flush and grouted as necessary. The engineer notes that no materials will be left on the beach and that the removal will not result in any adverse impacts on the structural stability of the seawall or the bluff. The Commission staff engineer has reviewed this information and has concluded that the proposed stair, landing and step removal will occur in a manner that will minimize risk of geologic instability, consistent with Coastal Act polices.

In summary, the applicants have documented that the existing unpermitted seawall is in need of repairs to assure continued protection to the residential structure on the blufftop.

The applicant has demonstrated that the repairs are the minimal necessary to assure structural integrity of the seawall and that no impacts on geologic stability will result from the proposed repairs and stairway removal. Since the repaired seawall will continue to have adverse impacts on beach sand supply, Special Conditions require the applicant to pay an in-lieu mitigation fee to offset this impact. Therefore, as conditioned, the Commission finds that the proposed seawall repair and stairway removal is consistent with Sections 30235 and 30253 of the Coastal Act.

3. Visual Resources/Alteration of Natural Landforms. Section 30251 of the Coastal Act states, in part:

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas.

The proposed repairs and stair removal will occur on a public beach at the base of an approximately 95 foot-high coastal bluff fronting a duplex. Similarly designed seawalls lie immediately south and north of the subject site. These structures consist of an approximately 9 foot-high concrete base with a series of large concrete columns imbedded into the base rising to an elevation of about 36 feet on the adjacent southern site and to an elevation of approximately 25 feet on the adjacent northern site. As with the subject seawall, horizontal timber laggings separate the columns from the face of the bluff.

While the design for the adjacent southern wall was accepted by the Commission at the time of its approval as an emergency permit (ref. CDP No. 6-92-86-G), the design of this type of structure is not typical of structures that have more recently been approved by the Commission. In addition, the Commission denied the application request for the subject existing seawall and adjacent northern 25 foot-high seawall finding the walls and their stairways would have significant adverse resource impacts including irretrievable damage in the form of adverse impacts on visual resources.

In recent permit approvals, the Commission has required that any permitted shoreline protective device be designed to reduce the potential adverse visual impacts through minimizing of height or coloring/texturing to be compatible with the surrounding natural bluffs. The existing unpermitted 36 foot-high seawall consisting of an approximately 11 ½ foot-wide, 9 foot high, 70 foot-long concrete base supporting nine concrete columns with wood lagging behind the columns has not been designed in a manner that minimizes its visual impact to the beach going public. The wall is also approximately 12 feet higher than the adjacent wall to the north. In addition, the upper 12 feet of the subject seawall (on its southern half) has been encased in concrete such that it conflicts with the overall design of the existing structure and the adjacent seawalls. The adverse visual appearance of the existing seawall is further exacerbated by the attachment of a metal stairway with

concrete landing that extends out from the face of the seawall from the top of the seawall to the beach below and the large concrete extension of the seawall located on the walls southern upper half. In addition to the existing visual impacts associated with the seawall, the applicant is proposing to repair the wall by installing 10 new tiebacks that will be placed on new concrete gradebeams between the existing concrete columns. While the proposed repairs will add more "structural components" to the seawall, they will not result in a significant adverse impact.

In this case, however, the applicant has documented that removal of the unpermitted seawall or any portion of it (except for the stairway and landing steps) will result in an immediate threat to the residences located at the top of the bluff. Although the existing wall cannot be removed and is similar in design to surrounding seawalls, this does not mean that measures are unavailable to improve the visual appearance of the seawall. The applicant indicates that the proposed repairs will result in adding an additional 20 years to the lifetime of the seawall. This will result in an additional 20 years of adverse visual impacts. With the proposed removal of the metal stairway and concrete landing, a significant adverse visual impact will be removed. While the applicant has looked at various alternatives to reduce the adverse visual impacts associated with the existing seawall (shotcrete application, texturing and coloring the entire seawall, etc.), such alternatives were not pursued due to high maintenance and minimal visual benefits. Instead, the applicant is proposing to color the most visually apparent portion of the seawall to reduce its visibility. Special Condition #6 has been attached which requires the applicant to submit final plans that include information on how the upper 12 feet concrete facing of the subject seawall (on its southern half) will be colored and treated to help reduce its contrast with the natural bluff.

Thus, with the removal of the existing unpermitted stairway, concrete landing and steps, and the coloring of the unpermitted concrete extension of the seawall; the visual impacts of the proposed repairs have been mitigated to the maximum extent possible consistent with Section 30251 of the Act.

4. Public Access/Recreation. Pursuant to Section 30604 (c), the Coastal Act emphasizes the need to protect public recreational opportunities and to provide public access to and along the coast. Section 30210 of the Coastal Act is applicable to the proposed development and states:

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

In addition, Section 30212 of the Act is applicable and states, in 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:

- (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources,
- (2) adequate access exists nearby....

Additionally, Section 30220 of the Coastal Act provides:

Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.

The existing seawall lies seaward of the mean high tide line (MHTL). In September 1994, State Lands Commission surveyed the MHTL in Encinitas and concluded that the MHTL follows the toe of the bluff in the City of Encinitas ("Encinitas Beach Survey by Centennial Engineering, Inc. dated September 1994). The State Lands Commission retains ownership of the public trust lands within the City of Encinitas until it amends its tidelands grant to include such lands. In this case, the City has not yet amended its grant to include the land upon which the proposed project is located. The site is located approximately two blocks north of the City of Encinitas' "Stone Steps" public access stairway. The beach at the project site is used by local residents and visitors for a variety of recreational activities. Thus, the existing unpermitted seawall is located on sandy beach area that would otherwise be available to the public. The proposed repairs to the existing unpermitted seawall is estimated to add 20 additional years to the lifetime of the seawall.

The existing unpermitted seawall extends approximately 11 ½ feet onto the public beach occupying approximately 770 sq. ft. (70 ft. by 11 ½ ft.) of public beach area. The seaward encroachment of the wall extends approximately 4 feet further than the existing seawall on the south but extends no further seaward than the existing seawall on the north. However, the beach along this area of the coast is narrow and at high tides and winter beach profiles, the public may be forced to walk virtually at the toe of the bluff or the area may be impassable. As such, any encroachment of structures, no matter how small, onto the sandy beach in this area, reduces the beach area available for public use. This is particularly true given the existing beach profiles and relatively narrow beach.

In addition to the above-described direct interference with public access that occurs from the presence of the seawall, there are a number of indirect effects as well. The adverse impacts of the seawall on shoreline processes, sand supply and beach erosion rates alter public access and recreational opportunities. The loss of sandy beach area, and the loss of sand contribution to the beach reduce the beach area available for public access and recreation. The seawall reduces lateral beach access by encroaching onto the beach and has adverse impacts on the natural shoreline processes. As stated elsewhere in these findings, Section 30235 of the Act allows for repairs of such a device where it is required to protect existing development that is threatened by erosion and where it has been designed to eliminate or mitigate adverse impacts upon shoreline sand supply. In this case, the direct impacts associated with this subject seawall have been ongoing and

unmitigated since the concrete base of the subject seawall was completed in approximately 1985. The proposed repairs represent a request to extend the life of the seawall thereby altering public access and recreational opportunities and impacting sand supply for an additional 20 years.

The Commission further recognizes that most shoreline protective devices have been shown to have adverse impacts upon the beach. As stated elsewhere in these findings, Section 30235 of the Act allows for the use of such a device where it is required to protect existing development and where it has been designed to mitigate adverse impacts upon shoreline sand supply. In order to mitigate the known adverse impacts, the Commission typically requires an offer of dedication of lateral public access in order to balance the burden placed on the public with a public benefit. However, in this case, the City and the State Lands Commission have both agreed that the MHTL currently is at the toe of the existing bluff. As such, public access is assured through the public ownership of the beach.

As debris dislodged from the seawall during its repair or after completion also has the potential to affect public access, Special Condition #3 has also been proposed. This condition notifies the applicant that they are responsible for maintenance and repair of the seawall and that should any work be necessary, they should contact the Commission office to determine permit requirements. In addition, the condition requires the applicants to be responsible for removal of debris deposited on the beach during and after construction of the project.

In addition, the use of the beach or public parking areas for staging of construction materials and equipment can also impact the public's ability to gain access to the beach. As noted, while the proposed seawall currently exists, maintenance is proposed. As such, Special Condition #4 has been proposed to require that a staging area plan be submitted that indicates the beach will not be used for storage of materials and equipment and that construction be prohibited on the sandy beach on weekends and holidays during the summer months of Memorial Day to Labor Day of any year.

In summary, the existing unpermitted seawall, that has been in place for 15 years, currently occupies public beach area resulting in impacts to public access. With completion of the proposed repairs, the expected life of the seawall will be extended an estimated 20 more years. Impacts of the seawall on the beach will be mitigated by Special Condition #1, discussed in a previous section of the staff report, which requires the applicant to pay an in-lieu mitigation fee for sand replenishment. In addition, with removal of the existing concrete stair and landing that extends out from the face of the seawall, access along the beach in front of the existing seawall will be enhanced. As conditioned, the Commission finds the proposed development to be consistent with the public access policies of the Coastal Act.

5. Local Coastal Planning. Section 30604 (a) also requires that a coastal development permit shall be issued only if the Commission finds that the permitted development will not prejudice the ability of the local government to prepare a Local Coastal Program (LCP) in conformity with the provisions of Chapter 3 of the Coastal Act. In this case, such a finding can be made.

The subject site is located on the beach within the City of Encinitas. In November of 1994, the Commission approved, with suggested modifications, the City of Encinitas Local Coastal Program (LCP). Subsequently, on May 15, 1995, coastal development permit authority was transferred to the City. Although the site is within the City of Encinitas, it is within the Commission's area of original jurisdiction. As such, the standard of review is Chapter 3 policies of the Coastal Act, with the City's LCP used as guidance.

As shoreline erosion along the coast rarely affects just one individual property, it is imperative that a regional wide solution to the shoreline erosion problem be addressed and solutions developed to protect the beaches. Combined with the decrease of sandy supply from coastal rivers and creeks and armoring of the coast, beaches will continue to erode without being replenished. This will, in turn, decrease the public's ability to access and recreate on the shoreline.

Based on specific policy and ordinance language requirements placed in the LCP by the Commission, the City of Encinitas is in the process of developing a comprehensive program addressing the shoreline erosion problem in the City. The intent of the plan is to look at the shoreline issues facing the City and to establish goals, policies, standards and strategies to comprehensively address the identified issues. To date, the City has conducted several public workshops and meetings on the comprehensive plan to identify issues and present draft plans for comment. However, at this time it is uncertain when the plan will come before the Commission as an LCP amendment or when it will be scheduled for local review by the Encinitas City Council.

In the case of the proposed project, site specific geotechnical evidence has been submitted indicating that the existing structures on the project site are in danger if repairs to the existing unpermitted seawall are not performed. Based on the above findings, the proposed seawall repair and stairway removal has been found to be consistent with the Chapter 3 policies of the Coastal Act in that the need for the seawall repairs has been documented and adverse impacts on public access, beach sand supply, and visual resources will each be mitigated. Therefore, the Commission finds that approval of the proposed seawall repair and stairway removal, as conditioned, will not prejudice the ability of the City of Encinitas to prepare a comprehensive plan addressing the City's coastline as required in the certified LCP and consistent with Chapter 3 policies of the Coastal Act.

6. Consistency with the California Environmental Quality Act (CEQA).

Section 13096 of the Commission's Code of Regulations requires Commission approval of Coastal Development Permits to be supported by a finding showing the permit, as conditioned, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment.

The proposed project has been conditioned in order to be found consistent with the geologic stability, public access and visual resource policies of the Coastal Act. Mitigation measures will minimize all adverse environmental impacts. As conditioned, there are no feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse impact which the activity may have on the environment. Therefore, the Commission finds that the proposed project, as conditioned, is the least environmentally-damaging feasible alternative and can be found consistent with the requirements of the Coastal Act to conform to CEQA.

STANDARD CONDITIONS:

1. **Notice of Receipt and Acknowledgment.** The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
2. **Expiration.** If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
3. **Interpretation.** Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
4. **Assignment.** The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
5. **Terms and Conditions Run with the Land.** These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

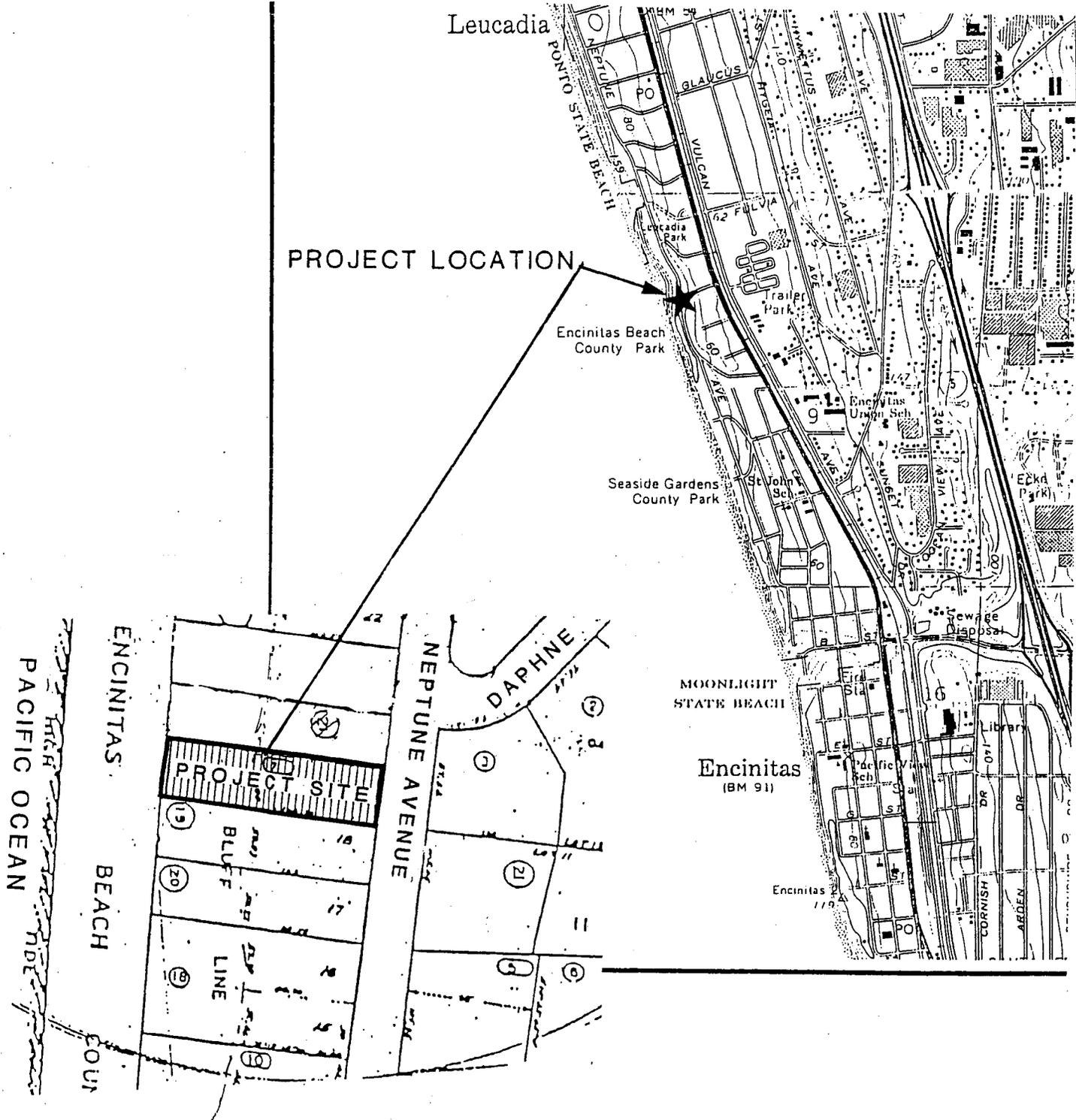
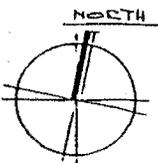
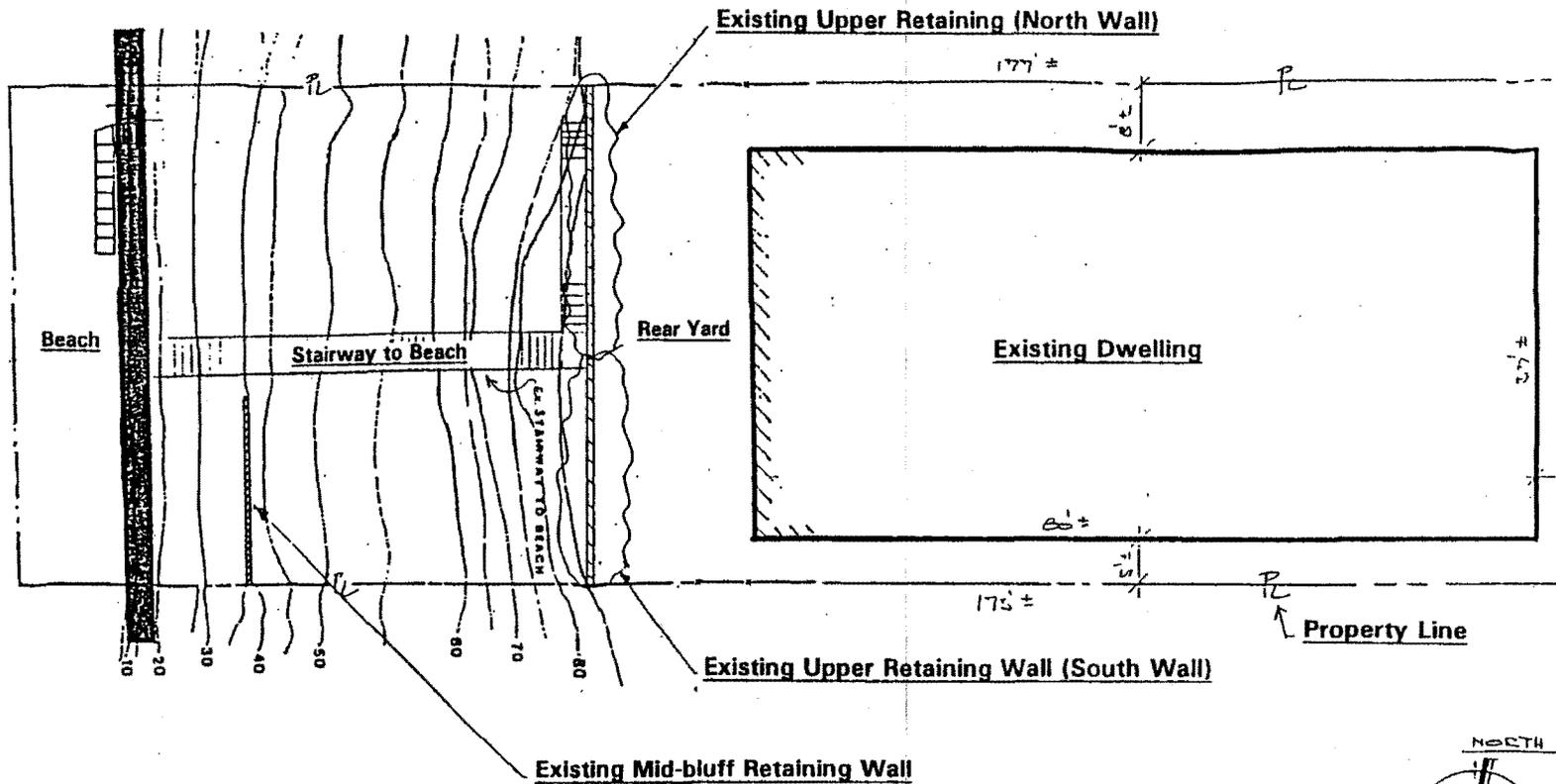


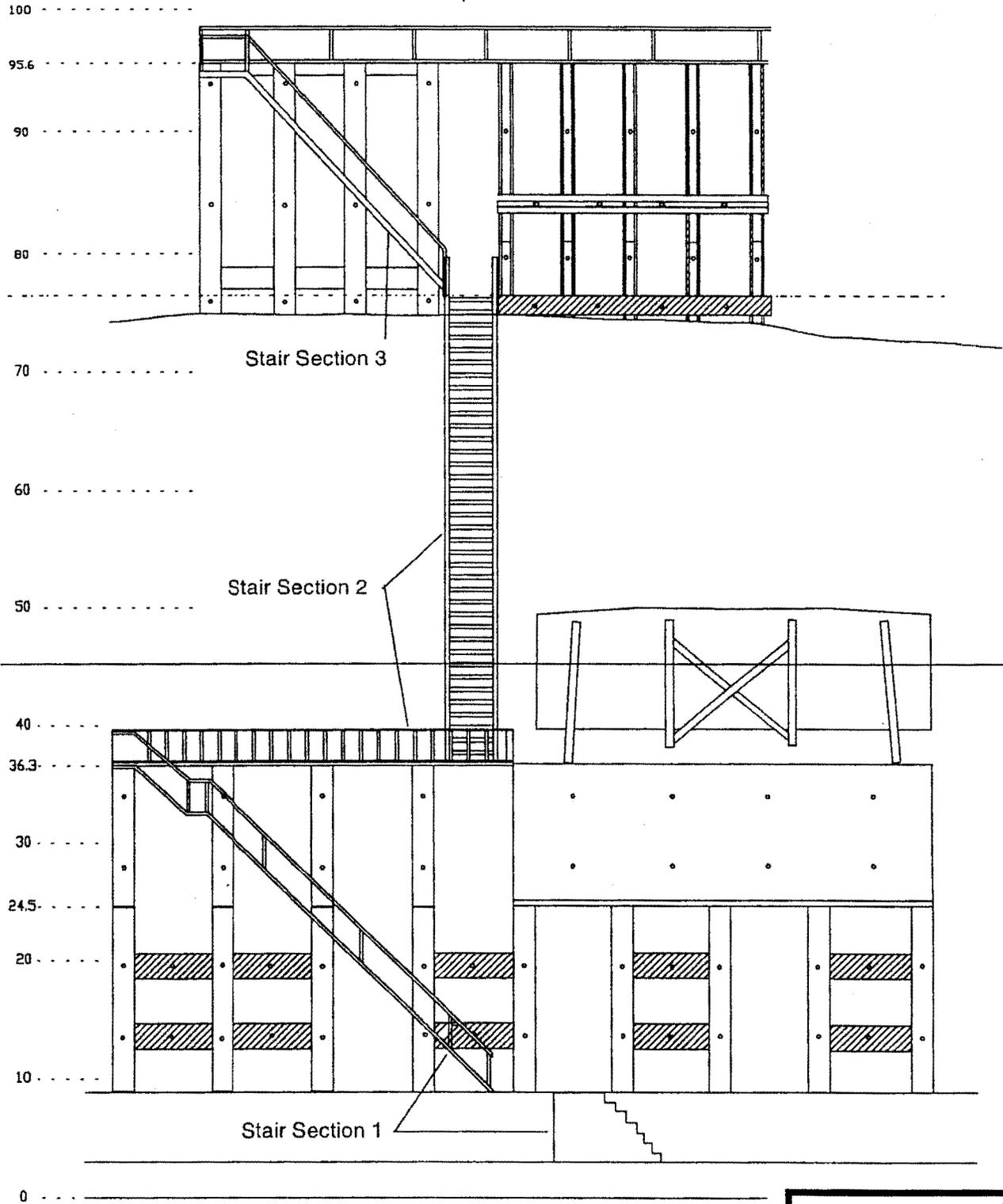
EXHIBIT NO. 1
 APPLICATION NO.
6-00-102
 Location Map

California Coastal Commission

NO SCALE



 California Coastal Commission	EXHIBIT NO. 2
	APPLICATION NO.
	6-00-102
	Site Plan



678 Neptune Avenue
Stairway Removal Plan

EXHIBIT NO. 3
APPLICATION NO.
6-00-102
Existing Stair
Conditions
 California Coastal Commission

60
50
40
36.3
30
24.5
20
10
8.9
0

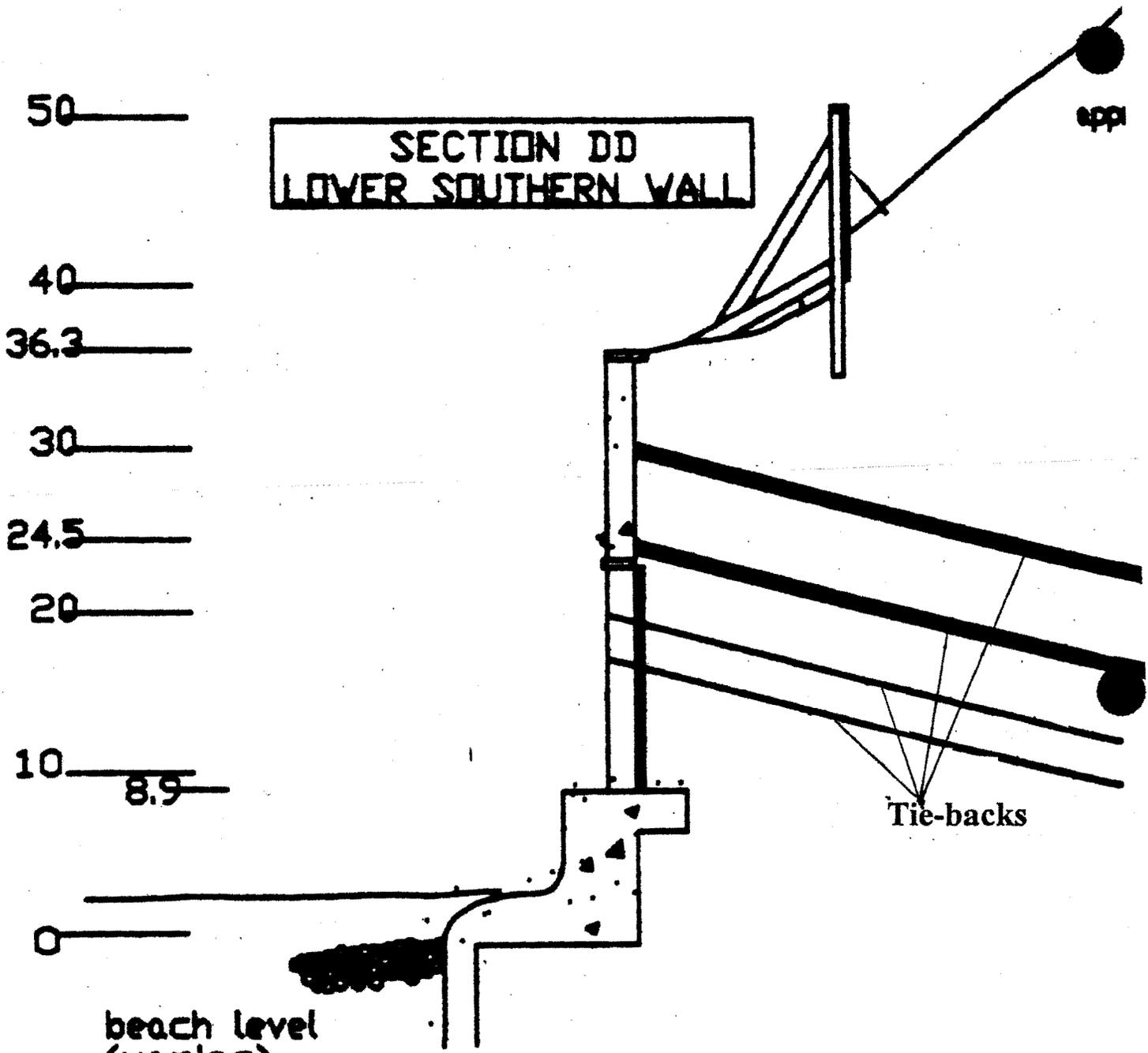
**SECTION DD
LOWER SOUTHERN WALL**

beach level
(varies)

11 1/2 Ft.

Tie-backs

EXHIBIT NO. 4
APPLICATION NO.
6-00-102
Cross-Section at
Southern Part of Wall
California Coastal Commission



40
36.3
30
24.5
20
10
8.9
0

beach level
(varies)

11 1/2 Ft.

SECTION
LOWER NORTH

Tie-backs

EXHIBIT NO. 5
APPLICATION NO.
6-00-102
Cross-Section at
Northern Part of Wall
California Coastal Commission



September 18, 2000

Mr. Matt Peterson, Esq.
Peterson & Price
530 B Street, Suite 1700
San Diego, California 92101

RECEIVED

SEP 19 2000

CALIFORNIA
COASTAL COMMISSION
SAN DIEGO COAST DISTRICT

**Re: Plan for Removing Stairways at Lampl Residence
678 Neptune Ave, Encinitas**

Dear Mr. Peterson:

Per your request, Soil Engineering Construction, Inc. (SEC) has prepared this letter describing our recommendations for the removal of the stairways below the subject property.

The stairways are constructed in three discrete sections: The lower steel section (section 1), which is bolted to the lower seawall and terminates at a concrete stairway to the beach. The middle wooden section runs up the bluff face to a landing (section 2). And finally a wooden section running up the face of the upper retaining wall (section 3). The removal will occur as follows:

Section 1: Following the completion of the lower seawall repair an all terrain crane will be brought to the beach during times deemed acceptable to the Coastal Commission Staff. The crane will be attached to the stairs to support the load while sections are cut using an oxyacetylene torch. At the completion of each work period, removed stair sections will be hauled by truck to a disposal site. No materials will be staged or stored on the beach. It is estimated that the lower stairs removal will require 3-5 days depending upon tides and unforeseen conditions. Any remaining exposed metal parts that are integral to the lower seawall will be epoxy coated at the time that the coating contractor seals the exposed spalling and other portions of the lower wall as specified in the seawall repair permit application. The lower concrete landing will be removed flush with the existing foundation utilizing a backhoe. Any exposed rebar at the joint with the existing shotcrete foundation will be cut flush and/or grouted as needed.

Section 2: Following the completion of lower seawall repair and upper and mid bluff repair the mid and upper stairs will be removed in the following manner: First, the railing along the top of the upper seawall will be removed by cutting flush with the upper wall top. Then each tread of the middle stairs will be cut flush with the riser. Wood from this operation will either be removed via a truck on the beach or hauled up to the top of bluff. No material will be staged or stored on the beach. Following removal of the stairs, the stair risers will be cut by personnel into manageable sections for removal as above. Finally, the posts will be cut flush with the soil line. After completion of stair removal, the exposed bluff will be covered with jute mesh and revegetated with drought tolerant planting as on the adjoining bluff on either side of the stairs. No material will be stored or

EXHIBIT NO. 6

APPLICATION NO.

6-00-102

Stairway Removal

Plan

California Coastal Commission

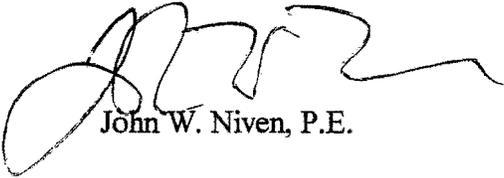
Mr. Matt Peterson, Esq.
September 18, 2000
Page 2

staged on the beach. It is estimated that removal of sections 2 & 3 will require 7-10 days. The timing for the removal of the stairs will be adjusted for weather conditions to minimize instability and disruption to the bluff.

Section 3: Following removal of section 2, section 3 will be removed in a similar manner with all materials hauled for disposal through the back yard.

If you should have any questions regarding this letter, please do not hesitate to call us at (760) 633-3470.

Regards,
SOIL ENGINEERING CONSTRUCTION, Inc.



John W. Niven, P.E.

Beach Sand Replenishment
In-lieu Fee Worksheet
678 Neptune Avenue/Lampl
CDP #6-00-102

$V_e =$ Volume of sand to rebuild the area of beach lost due to encroachment by the seawall; based on the seawall design and beach and nearshore profiles (cubic yards)

$$V_e = A_e \times v$$

$A_e =$ The encroachment area which is equal to the width of the properties which are being protected (W) times the seaward encroachment of the protection (E)

$$A_e = W \times E$$

$W =$ Width of property to be armored (ft.)

$E =$ Encroachment by seawall, measured from the toe of the bluff or back beach to the seaward limit of the protection (ft.)

$v =$ Volume of material required, per unit width of beach, to replace or reestablish one foot of beach seaward of the seawall; based on the vertical distance from the top of the beach berm to the seaward limit of reversible sediment movement (cubic yards/ft. of width and ft. of retreat). The value of v is often taken to be 1 cubic yard per square ft. of beach. If a vertical distance of 40 feet is used for the range of reversible sediment movement, v would have a value of 1.5 cubic yards/square ft. (40 feet x 1 foot x 1 foot/27 cubic feet per cubic yard). If the vertical distance for a reversible sand movement is less than 40 feet, the value of v would be less than 1.5 cubic yards per square foot. The value of v would be less than 1.5 cubic yards per square foot. The value of v will vary from one coastal region to another. A value of 0.9 cubic yards per square foot has been suggested for the Oceanside Littoral Cell (Oceanside Littoral Cell Preliminary Sediment Budget Report, December 1997, prepared as part of the Coast of California Storm and Tide Wave Study)

$V_w =$ Volume of sand to rebuild the area of beach lost due to long-term erosion (V_w) of the beach and near-shore, resulting from stabilization of the bluff face and prevention of landward migration of the beach profile; based on the long-term regional bluff retreat rate, and beach and nearshore profiles (cubic yards)

EXHIBIT NO. 7
APPLICATION NO. 6-00-102
In Lieu Mitigation Fee Worksheet
 California Coastal Commission

$$V_w = A_w \times v$$

A_w = The area of beach lost due to long-term erosion is equal to the long-term average annual erosion rate (R) times the number of years that the back beach or bluff will be fixed (L) times the width of the property that will be protected (W) (ft./yr.)

$$A_w = R \times L \times W$$

R = The retreat rate which must be based on historic erosion, erosion trends, aerial photographs, land surveys, or other acceptable techniques and documented by the applicant. The retreat rate should be the same as the predicted retreat rate used to estimate the need for shoreline armoring

L = The length of time the back beach or bluff will be fixed or the design life of the armoring without maintenance (yr.). For repair and maintenance projects, the design life should be an estimate of the additional length of time the proposed maintenance will allow the seawall to remain without further repair or replacement

V_b = Amount of beach material that would have been supplied to the beach if natural erosion continued, or the long-term reduction in the supply of bluff material to the beach, over the life of the structure; based on the long-term average retreat rate, design life of the structure, percent of beach quality material in the bluff, and bluff geometry (cubic yards)

$$V_b = (S \times W \times L) \times [(R \times h_s) + (1/2 h_u \times (R + (R_{cu} - R_{cs})))]/27$$

S = Fraction of beach quality material in the bluff material, based on analysis of bluff material to be provided by the applicant

h_s = Height of the seawall from the base of the bluff to the top (ft.)

h_u = Height of the unprotected upper bluff, from the top of the seawall to the crest of the bluff (ft.)

R_{cu} = Predicted rate of retreat of the crest of the bluff, during the period that the seawall would be in place, assuming no seawall were installed (ft./yr.). This value can be assumed to be the same as R unless the applicant provides site specific geotechnical information supporting a different value

R_{cs} = Predicted rate of retreat of the crest of the bluff, during the period that the seawall would be in place, assuming the seawall has been installed (ft./yr.). This value will be assumed to be zero unless the applicant provides site specific geotechnical information supporting a different value

V_t = Total volume of sand required to replace losses due to the structure, through reduction in material from the bluff, reduction in nearshore area and loss of available beach area (cubic yards). Derived from calculations provided above

$$V_t = V_b + V_w + V_e$$

$$M = V_t \times C$$

C = Cost, per cubic yard of sand, of purchasing and transporting beach quality material to the project vicinity (\$ per cubic yard). Derived from the average of three written estimates from sand supply companies within the project vicinity that would be capable of transporting beach quality material to the subject beach, and placing it on the beach or in the near shore area

678 Neptune Avenue; Lampl

W	=	67 ft.
E	=	11.5 ft.
v	=	0.9
R	=	0.2 ft/yr.
L	=	15 yrs
S	=	.628
hs	=	36.5 ft.
hu	=	59 ft.
Rcu	=	0.2 ft/yr.
Rcs	=	0.0
C	=	\$8.80 cy

$$V_e = A_e \times v = W \times E \times v$$

$$V_e = \underline{67} \times \underline{11.5} \times \underline{0.9} = \underline{693.45 \text{ cubic yards}}$$

$$V_w = A_w \times v = R \times L \times W \times v$$

$$V_w = \underline{0.2} \times \underline{15} \times \underline{67} \times \underline{0.9} = \underline{180.9 \text{ cubic yards}}$$

$$V_b = (S \times W \times L) \times [(R \times h_s) + (1/2 h_u \times (R + (R_{cu} - R_{cs})))] / 27$$

$$V_b = (\underline{.628} \times \underline{67} \times \underline{15}) \times [(\underline{0.2} \times \underline{36.5}) + (\underline{59/2} \times (\underline{0.2} + (\underline{0.2} - \underline{0})))] / 27 = \underline{446.47 \text{ cubic yards}}$$

$$V_t = V_b + V_w + V_e$$

$$V_t = \underline{693.45} + \underline{180.9} + \underline{446.47} = \underline{1,321 \text{ cubic yards}}$$

Less slide credit of 125 cy: $\underline{1,321} - \underline{125} = \underline{1,196}$

$$M = V_t \times C$$

$$M = \underline{1,196} \times \underline{\$8.80} = \underline{\$10,524.80}$$

